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## INSPIRING ALUMNI STORIES: TESTIMONIALS OF BLUE DOCTORATE HOLDERS

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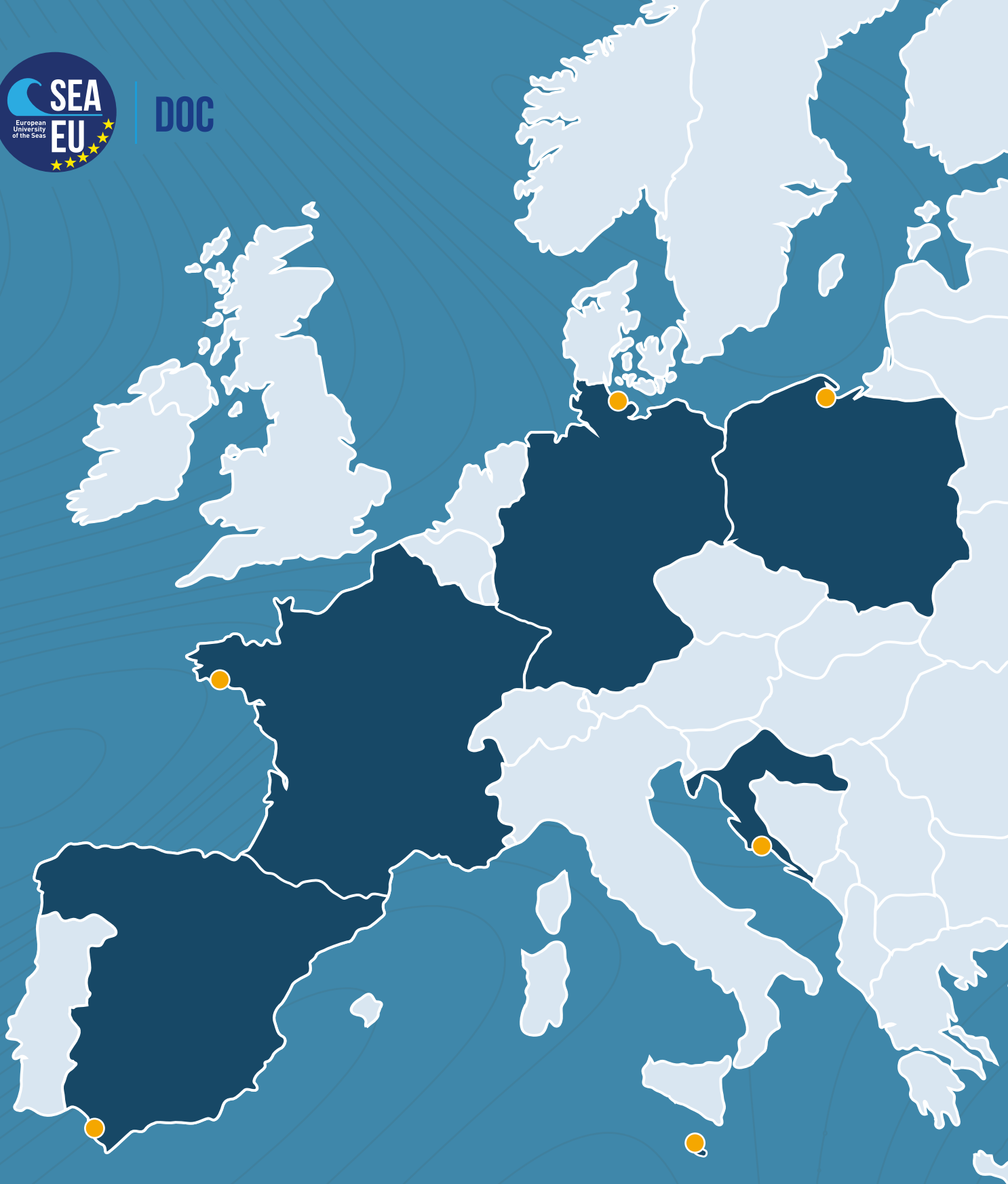
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# INSPIRING ALUMNI STORIES: TESTIMONIALS OF BLUE DOCTORATE HOLDERS

**INSPIRING ALUMNI STORIES:  
TESTIMONIALS OF BLUE DOCTORATE HOLDERS**

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This booklet of testimonies retraces the career paths of doctors in marine, maritime and coastal sciences. It focuses on experiences outside the academia. It is a collective output of a European Erasmus+ project involving the universities of Brest, Gdansk, Cadiz, Split, Kiel and Malta working within SEA-EU DOC project. This project aims to broaden employment opportunities for doctors by preparing doctorate students for a wide range of career options matching the reality of the labour market.

These sectors constituting the blue economy are developing very dynamically. It is, therefore, important to analyse development opportunities for PhD holders based on examples of successful careers outside the academia. The method used to examine these "success stories" was an interview. The interview analysis allowed to draw conclusions on the factors that may influence the success of doctorate holders in developing careers outside the academic sector. This, in turn, allowed to identify the key elements that should be included in doctoral training programmes and ensured that doctoral students obtain the qualifications and skills expected by employers of the current and future labour market.

These interviews are used as informative material to present the diversity of employment opportunities for doctorate holders. They are disseminated through open online access on the SEA-EU platform and the partners' websites. The main objective of the interviews is to get a picture of PhD graduates' career path from the moment they decided to undertake PhD studies up to the point when they developed their careers.

During the SEA-EU DOC project, a total of 60 doctorate holders from 6 countries were interviewed (51% of them were male and 49% female). Participants represented diverse scientific fields. The Earth sciences (41%) was the most represented field, while engineering (16%) was the least. The majority of doctorate holders worked at their current job for over three years. Most of them (77%) worked in their home country. Among the interviewed PhD holders three most popular blue economy sectors were environmental monitoring and protection (32%), offshore wind power (16%) and science communication (12%). The two least popular sectors were marine biotechnology and mineral resources (each 2%). Additionally, 22% of doctorate holders worked simultaneously in at least two sectors.

This collection of testimonials presents the diversity of career paths of doctorate holders and focuses on valuable skills acquired during the doctorate that can be transferred to any work context. It is also intended to be a collection of messages sent by these doctorate holders to current doctoral students and to companies likely to hire them.

*Completing a PhD is not easy, it presents a multitude of professional and personal challenges, but in my view, nowadays, a doctoral degree strengthens your professional position in the job market, where a master's degree is often not sufficient enough.*

*Dr Marcin Szerle*

The background of the image features a series of concentric, overlapping circles in various shades of blue, creating a ripple effect. The circles are centered in the upper right quadrant and expand towards the bottom left.

University  
of Bretagne  
Occidentale





Camille Andre

## Coastal Risks Manager

**Camille Andre, PhD, a French national currently living in Bordeaux in France. He was awarded a doctoral degree in the discipline of Geography from the Doctoral School of Marine and Coastal Sciences in the University of Brest in 2013. His doctoral thesis, entitled "Analysis of damages linked to coastal flooding and evaluation of the costs incurred by homes based on insurance data: perspectives provided by the storms Johanna (2008) and Xynthia (2010)", was completed under the supervision of Professors Catherine Meur-Ferec and Charlotte Vinchon.**

### Which company do you currently work for and what are your professional duties?

Today, I work in Bordeaux, within the Public Interest Group (GIP) Littoral en Nouvelle-Aquitaine. This public structure aims to support local authorities in planning and managing the coastal areas of the New-Aquitaine region. Within this structure, I am in charge of coastal risks management; it is therefore in direct continuity with the subject of my doctoral thesis. I product studies and I lead the discussions between all the partners members of the structure, from the level of the local authorities, to the regional authority and the State services. It's a job of animating the project, communicating knowledge and synthesising knowledge with all these stakeholders.

### Has your job changed since you started working for the GIP?

Yes, my work has evolved. I joined the GIP in 2015, two years after my doctorate. At the beginning I was in charge of studies on a fixed-term contract, then two years later I took up a permanent situation. Since then, I have been a project manager.

### What was your first job after the thesis?

I started with a postdoc contract, quite short, for 6 months. The originality of this position in Montpellier is that it was a contract in an economics laboratory. So, after a geography thesis, I did economics. But the subject of this mission was directly related to my thesis work. Then, for 18 months, I joined a first public structure for the management of public policies of the Mediterranean coast. It was then that I came to Bordeaux for the GIP Littoral.

### Is your current job fulfilling?

Yes, today I am quite satisfied with my work. I have only been in this business for a few years, so for the moment everything is going well!

### What aspects of your job are the most rewarding for you?

The aspect I find most rewarding is that it is a job where I learn a lot every day. The tasks are not repetitive. We have new projects all the time, new subjects. It's a job in which you renew yourself a lot. As it is a job with multiple tasks, many projects to be carried out at the same time, and new themes, it is never boring!

### Would you be willing to share with us your professional victories and failures?

For successes, as soon as I finished my thesis, there was recognition of my results, recognition by my peers of my work. And very quickly, there were also concrete, operational applications in the public sphere, uses of my work in certain public policies by local authorities and by the Ministry of the Environment. It was really

very gratifying to see that a piece of research could find rapid applications in public policies in the field, in coastal risks management.

And today, in my work, I still find it gratifying to see that stakeholders in the field, mayors, elected representatives, adhere to what we say, adhere to the solutions that we propose, that they take them up, that they appropriate them. Seeing that things are moving forward, that research work is being taken into account by managers in their day-to-day lives, is something I am happy about.

#### **A failure, a regret?**

Perhaps it's seeing that things aren't moving forward as quickly as we would like, and seeing that there are obstacles in public institutions, resistance to change. No matter how much we know what we want, no matter how much we try to deploy all our conviction, things don't move forward as quickly as we would like. There are times when there is immobility and it is a bit frustrating. It's not a personal failure, but it's a failure in the sense that all the energy we deploy is not always enough to make things change.

#### **Is your current job related to the doctoral studies you completed?**

The link with my doctoral studies is very strong, as I have remained in the same field. A very precise theme, quite expert! All the knowledge I acquired during my doctorate, all my background, is still useful to me today. However, I have greatly diversified the questions I work on. So, it was a geography thesis, which was already quite interdisciplinary, and which had a lot of economics. But now I work on a daily basis on legal and regulatory issues, even though I have no legal initial training. I learned on the job. I also deal with financial issues, issues of communication with the public and partners. By staying on this topic, on which I have been an expert for a number of years, I have broadened the fields of intervention. Therefore, I have a very interdisciplinary activity.

*"The doctorate is also a springboard for building a network outside the university"*

#### **Do you think that your doctoral studies enabled you to join the GIP?**

Yes, even if I don't think that having a doctorate had been a determining factor in my recruitment... I am the only doctor in the GIP, there are nine of us, and the others do not have a doctorate. Everyone has nonetheless expertise in his own field. For my job, what was important was the fact that I was a specialist in the subject of risks management. The doctorate was a plus in the sense that it allowed me to build up a network, to have a very complete overview of the discipline, so it was undeniably a plus for my recruitment. But it was not a prerequisite for the job.

#### **Do you think that after the doctorate there are broad possibilities for career development within and outside the institution?**

Yes, I think so. My personal situation is that when I started my thesis, I knew that I wasn't necessarily aiming for a research and/or teaching position afterwards. My thesis project was the equivalent of a CIFRE (industrial) thesis with partnerships with the professional sphere and public authorities. I was therefore destined to pursue a career in the private sector or in the public sector, and that is what I succeeded in doing. I never had any doubts that it would be possible. The subject of my thesis was particularly suitable. As long as things are well prepared, well anticipated and the thesis is also a springboard for building a network outside the university. When you set aside three years to do this work, there are many opportunities afterwards. So, if you prepare your post-thesis period well, from the beginning of the thesis, as an objective, it is something

that works. On the other hand, if you stay locked up in your laboratory for these three years, it can be more complicated....

**What sort of skills have you developed during your doctoral studies and which one of them would you rate as the most and least useful?**

About core competencies: of course, the fact that you do a thesis on a specific subject makes you an expert on this field. The time you devote to your subject, the people with whom you are surrounded make you an expert.

These skills must be maintained after the doctorate, you must not stop at the doctorate. You have to keep up to date with the latest scientific publications.

About transversal skills, I have the feeling that the doctorate is a lot of self-training. You are sometimes left to yourself. I was lucky enough to have supervisors who followed me a lot and lucky enough to have close exchanges with other researchers who also helped me for three years. The doctoral student has nonetheless a lot of autonomy, he learns to search, to find information, to have a critical look at the information gathered. He learns to sort out this information, to synthesise the information to present it. I found that it was a very strong learning process to be able to build your own idea about a subject. As I said, I had a very interdisciplinary subject, so I had to collect and synthesise data from geography, geology, but also from economics and sociology. So, I was self-educated on many things. It taught me methods to succeed, to synthesise and to bring a critical eye. So, it was very rich!

On a relational level: There are different types of doctorates. For me, it was a doctorate with a partnership with an insurance company and with a public institution, the BRGM (French geological survey). I did not spend my three years at the University. I was housed in the company with which the doctorate was contracted. So, I had contacts in all these areas, both on the administrative and the scientific and technical levels, and this taught me a lot.

I was also involved in the management of the project, I organised presentations to non-scientific partners and managed the budget. So, it took me out of the purely scientific field and it's good to get to grips with the realities of communicating with all the people involved. It's also important to understand their expectations.

For me, the thesis is a real professional experience. It is at this time that I really created my first professional network, which I still have today.

**How would you evaluate the skills you acquired during your doctoral training and their relation to your current professional requirements?**

It is clear that I still use some of my scientific and technical skills, but some less and less. Because the further you progress in your career, the further you move away from technical production, and the more you are involved in cross-disciplinary work, in leading projects and people. There are quite a few tools and computer models that I no longer use on a daily basis. On the other hand, I use my interpersonal skills more and more and they have developed. Continuing to be curious, to research new information and use these skills, will always be useful for my entire career I think. What I appreciate most is always trying to improve myself, that's what gives salt, that's what gives spice to everyday life!

It's important to constantly question yourself, to look for new solutions to a problem, to be curious about what's being done elsewhere, to have time to keep an eye on watch and to know how to pass on information to the people you work with.

**Did your employment after doctoral studies go without problems or was it rather a challenge?**

For me, it was very easy! I needed little time to look for a job. Thanks to my contacts, I had a proposal for a postdoc contract before my defence. I knew that I would start one month after my thesis. Then, thanks to exchanges with my network, I was informed of my next position, and then of the third position



I took! So, everything went smoothly. I knew how to seize opportunities as they arose. It was a natural process.

### **What would you like to share with the current doctoral students and future doctoral graduates?**

Being able to do a thesis is a chance!

At the beginning of your career, you have a form of stability, you start with a three-year contract (sometimes more) to do your project. I know that afterwards there is not much stability when the thesis ends for many, it can be very complicated to find their first job, to go through short and precarious contracts. But during the three years of the thesis, we have a form of comfort, that's how I felt. But you have to project yourself. Above all, you must not restrict yourself, not limit yourself. Of course, working on your subject takes up most of your time, but you really have to try to create networks, to meet people in the academic world by going to conferences, by taking part in events, but also outside the academic world, really.

My subject lent itself to meeting experts in non-academic structures, to go and collect data in the field, to question them about their way of doing things, about their jobs. So, I learned a lot outside the academic sphere. From the start, you have to consider finishing your thesis with contacts in the business world and in local authorities, especially if you are not aiming for a research career.

In fact, these people are in demand for contacts with academics. Very often they don't know who to contact, so you mustn't hesitate to go out, to go towards these circles. They welcome us with interest and know that we are doctoral students, we have time, we can make ourselves available, we can start to exchange ideas and so they are really very interested. Then when the thesis ends, people remember you, that you were able to answer a question, or bring something interesting for them. It is what will make doors open, that a recruiter will contact you, it is the memory effect! Three years is more than enough time to achieve this result.

I consider that the beginning of my professional career is not the end of my thesis. My thesis is part of my career. I went presenting myself as a young researcher, a professional, not as a student. In the end, that's what we are when we are doctoral students, we are young researchers. If today the doctorate sometimes has difficulty being recognised in professional circles, it is perhaps because it is presented as three years of training studies, whereas in fact it is the first three years of the beginning of a career and later of an expert in his or her field. If we consider that from the outset we are legitimate to go and establish relations with the non-academic world, I think that it works.

### **What message would you like to pass on to people who employ or would employ doctors?**

I would like to say that many employers stop at the diploma, but for me, it is not having 5 or 8 years of higher education that was the determining factor. On the other hand, during these three years, I have acquired skills. This is what should be valued, much more than having the title of doctor. The most important thing, in my opinion, is not the degree, it's the fact that I've been able to say for three years that I've done research with academic partners, with professionals, and project management. It is valued, it allows us to say 'I have skills to showcase'. If we explain it in the language that recruiters understand, I think it can work. Recruiters should not stop at the title of doctor, and the preconceived ideas they may have about a title. They need to ask each doctor candidate what they did during their doctoral thesis. They need to see what skills they have acquired. We have to look at what lies behind a doctorate subject, it's a professional experience full-fledged. From the beginning of my thesis, I considered myself not as a student, but as a professional who is training. You train throughout your career, permanently and this is still the case for me today.

Thank you Camille!



Alexis Beudin

## **An oceanography consultancy "Our office is our backpack!"**

**Alexis Beudin, PhD, a French national currently living in France, at Lège-Cap-Ferret. He was awarded a doctoral degree in the discipline of Physical Oceanography from the Doctoral School of Coastal and Marine Sciences of Brest University in 2014. His doctoral thesis, entitled "Dynamics and sediment exchanges in the Brest bay impacted by the crepidula invasion", was completed under the supervision of the researcher Georges Chapalain.**

### **Which company do you currently work for and what are your professional duties?**

I work in Lège-Cap-Ferret for an independent design office. I was recruited three years ago by another doctor from the University of Western Brittany, who created this company BW-CGC (Benoit Waelles – Coastal Engineering Consultant). The company is legally domiciled in Brest, but its director B. Waelles works in Tenerife in the Canaries. He recruited me and another doctor from UBO three years ago. Since then, four other doctors have joined us. We are therefore seven doctors. It is a young innovative company with the status of a single-person simplified joint stock company. Our activity is partly devoted to research and development (R&D). We finance the R&D part through the research tax credit. We work mainly in the field of coastal engineering for energy companies and local authorities in the areas of coastal protection, development, ports and the definition of innovative structures for coastal protection. Here is an example: we are working on a project for a company to create an artificial reef that allows the regeneration of mangrove forests while protecting the houses located behind them. These are the types of R&D projects that we are implementing.

My job, my title in the company is very general: I am an oceanographic engineer. The organisation is horizontal; there is no hierarchy, no accountant, and no boss. Everyone is responsible for his own projects, and B. Waelles, the manager, is our main contact person. He is our reference when we have questions. He supervises but we are all very autonomous and that is also why the company works very well. We are all PhDs, and I think that it is really thanks to our PhD training that we can operate in this way. The PhD has made us independent and autonomous.

### **When you say that you are all on the same level, apart from the creator, does that mean that you are more heavily invested than you would be in another company?**

Yes, clearly, we have automated things a lot. We have a consultancy firm in Brest that helps us with the finalisation aspects, invoicing, tax returns and so on, and we simply have an email box for our invoices and personal business cards. On the other hand, everything that concerns the management of our clients' projects is the responsibility of each of us. B. Waelles gave us a head start, because none of us had been aware of these issues. We are a small team (7), we do these administrative operations as we go along, and we are becoming more and more independent in these matters.

### **Have you been employed anywhere else before?**

I have had several jobs since my thesis. I went to the United States for a post-doc at the Woods Hole Research Center – Massachusetts. I even left before

the defence of my thesis. It was an incredible experience in a beautiful place. However, I did not want to continue in the academic race, which was very competitive. I didn't plan on having 15 days of annual holiday, I also wanted time for my family. Furthermore, I had the status of a civil servant on secondment because I am a public works engineer. So I have a double degree, an engineering public school and then a doctorate, and I am therefore still attached to the Ministry of the Environment. That's why I applied for a position as marine environment officer at the Guadeloupe Department of the Environment, Planning and Housing (attached to my Ministry). This was a more administrative position, dealing with governance and the protection of marine environments, and more particularly coral reefs, mangroves and sea grass beds. For a year, I evaluated the work of private companies, drafted specifications, and I was able to instigate a European project that was recently launched. I had the will to do research, but this position was very dependent on the hierarchy and I could only devote about 20% of my time to this European project.

A personal constraint led me to return to metropolitan France, and I took up a contract research post at the University of Bordeaux, where I was a young doctor in post-doctoral studies... Thanks to this post, I built up a network of researchers in the Aquitaine region, the Gironde estuary and, in particular, the Grand Port of Bordeaux.

B. Waelles contacted me, asking me if I was available immediately, and I 'followed' him, because he was offering me an interesting job and the opportunity to work wherever I wanted. It was a very surprising offer.

### **It was royal!?**

Yes, and I didn't think that this kind of job existed. This autonomy! But on the other hand, I work alone. Interactions are done by video conference, on the phone. The non-verbal interactions, in this period of covid, the face-to-face interactions, the shared coffee, it's a bit lacking, even though I have an incredible balance by having an office very close to home. This is the case for all my colleagues: our office is our backpack! As I was saying, there's just the disadvantage of not having this improvisation in the relationships between us.

### **Is your current job fulfilling?**

In many ways, YES!

### **What brings you the most satisfaction?**

Autonomy: even if the tasks are not always the most intellectually accomplished and developed. The constraints of the private sector, even if you have this scientific awareness as a former researcher, are linked to the time constraint, and therefore to the financial constraint of the cost of the service. We charge by the day, a mission can last two days, for example. Our objective is to answer the question posed by our client, a local authority that is not necessarily aware of the scientific aspect of the request. We don't have the time to push our scientific curiosity to complete the answer given. However, sometimes, with self-financing or research tax credits, we develop a theme that interests the company.



***My greatest success is having juggled different positions: research in the USA, administration and governance in Guadeloupe, research at the University of Bordeaux and now consulting! It is to have been able to juggle from one position to another easily for short periods, but allowing me to take charge of a mission, and to have always adapted to the different positions with my double hat of engineer and doctor.***

**So you go beyond your mission?**

Yes, unlike other design offices, this is also the reason why we recruit. And we are also subcontractors for larger companies (e.g. Actimar). I think we do a really good job!

**Would you be willing to share with us your professional victories and failures?**

Does the thesis count? That I went through with it; and that it went badly. I still dream about it at night ....

**When you look back, do you think that it was not easy?**

Yes, but it taught me! It taught me about human behaviour. I developed "antennae"!

My greatest success is having juggled different positions: research in the USA, administration and governance in Guadeloupe, research at the University of Bordeaux and now consulting! It is to have been able to juggle from one position to another easily for short periods, but allowing me to take charge of a mission, and to have always adapted to the different positions with my double hat of engineer and doctor. This dual competence allows me to dialogue with both the technicians and the researchers.

I'm not at all an exceptional scientist, but there are many things that interest me. I have this desire to scratch; I have this 'Swiss Army knife' side that interests me a lot in my career profile!

**A failure?**

Not having completed the mission in Guadeloupe, but sometimes you have to have other priorities than the professional.

**Is your current job related to the doctoral studies you completed?**

My studies are totally in line with my work: coastal physical oceanography, the study of currents, waves, sediment movement (sand, silt) on beaches, in ports, wind transport in dunes. I work on submersion issues, erosion hazards, harbour siltation and everything related to energy quantification. I did a thesis on the hydrodynamics of the Brest harbour, so these are skills that I use in my work. My thesis was already very applied.

**In your opinion, do doctoral studies create ample career opportunities, inside and outside academia?**

Very much so! But perhaps not in France... In countries like Germany, the Netherlands, England and the United States, doctors are really well regarded. The title of doctor immediately puts you in a management position, in a hierarchy recognised in large companies. In France, you have to be a Polytechnic engineer!

Recruiters have a vision of doctors that is far removed from them : long hair, unshaven, with fangs, cool (laughs). They are afraid that the doctor will take them far away... It's still a battle between the engineer from a "grande école" and the doctor from the university. This is despite the fact that today the doctoral schools integrate engineering schools and have public/private partnerships, notably with the CIFRE.

Obviously, the thesis is a job, a professional experience, in which you don't have too much pressure and in which you are integrated by the research world. The doctoral student can make mistakes, he benefits from a lot of information, he learns, people are generous when you are at this stage. Then there are the rivalries that arise.

I'm not telling you that I would do another one!

There is also the problem of salaries, if the salary was higher... It is difficult to make personal plans, which is why doctoral students often start their family life later.

Of course, doctoral students should flood the corporate job market! Our company only recruits doctoral holders, which means that doctors are talented!

### **Did the university open up its perspectives for you or not?**

Because of my rather special status, I was not completely in the university environment. I was aware of the process because I was interested in it. In fact, I was not in contact with many university researchers or research organisations. It was in Bordeaux, as a post-doc, that I saw what academic opportunities were available within the university. But I was not attracted, probably because the working conditions (building, teams) were nothing like those in Brest and more particularly those at the European University Institute of the Sea (IUEM). There, at IUEM, the researchers know why they are doing oceanography!

Moreover, the path to becoming a lecturer is a labyrinth; it is a lot of investment for little financial recognition. Maybe it's a question of ego, of idealising research, which I didn't have in the first place.

On the other hand, I do some training as an external speaker for coastal engineering modules, and I like it.

I don't know what I'll be doing in five years' time, and I have the feeling that in an academic post I would have had many more constraints.

### **What sort of skills have you developed during your doctoral studies and which one of them would you rate as the most and least useful?**

I acquired technical skills on tools related to my scientific field which allowed me to create links with local researchers. Socially, the skills related to the doctorate are important, I created a professional network, but also friends! I have built up a character, a shell.

### **Did your thesis teach you to work in a team?**

In my personal case, no. But I loved working in a team in the USA, it was really great. But I can work alone, I'm not dependent on others to get ahead. I don't put myself in a situation of dependence, but I love working in a team.

### **How would you evaluate the skills you acquired during your doctoral training and their relation to your current professional requirements?**

Totally in line: it was essential on a technical and scientific level. My doctorate allows me to face the time constraint in the projects for which I am responsible, and to approach the pressure in a positive way. It brought me maturity.

### **Which skills are the most important in your current job?**

The technical and scientific skills are the most important ones, the cross-cutting skills were forged later. Company management, for example, it was by developing the desire that I succeeded, that was indirect.

**What acquired skills do you appreciate the most?**

Clearly my scientific training.

**Did your employment after doctoral studies go without problems or was it rather a challenge?**

It just fell into my lap! They came looking for me, so it's pretty easy! I don't know if it would go so well in a big firm, which is very vertical in terms of hierarchy. I like the team, with a certain amount of freedom, I don't really like authority!

**What would you like to share with the current doctoral students and future doctoral graduates?**

A lot of doctorate students call me, and I tell them that there are vacancies in the field of coastal engineering. There is a lot of work to be done. You have to know that in the course of a career, you can also go back and forth between research organisations, companies and vice versa. Many public-private partnerships, 'guest' researchers, within a laboratory, hosted companies or incubators are possible.

If you like to do research and not just research, it is possible to project yourself into a company, because companies like mine are called upon by research organisations in the framework of partnerships, and it is very gratifying. We deal with a very wide range of projects, the operating funds come from many countries, and many types of clients.

I find that the activity is more diversified, and what is not negligible, the remuneration is really much more interesting. And then, in my case, I can work from wherever I want, and that's a real plus.

So do a thesis, learn as much as you can for three years and join the business world because it is very rewarding to provide answers to people who need them in a short time (this time factor is really very different from that of academic research), while taking into account the human and financial stakes.

I also encourage doctoral holders (and doctoral students) to go abroad, doors are opening, international mobility is really important!

**And what message do you want to give to people who employ, would employ doctors (or who are not yet doing so) about doctors, their skills, their adaptability to the job?**

Employ doctors, because they have a great deal of autonomy, much greater than holders of an engineering degree. And I can say this because it is my initial background.

Engineers are given a hand to answer problems. An engineer is not armed, he is disoriented when faced with a problem that he has never solved. The engineer is rational.

The doctor finds a solution, he knows how to bring out the positive in all its complexity. A doctoral student can be given a subject for a thesis with no end in sight, he will go to the end of the question, he will find a solution!

The thesis gives the person who prepares it the time, the time to also work on himself.

The doctor has technical and scientific skills, but you really need to have 'lost yourself' in a thesis in order not to lose yourself in the world of work!

Doctors will bring a breath of fresh air to your company.

Thanks to Alexis!



Florent Guinot

## **Facilitating the implementation of Renewable Marine Energies, it's really satisfying!**

**Florent Guinot, PhD, a French national currently living in Bristol in United Kingdom. He was awarded a doctoral degree in the discipline of Physical Oceanography from the Doctoral School of Coastal and Marine Sciences of Brest University in 2010. His doctoral thesis, entitled "Wave-current interactions in variable bathymetry: numerical and experimental approaches", was completed under the supervision of Professor Vincent Rey.**

### **Which company do you currently work for and what are your professional duties?**

Since June 2021, I have been working for Wood Thilsted in Bristol, an Anglo-Danish company that does foundation design for offshore wind turbines. I am therefore involved in the offshore theme of wind energy. I'm responsible for the company's oceanographic issues, all the site studies, waves, wind currents, etc. It's my responsibility to be in charge of all these issues. It's my responsibility to make sure that data are collected and defined in the right way for the projects. So I carry out and exploit a lot of studies done by third parties

### **Have you been employed anywhere else before?**

Previously, I was in a similar position, in a French company called Naval Energies, which was designing offshore wind floating units also for the offshore wind market. I started by studying oceanography, and then I evolved into my position. I went from being in charge of the site characterisation department (meteorology-oceanography and geosciences), to being in charge of the site characterisation and mooring department. So there was a theme very much in line with my thesis and another slightly new one, on mooring, all linked to oceanography, and the problems of engineering at sea.

### **What prompted you to choose Bristol?**

I just had the idea of leaving, of discovering something else, our generation is a bit restless! But this desire for mobility came at the time when our company, Naval Energies, was being partially closed. I already had my job project before the closure was announced, and everything came together at the same time. Naval Energies was bought out, a third of the engineers were hired in another entity; it was the end of an adventure, a bit sad for this beautiful company.

### **Did you choose Wood Thilsted, or did they come looking for you?**

I did!

### **And why did you choose it?**

To be honest, the destination suited me, it is a personal project to go back abroad, and the company was totally in line with what I was looking for professionally.

### **Is your current job fulfilling?**

Yes, I'm very happy with what I do, with the people I work with, with what I work for ... the purpose of renewable energy. If I had to find a negative point: spending our days behind a computer!

The content of my work is very interesting and suits me perfectly.

**And what brings you the most satisfaction?**

The importance of the studies that I do, because this has a real impact on the cost of the projects and on the work of the engineers. The site studies are essential to do all the dimensioning of systems, and we are usually the first ones involved in this project. If we do our work well, it will facilitate the work of others who will move on to the technical phase and will facilitate the implementation of all these renewable energy projects. It's really satisfying!

**Are you in charge of a team?**

No, not anymore. It's a choice too. I was in charge of a team in my previous job, and now I wanted to go back to being in charge of myself! (Laughs). I wanted to go back to being a technician and taking care of my work. It's clearly a choice to stop managing and focus on the technical aspects.

**And why this break from management? Did you find it complicated, exhausting...?**

No! I really enjoyed it, I was lucky enough to have a nice team. It was really the need to alternate. I'm now in the technical field, in a problematic that I knew a little less about. Besides, I'll probably want to go back to management again later. I would like to alternate.

**Would you be willing to share with us your professional victories and failures?**

I'll start with the failure, a collective failure, with the company dying out. It's a big disappointment because we had excellent technical teams, and we were doing a good job. There were strategic choices and things that we didn't control. It's sad to see 10 years of work come to a halt... It started with the wave energy activities, the tidal energy; there was a whole area of activity, which disappeared as we went along, even though we were quite good in our field. The fact that a large part of it has disappeared is a disappointment.

*For young people, I have the impression that doctors are increasingly valued by companies. Moreover, we can clearly see that salaries on recruitment are clearly better for a doctorate than for a bachelor's degree! In engineering, there are companies that recruit engineer profiles (low+5), but now they opt for doctoral profiles, because of the development of new and original themes.*

**Any successes?**

My biggest success is the current projects. I'm working on some great projects and it's having a real impact! On the farms we've worked on, there are dozens of machines that have been or are going to be installed all over the world. The company is really involved in this dimensioning, this development, and it's very satisfying to put these projects in the water!



**Is your current job related to the doctoral studies you completed?**

Completely, I have the chance to be totally in line with my studies: oceanography studies, wind, wave and current studies. And globally, on a daily basis, I use everything I have learned, not in the same way of course, but all the knowledge acquired is useful.

**In your opinion, do doctoral studies create ample career opportunities, inside and outside academia?**

As far as I am concerned, YES! I am in a field where there is a lot of engineering associated with it. For other doctorates, it is more difficult to find links with industry. There is a huge need for work in marine engineering, whether in the offshore oil industry, in renewable energies or in port development. All the knowledge we can develop in oceanography is directly applicable to engineering problems. We are in a field where there are bridges, it's simple!

**What sort of skills have you developed during your doctoral studies and which one of them would you rate as the most and least useful?**

There are plenty of them!

It is very important to start by building a network. Right from the start of my thesis, I joined a network specialising in renewable energy. We know each other, we exchange, we cross paths; it facilitates exchanges in the different companies. We got to know each other during the thesis, and we continue to cross paths! It is really important to have a social network, and to have started it during the thesis!

On skills, 2 important points:

- Learning how to present results, how to synthesize information, how to write and present, this is really the main part of our work. It's really the biggest part of our job. No matter how much research we do, if we can't explain it, if we can't make it accessible to the people who are going to use it, it's useless. So it's really important! This is what the doctorate teaches us to do (publishing,



communication, ...). It is essential to emphasise the transmission of information. Having a lot of knowledge and skills is useless if you don't know how to pass it on.

- Learn to search for information. It is not necessary to reinvent everything on every project. There are many studies that have been done. The bibliography reflex is extremely important. It is not necessary to redo, we can draw inspiration; we can improve. This is really particular to the doctorate student to have an adapted research and development approach.

### **Did your employment after doctoral studies go without problems or was it rather a challenge?**

Very easily. I had no fear, and I did not encounter any particular difficulties. I was lucky enough after my doctorate to work for a private company linked to a university (in Belgium). So the transition was smooth. I was doing academic research for the university and in parallel, I applied research for the company. Today, I am less involved in R&D; we have short-term needs, we draw on fundamental research to come up with very rapid solutions. We can also be involved in collaborative projects with universities,

### **When you spoke of networks earlier, could you tell us more?**

It was the INORE network (International Network on Offshore Renewable Energy), which was born during my thesis on the initiative of Norwegians who wanted to bring together all the doctorate students working on Marine Renewable Energies, whatever their subject (electrician, oceanographer, jurist, economist...). The aim was for us to get to know each other, and to be able to work together easily afterwards. In this network, we had similar projects, similar ages, and we still rub shoulders on a daily basis.

### **What would you like to share with the current doctoral students and future doctorate holders?**

For young people, I have the impression that doctors are increasingly valued by companies. Moreover, we can clearly see that salaries on recruitment are clearly better for a doctorate than for a bachelor's degree!

In engineering, there are companies that recruit engineer profiles (low+5), but now they opt for doctoral profiles, because of the development of new and original themes. Researchers are very much appreciated, because they are used to digging deeper and not just applying codes, standards, formulas... I'm caricaturing a bit.

### **What message would you like to pass on to people who employ or would employ doctors?**

Having people who have developed skills during a doctorate is a real plus for the company. The company is faced with very new problems. Each project has its own particularities, technology evolves very quickly, and you need people who are capable of developing new approaches, of digging into all the science that already exists on the subject and making it their own. Doctors have this ability to dig into subjects naturally, to look for the flaws, the limitations of each approach, what could be improved.

Sometimes the doctor is reproached for never being satisfied, for always wanting to go further, for always wanting to improve, but in fact, it is a real advantage, if well supervised, it is a big added value for the company.

Many thanks Florent!



Hansy Haberkorn

## **I am recognised and appreciated by my clients and managers**

**Hansy Haberkorn, PhD, a French national currently living in France in Nantes. He was awarded a doctoral degree in the discipline of Marine Biology in the Doctoral School of Coastal and Marine Sciences of Brest University in 2009. His doctoral thesis, entitled "Impact of the toxic dinoflagellate, *Alexandrium minutum*, on the oyster, *Crassostrea gigas*: an integrative approach" was completed under the supervision of researchers Philippe Soudant and Christophe Lambert.**

### **Which company do you currently work for and what are your professional duties?**

Currently, I work for CGI, (Management and IT Consultants) which is a Canadian ENS (Digital Services Company), an information technology and management consulting company which has a presence in France. We have 70,000 employees worldwide, about 11,000 in France.

### **What are your professional responsibilities at CGI?**

I am a business analyst, which means that I act as a bridge, the link between the users of a software or software solution and the teams of developers. In fact, I will get clients to express a need for a new feature in their software and I will help them determine that need. Then I explain to the developers what is expected, and finally, I make sure that everything is done and works.

### **Since you joined CGI, has your job changed?**

Not really, but I did some different assignments. I was a consultant, that was a bit different; I supported a big team of a client to try to find ways of improving its business. Then I did three business analyst assignments for two different clients; I had to learn to imbibe the clients' trades.

### **How long have you been with CGI?**

Five years.

### **Have you been employed anywhere else before?**

I did two post-docs in two different laboratories, a temporary teaching and research position at the University of Nantes, and a position as a project manager at Ifremer at Rephy (phytoplankton and phycotoxin monitoring network), a mission that aimed to review the network's activities to try to find ways of improving them. The post-docs were in my field of specialisation.

### **What prompted you to choose CGI?**

It was linked to my choice to change my professional life. I took a Master's degree in computer science and at the end of the course, I had to do an internship in a company. I explored the field in Nantes. There are many offers in the IT sector in the broad sense of the word, and I wanted to join an organisation that offered different activities. I did not want to find myself locked into a speciality (as I did after my thesis). That's why I decided to work for a Digital Services Company, which makes it easy to change missions. And CGI is also where I did my end-of-studies internship for my Master's degree, at the end of which I was offered

a permanent contract. I accepted the offer and I was well supported in this company. The managers believed in my abilities, so it was a great opportunity.

**Is your current job fulfilling?**

Yes, I am satisfied with my current work!

**What brings you the most satisfaction?**

I should say that is the trust and responsibility that has been placed in me. At the beginning, the transition is a bit strange between the world of research and that of IT, in the broadest sense of the term. But quite quickly my managers realised my abilities, what I knew how to do, and they also quickly gave me responsibilities. They tell me that they are happy with my work, which may seem trivial, but it's not the case everywhere, and it's good to hear it!

I am given opportunities in relation to what I want to do.

I have a certain number of social benefits which are rather nice, (dynamic works council), interesting career development and salary prospects.

**Would you be willing to share with us your professional victories and failures?**

No particular example, but my professional reconversion is rather successful. At the beginning, I had a lot of doubts. It's difficult to go back to university. It is a bit strange, there are doubts. Did I make the right choice? Today, I am satisfied with what I am doing. It is rather a success, and I am recognised and appreciated by my clients and managers.

If I had to talk about my failures, I would say that some of my post-doctoral experiences left me with a bitter taste, and pushed me to look for something else. A bitter taste because you can find yourself in situations where you lack the means to work, where you are not very involved in research projects. I was a bit frustrated and that is among other what pushed me to look elsewhere.

**Is your current job related to the doctoral studies you completed?**

At first sight, there is no link between marine biology and computer science!

In fact, there is a lot of know-how and interpersonal skills that you learn in a doctorate or in a research job that you will find in my current job: there is the whole teamwork part, you never work alone in my job; the whole project management part, planning, coordination, knowing how to apply a method, these are essential things.

And also the whole part about knowing how to express yourself, both in writing and orally, knowing how to write, synthesise, present a result, and mastering English.

The fact of analysing problems, envisaging solutions, proposing scenarios, I find all aspects that I liked in the research profession.



***Even if a doctoral student's speciality may seem far removed from a company's activity, you have to trust them, because all this knowledge acquired during the thesis can be transposed. If I were to paraphrase Montaigne, I would say "a well-done head is better than a full one".***

**In your opinion, do doctoral studies create ample career opportunities, inside and outside academia?**

Yes, clearly! As far as I'm concerned, I was attracted to IT!

**Were you aware of this when you were finishing your doctorate?**

No, I felt like I was a bit stuck, that I'd done the rounds. I wanted to settle down geographically when I discovered all the opportunities in IT. So I can/could change employers quite easily. Moreover, the means we are given to work have nothing to do with the research field!

On the other hand, you still have to be prepared to do some training, even a small one, sometimes in-house in the company. This is necessary because it is not possible to transfer directly from a researcher's job to an IT job, but it can be done quite easily.

**Did the university where you obtained your doctorate open up opportunities for career development? And, did you have any opportunities in the non-academic world?**

I had done a training called the "New Chapter of the thesis". That gave a window into the private sector, which was pretty good. Apart from that, in terms of opportunities directly, no, I don't feel I've been offered anything. In 6 years, I saw one post of Senior Lecturer at Brest University, that corresponded to my profile. It's linked to the situation, it's the same in Nantes, and it's quite sad.

**What sort of skills have you developed during your doctoral studies?**

In terms of fundamental knowledge, I have not transposed my knowledge of toxic microalgae into my current work, and my knowledge of bivalves is not really useful either!

If it is true that one uses the computer tool in thesis, it is not either the computer knowledge that I use today.

On the other hand, the cross-disciplinary skills, knowing how to express oneself orally in writing, knowing how to synthesise and deconstruct a problem, can be transposed very well from research to what I do today.

As for team skills, pedagogy to accompany a user who has a problem, these are important things in my company. The human aspect, building teams whose members get along, is essential.

**How would you evaluate the skills you acquired during your doctoral training and their relation to your current professional requirements?**

They are very good, they are the ones I just mentioned. We have a very good level, we adapt very well to the business world. Not all private employers are aware of this, but we must encourage them to trust us.

**What are the most important ones in your current job?**

There are several, being organised, methodical, being able to manage a project, expression to rephrase explain, and really being able to work in a team.

**What training have you taken that would not serve you, or that would not be relevant to your career path?**

The scientific skills and the technical skills. You could say that flow cytometry is not really useful to me...

**What skills do you appreciate the most?**

Clearly teamwork, and breaking down a problem. We ask ourselves questions, we look for the strategy to put in place to tackle a problem, to envisage solutions. And also imagination, finding the best answer. These are elements that I find in my current work.

**Did your employment after doctoral studies go without problems or was it rather a challenge?**

It has not been easy, with a series of short contracts. This does not allow one to see the end of the tunnel. The transition was not easy. You have to take the plunge, go back to training at almost 40 years of age, at university...

**Without a salary?**

I had the help of the Pôle emploi (French employment agency). But the doubt is there: did we make the right choice? The first courses in programming, I did not understand anything... And I got over it, I continued, even if the doubts persisted. But in the end, I am positive and happy with my path.

**What would you like to share with the current doctoral students and future doctoral holders?**

I really enjoyed my doctorate; it was the rest that was difficult. I had a great time, despite the inevitable tensions at the end of the thesis. If I had a message to pass on today... I still talk to doctoral students. They see the future, which may seem uncertain; it may seem discouraging. But if it's a passion, you have to live it to the end, you have to do your best. You must not be discouraged, because if it does not work out, you can bounce back. We have training that provides us with enough know-how that we can transfer to other fields. I do not regret having done a thesis and I do not regret my choices, I like what I do today.

**What message would you like to pass on to people who employ or would employ doctorate holders?**

Even if a doctoral student's speciality may seem far removed from a company's activity, you have to trust them, because all this knowledge acquired during the thesis can be transposed.

If I were to paraphrase Montaigne, I would say "a well-done head is better than a full one".

It is a beautiful conclusion, many thanks Hansy for this exchange!



Camille Lacroix

## From the study of environmental disturbances on mussels to the fight against marine pollution

**Camille Lacroix, PhD, a French national currently living in France in Brest. She was awarded a doctoral degree in the discipline of Marine Biology in Coastal and Marine Doctoral School of Brest University in 2014. Her doctoral thesis, entitled "Impacts of environmental disturbances on a sentinel organism of anthropized coastal environments, the blue mussel *Mytilus* spp.: genomic and ecophysiological characterization of stress adaptation", was completed under the supervision of professors Dario Moraga and Michel Auffret.**

### Which company do you currently work for and what are your professional duties?

I am currently employed on a permanent contract at CEDRE (Centre for Documentation, Research and Experimentation on Accidental Water Pollution) in Brest. I am head of department, so I have managerial responsibilities. The CEDRE has the status of an association with a public service mission, and we have functions like a private company. So we work on different actions. We have public service missions financed by the State, by the Ministry of the Environment. The purpose of these public service missions is to assist the authorities in the event of accidental water pollution and also to provide solutions to public policies concerning pollution by waste in the aquatic environment. We therefore benefit from public funding in this context. We also carry out projects that may be financed or co-financed by national (such as the National Research Agency, ANR) or international (European) agencies. We may also be involved in private screening. When we break down our budget, it is 50% state funding and 50% project funding.

### Have you been employed anywhere else before?

I have been head of department for a year. Before that I was an engineer at CEDRE. I worked on the impact of accidental pollution on the marine environment. I then changed jobs, so I focused on the impact of pollution by aquatic waste.

### What prompted you to choose CEDRE?

First and foremost for the theme. I always wanted to work on the marine environment and chemical pollution. I am a chemist by training and it is something that has always interested me. I liked the applied side of CEDRE and the diversity of jobs within the company. At CEDRE, we are a bit like "Swiss Army knives", we get to do everything, not just anything, but a lot of things.

### Is your current job fulfilling?

I am very satisfied!

### Would you be willing to share with us your professional victories and failures?

The most rewarding aspect of my job is the fact that I have responsibilities, the fact that I can lead the department's actions as I see fit, and decide on the main strategic directions. Not alone of course, but I really contribute to the work of the department and CEDRE in this sense. I also like the diversity of the work and the themes addressed. I like the diversity of the people I work with, I interact with authorities, academics, managers, private people.

And the last thing, we have a lot of activities in France or abroad, missions in the field. I also like these territorial interactions with other regions, and other countries.

#### **Are you still doing fieldwork?**

Less so now that I'm head of department, but still a little. On the other hand, I still have an activity and I have more and more meetings, especially abroad.

#### **What are your greatest successes or failures?**

In terms of successes, if we look at the post-doctoral period, it is my hiring on a permanent contract at CEDRE in 2018: it is a very great satisfaction. I was fully aware of what I was getting into, since I had done several fixed-term contracts, and I knew, I know, how complicated it is, given the background of some colleagues, to get this type of contract. In the end, I was lucky enough to have very few periods of unemployment and to have a series of fixed-term contracts. My second success was my internal development and the move to responsibility for the department I manage. This is a new activity within the association, as the department did not exist before I took over. For me, it is both a great sign of confidence and a great step forward.

#### **A failure, a bitter note?**

No ...

#### **Is your current job related to the doctoral studies you completed?**

Yes, there is a direct link with my doctoral studies. When I joined CEDRE, I continued with the theme I had worked on during my thesis. I was doing ecotoxicology for my doctoral research, and I am still doing ecotoxicology. Since we are a small team, and the skills at CEDRE are multiple, I am the one who brings this skill to the association today. Thanks to my doctorate, I have developed a whole professional network that I continue to have and extend in my current activities. My job is completely compatible with the framework of doctoral studies.

#### **In your opinion, do doctoral studies create ample career opportunities, inside and outside academia?**

If I take the theme of the doctorate and the skills acquired during the thesis only, I don't think there were many opportunities outside the institution. I have a double degree, I obtained a degree in chemical engineering before my doctorate. That's why I don't think I would have had too much trouble getting back into chemistry, or into a more engineering job. On the other hand, if you only consider the doctorate, I have doubts... In fact, I did not look too much outside the academic world, I was lucky to have this opportunity (the CEDRE). I had the impression after the doctorate that I had a lot of opportunities and positions outside the academic world.

#### **And, did you have any opportunities in the non-academic world, or did you know from the start that this would not be your choice?**

No, the opportunity didn't really arise. I had applied for a few post-docs, and the CEDRE opportunity arose. In fact, at that time, there were a number of positions created on permanent contracts, which I did not obtain, but on the other hand, I was quickly integrated on a fixed-term contract. So I didn't have to look very hard in public research.

#### **What sort of skills have you developed during your doctoral studies and which one of them would you rate as the most and least useful?**

I gained a lot of fundamental skills during my doctorate. I was a chemist and



I learned what biology is! I was lucky enough to have a thesis project that dealt with a lot of technical aspects and problems in the biological sciences. It really helped me develop technical and scientific concepts that are useful to me today.

#### **Such as?**

The functioning of the marine environment, organisms, the impact of pollution on these organisms. How to monitor the marine environment, what to do to study in the field. It's really a set of things, the basics for environmental science with a more biological component, in addition to my chemistry background (industrial chemistry and laboratory chemistry). So I acquired all these field skills and knowledge of this field.

#### **In more transversal skills?**

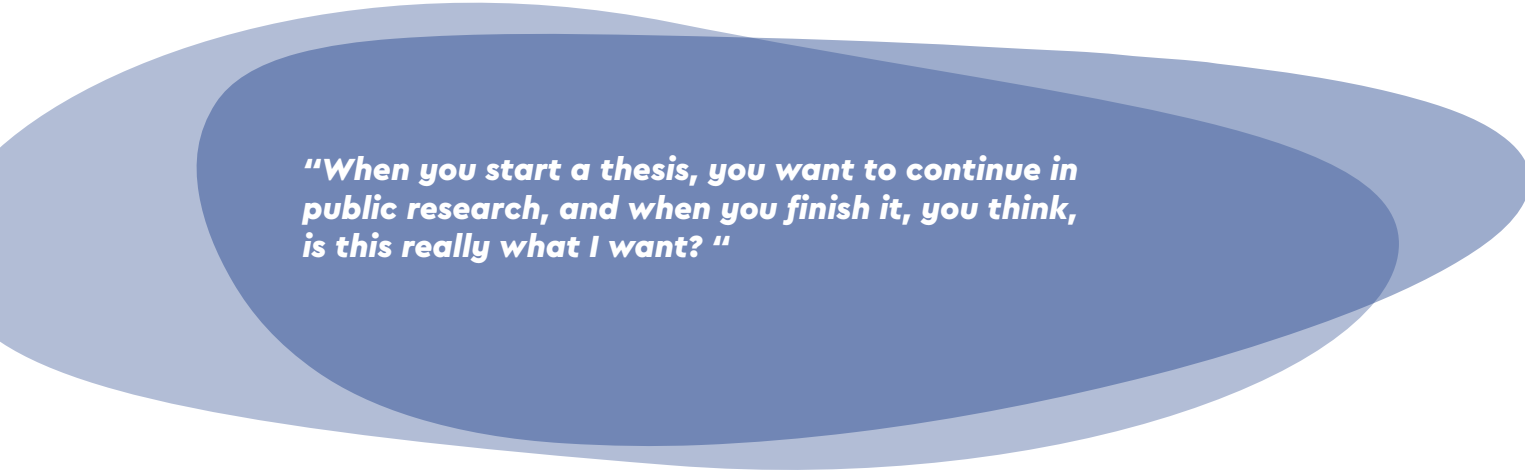
The ability to work in a team, to interact, to integrate into the organisation, the use of certain equipment, the pooling of ideas, the creation of synergies between different experts, and also all the interactions and scientific reflections between colleagues. I would add that the experience of supervising trainees during the thesis has given me skills. Finally, the ability to analyse and synthesise is essential, I did not have these skills before doing my thesis.

#### **How would you evaluate the skills you acquired during your doctoral training and their relation to your current professional requirements?**

Very very good, in terms of technical and scientific skills, everything that was mentioned before.

But there are maybe some small things that would have been interesting, but it depends on the thesis project, the supervisors, the opportunities... But I would have liked to have been taught to plan, to organise, via retro-planning. The importance of deadlines is a notion that I did not have in my thesis. I think that we are not sufficiently trained in this. But it is also mainly because research encourages us to go further in the development of the thesis project. Maybe we develop too much this capacity to want to dig, dig, dig again and never want to stop! I think this is something that in the private sector is very difficult to accept. You have to stop one day, without having gone as far as you would have liked from a technical and scientific point of view. But this is perhaps not compatible with the purpose of doctoral studies.

I would have liked to have been more involved in setting up the project. But that also depends on the thesis supervision. I would have liked to deal with the planning, management and budgeting aspects, and the management of human resources and subcontracted equipment. These are activities that I now do every day! It's really important for understanding how things work, for better understanding scientific and technical work, for optimising what we do. This can also be learned very well afterwards, but it could be interesting to train future doctors in these aspects.



***“When you start a thesis, you want to continue in public research, and when you finish it, you think, is this really what I want? ”***

**Which ones are the most important in your current work?**

These are the ones that have been mentioned. The technical and scientific skills, the valorisation skills, in the form of reports and oral communication, or publications are essential. The relational skills, the ability to know how to solicit the skills of team members or technical equipment.

**What training courses have you taken that would not be of use to you, or that would not be relevant to what you are planning to do?**

I don't see any non-essential skills.

**Which acquired skills do you appreciate the most?**

Finally all of them!

**Did your employment after doctoral studies go without problems or was it rather a challenge?**

Smoothly, everything is a logical sequence. First an opportunity: a retirement, then the creation of a department... Everything was done in a serene and well-constructed way, so that I was never in difficulty.

**What would you like to share with the current doctoral students and future doctoral graduates?**

Certainly, to anticipate during the thesis what they want to do at the end of the preparation of their doctorate. When you start a thesis, you want to continue in public research, and when you finish it, you think, is this really what I want? Maybe if you already had some idea of where you want to go, you could try to adapt the content of the work and the skills you develop during the thesis, through training. Anticipating the career path, trying to take a step back during the thesis seems important to me, even if it is complicated. You shouldn't deny yourself a position, it's not because you're doing a thesis that there's only public research as an outlet.

Above all, stay open!

**What message would you like to pass on to people who employ or would employ doctors?**

Through their ability to think, to propose solutions or approaches, to respond to specific problems, for their scientific skills on the subject on which they are an expert, for their ability to communicate in French and in English, both orally and in writing, doctors are an asset to the company.

**What difference do you see between an engineer and a doctor?**

The engineer will have a spirit of synthesis and an ability to adapt to the deadline; he or she has an advantage in meeting deadlines. At the beginning of my work at CEDRE, I had difficulties in meeting this time factor. It is important to bear in mind that the time limit for an action in the private sector is crucial: once the time is up, it is up, even if from a scientific point of view, the study could continue. In engineering studies, you learn to set time limits, to respond only to demand, that is the engineer's advantage.

**And the doctor's advantage?**

The thesis is a form of freedom, the researcher sees something..., and pfff, he goes there... and can spend weeks, months working on this point. It's a totally different approach. The doctor therefore has specialised scientific skills, the ability to propose solutions and develop collaborations and synergies.

These are really two different profiles. This is also my personal experience.

Thank you very much Camille!



Soizig Lalancette

## Supporting public research!

**Soazig Lalancette, PhD, a French national currently living in France. She was awarded a doctoral degree in the discipline of Economic Sciences in the Coastal and Marine Doctoral School of Brest University in 2019. Her doctoral thesis, entitled "Economic analysis of the territorial footprint of marine renewable energy projects, the case of offshore wind power in Brittany", was completed under the supervision of Pascal Le Floc'h.**

### Which company do you currently work for and what are your professional duties?

I work for a Scientific Interest Group (GIS), the GIS Marsouin (Armorican Research Cluster on the Information Society and Internet Uses), which brings together 200 scientists in the Human and Social Sciences who work on digital issues in Brittany and Pays de la Loire territories. The GIS is subsidised by the Brittany Region and aims to support and federate digital research with regional aid. The special feature of this GIS is that it has its own data observatory. Every year we organize quantitative surveys to measure the evolution of digital in our society.

### What are your responsibilities?

I was hired in January 2020 as head of the GIS data observatory called OMNI. So, every year we produce surveys or products, barometric on digital with three populations: communities, individuals and companies. Thus, since 2002, we have had monitoring data on digital technology in the Region. Initially, my job was to construct the questionnaires, to liaise with the researchers on the execution and then on the valorisation and transfer of data. Since September 2021, I have been the coordinator of this GIS, so my responsibilities have changed. I work more in relation with the community of researchers working on digital technology; my role consists in federating them by proposing calls for interest on scientific themes. I manage the life of the GIS, I organise the scientific councils (every two months) and relations with the Brittany Region. I go to the laboratories to present the group. I generate the call for papers for the annual seminar, and I follow the evaluation. It's a very varied activity.

### Have you a human resources management part?

Yes, I coordinate the activities of the team, which includes a development officer and a statistician, in particular the organisation of activities, the production of the observatory, etc.

### What prompted you to choose the GIS Marsouin?

I joined the GIS because I wanted to improve my skills in data analysis, so I applied for the position of statistical data manager. I found it interesting to bring together researchers on digital issues and to discover the organisation of research in Brittany and Pays de la Loire. Then, my rise in rank and skills was logical. I wanted to understand how calls for projects were made, how communication evaluations were carried out, how partnership agreements were managed, etc.

### Is your current job fulfilling?

Yes, absolutely, I am happy to do it now, to see how research is organised and works. I am learning a lot about all these aspects.

**What brings you the most satisfaction?**

It's helping researchers to progress in their research, finding solutions to get their project funded, following the progress of their work, and trying to find collections that could help them. And then there's the whole aspect of reporting what's happening in the field in terms of digital.

**Would you be willing to share with us your professional victories and failures?**

I think it's finishing my thesis. I succeeded; I proved to myself that I could go all the way, that I could achieve my goal!

So there is the completion of the thesis, and yes, there is the position of SIG coordinator. I realise that I am trusted to manage big files. I have gone from an applied position to a team leader. It's up to me to make the SIG live!

I am satisfied with the way my career path has been built, a path that suits me.

**Is your current job related to the doctoral studies you completed?**

My experience in economics, in research in Human and Social Sciences, allows me to approach researchers easily. Exchanges are easier because I come from research; I understand the interest they have in their project. I think it's great to work in a supportive environment!

**Is your job compatible with doctoral studies?**

Yes, totally!

Sometimes I wonder about being just a mentor, it makes me realise that I might miss research. In fact, I could do much more in my job.

**In your opinion, do doctoral studies create ample career opportunities, inside and outside academia?**

After my thesis, I had several interviews for companies. But I wanted to work in research promotion, it is important to support. There are a lot of issues at the moment, especially environmental ones, on which researchers are not heard enough.

***"the fact that I worked alone,  
to organise my thesis project, is what helps me  
today to coordinate all the projects simultaneously;"***

**What sort of skills have you developed during your doctoral studies and which one of them would you rate as the most and least useful?**

The skills I have developed are many!

I learned how to organise and manage a project.

I learned how to work.

I learnt about rigour (not great before .... Laugh)

I learnt how to present an argument so that people listen to us.  
I learned to write, which is essential in the working world, the thesis is an excellent exercise!  
I learned to talk with researchers from other disciplines.  
I learned to be daring, to communicate, to go towards people.  
I learnt to be open-minded, to trust, and to realise that when you work together you can build ideas.  
I think that our training courses, particularly on publication, presentations, student supervision and post-thesis, are comprehensive.

**Which skills are most important for your current activity?**

The organisation of time: the fact that I worked alone, to organise my thesis project, is what helps me today to coordinate all the projects simultaneously; it is essential!

**Which skills acquired during your doctorate do you appreciate the most?**

Project management, curiosity, freedom! I have this curiosity to go and see what others are doing, open-mindedness.

**Did your employment after doctoral studies go without problems or was it rather a challenge?**

At the end of the thesis, I felt the need to take a break; I needed time to step back. I wondered what I was going to do with my thesis. I had many skills, and I wanted to give it a try! It takes a little time to start another project with the same energy as the thesis.

**What would you like to share with the current doctoral students and future doctorate graduates?**

Finishing your thesis is a big deal!  
You need time, to step back at the end to see what you want to do, whether it's a company or public research.  
For me, public research is important. There are companies that invest in research with substantial budgets, but in my discipline, economics, it seems to me more complicated.  
What is essential is to have confidence in yourself, everything is open to you, everything is possible!

**What message would you like to pass on to people who employ or would employ doctors?**

Give doctors a chance!  
Doctors are interesting, they know how to adapt to a project, how to adapt to any public. We, doctors, have this desire to learn, we have developed a great curiosity, we are really interesting profiles for your companies, to bring you new ideas. Don't be afraid of doctors!

Thank you Soazig!



Edouard Lavergne

## **From Bordeaux to Brest, Frankfurt, Socotra, Tokyo and finally Banyuls-sur-Mer!**

**Edouard Lavergne, PhD, a French national currently living in France. He was awarded a doctoral degree in the discipline of Marine Biology from the Doctoral School of Coastal and Marine Sciences of Brest University in 2012. His doctoral thesis, entitled "*Biodiversity of estuarine fish in Socotra Island (North West Indian Ocean): from the fish population to the functioning of *Terapon jarbua* populations*", was completed under the supervision of Professor Jean Laroche.**

### **Which company do you currently work for and what are your professional duties?**

I work for Plastic@sea, a startup housed in the oceanological incubator of Banyuls-sur-Mer (Arago laboratory). I am in charge of Research and Development since September 2021.

### **Have you been employed anywhere else before?**

After my thesis in Brest, I did a post-doc, then I was a professor at high school (Lycée Naval of Brest). I was then recruited as an Associate Professor in Japan at Kyoto University. For 6 years, I taught and did research in the field of integrated coastal zone management, on the marine biology aspect, and I worked a lot on the connectivity between estuary and marine environment, in the field of environmental DNA genetics (types of fish in Japanese estuaries). After that, I was a Temporary Teaching and Research Assistant (ATER) at the University of Bretagne Occidentale (18 months).

### **What prompted you to choose your Company Plastic@sea?**

Two main reasons: firstly, I know the CEO and the Director of Operations who recruited me; they both come from the University of Brest and the Coastal and Marine Sciences Doctoral School. They were faced with an increase in activity during the Covid pandemic, and they contacted me to reinforce their team. I was then involved in the ATER position and with colleagues in Brest. My plan was to take the competitive examination that would allow me to become a lecturer in a position that was being created in Brest. In the end, in June, I was ranked but did not get a position. So I contacted Plastic@sea again, and I joined the team!

So it was not my first choice, I wanted to be a lecturer, but it was not a choice out of spite either. After twenty years of successive positions all over the world, I have seen and done quite a lot, so it was less of a heartbreak than it could have been a few years ago.

### **Is your current job fulfilling?**

Yes, I am very satisfied; my activities are very interesting and varied.

### **And what brings you the most satisfaction?**

In terms of research and development, it's the setting up of new experiments to test the toxicity and biodegradability of plastics at sea. This ranges from experimentation in the natural environment to laboratory experimentation, with the use of aquario systems that are being patented. So there is also this innovation aspect which is interesting.

The field aspect is also very satisfying. We also do scientific communication. For example, we are working on the "Plastic under the microscope" project with schools. Children go to the beaches to collect and count plastics (as part of a European protocol); an operation like this is quite rewarding. This is also one of the reasons why I went into the corporate world; there is an impact of our research work on society. My thesis work in Yemen affected far fewer people! Furthermore, I continue to publish, as I am co-supervising two doctorate students and soon a third (all funded by the CIFRE : Industrial Research Training Agreement).

***"Doctors have, because of their thesis experience, this capacity to be imaginative, which is a real plus in R&D for the company!"***

**Would you be willing to share with us your professional victories and failures?**

The biggest regret is not to have become a lecturer!

**Did you give up for good?**

The vision of the company within the University has evolved, and I tell myself, especially as I was once a teacher-researcher, that at the end of my career, .... I don't have any regrets, I feel good at Plastic@sea, and I still give some courses and supervise young doctoral students.

**Your best success?**

The position at Kyoto University! The day it happened, it was a great satisfaction, even if I knew that the position had a limited duration (6 years). Kyoto University is the second largest university in Japan, ranked in the top 25 in the Shanghai ranking. In Japan, when people ask you in which university you teach, and you come from Kyoto, they respect you, it's quite special! (On the other hand, you should not introduce yourself by saying that you come from Kyoto University, you would be considered as a proud person)... On the other hand, when you come back to France.... Laughter.... Whether you come from the Sorbonne or elsewhere, you are an eternal student....

**Is your current job related to the doctoral studies you completed?**

My studies are entirely compatible with the framework of my work with a lot of skills transfer, scientific rigour, bibliography, and all the skills for working upstream, in aquario, ... Even if the subject is different "the bacteria that are on the plastic", my doctoral knowledge is transposable.

**In your opinion, do doctoral studies create ample career opportunities, inside and outside academia?**

I have the impression that university professors are training future teachers. I don't think this is voluntary. The question of the context of entrepreneurship is not asked, unless the thesis student has a precise idea of his professional project and has an idea of his transferable skills. I think that CIFRE doctoral students are more sensitive to this aspect. As far as I'm concerned, I also think that when you talk to a company director about the environment (my discipline), he hears a constraint...

**What sort of skills have you developed during your doctoral studies?**

In terms of fundamental skills, of course, the whole research aspect is important. In the doctoral school, we had the advantage of being able to choose our courses without restriction, depending on our needs. So I took a lot of courses during my stays in Germany.

On the aspect of social and relational skills, I followed courses with an external speaker that I found very interesting. These were courses on interpersonal relations, team management and conflict prevention. I thought what he presented was great, but we realised that in everyday life, in reality, it didn't work the way it was presented to us... It was paradoxical.

In terms of crosscutting skills, I developed all the skills in terms of project management and budget management. Especially as far as I was concerned, I really managed the budget of my thesis (financed by the Muséum National d'Histoire Naturelle and by the University of Frankfurt). I was autonomous on this management and had to ensure the means of the thesis, my missions and also my salary.

**Which one of them would you rate as least useful?**

None of them! You always use what you have learned, at one time or another. There are some areas of expertise that I don't use any more, such as fish taxonomy... but the process of description remains the same for other areas.

**What are the most important acquired skills for your current activity?**

Scientific rigour, of course, but above all the organisational aspect: planning meetings, appointments with doctoral students, experiments that start on such and such a date and must be completed by another date. At the moment, I feel like I'm working on five theses at the same time!

My background, having done a thesis, allows me to manage this situation, of course with the help of the laboratory technicians, the doctoral students, but everything has to be coordinated.

**You didn't mention your language skills?**

I don't talk about it, because for me it's obvious, I did my master's in Wales, my job in Japan, it was essential. Even if I can also communicate in Japanese, but yes, of course English is essential!

**Which acquired skills do you appreciate the most?**

Project management! For everything scientific, you can train yourself, with tutorials on the internet, but for project management, it is essential to be trained, to learn from someone.

**Did your employment after doctoral studies go without problems or was it rather a challenge?**

Long, if I look back... I defended my thesis in 2012, and I got a job with a permanent contract in 2021.



**And your integration into the company, did it happen naturally?**

It happened quickly, but it was something I didn't know. I discovered a totally different world of work, with deadlines to be respected in relation to clients, and sometimes deadlines that are not achievable.

**And you may feel that you are not going to finish?**

If you want to go to the end of the scientific process, that may be the case, but for the company and the client the question of going further may have very little interest or not at all. This can be frustrating. That doesn't mean that we don't try to answer it, it may happen that we do, and that is a plus. But it's all a question of time.

**What would you like to share with the current doctoral students and future doctoral graduates?**

Being in a thesis shows that you have a passion for your field of research, you show that you want to know more, you must continue, you must not give up! It can sometimes be complicated, but there is nothing insurmountable. Few people do not find a job at the end of their thesis. On the other hand, you should not focus solely on the world of teaching and academic research. This can be an objective of course, but you should also look at what is going on in the surrounding area, and this will be all the easier if you have anticipated it. You have to have a plan A and a plan B!

**And a good network?**

In my case it helped, for my current job, and for my job in Japan. It's true, a meeting, a discussion can open doors.

**What message would you like to pass on to people who employ or would employ doctors?**

At Plastic@sea, we have colleagues from engineering schools. Engineers have, during their training, learned to apply and develop precise techniques, they are very "square", a little less flexible than a doctor is.

Having spent three years in the world of research brings a lot to the table; you realise that not everything works in a model. To find solutions, you have to be imaginative and use inequalities. This is a plus for the company, a plus that allows you to move forward and avoid having to go backwards; you can change direction a lot in research.

Doctors have, because of their thesis experience, this capacity to be imaginative, which is a real plus in R&D for the company!

Thank you Edouard, for your time!





Anne Piron

## Manager for Earth Observation and Marine Currents

**Anne Piron, PhD, a French national currently living in France in Brest. She was awarded a doctoral degree in the discipline of Physical Oceanography in the University of Brest in 2015. Her doctoral thesis, entitled “Observation of deep convection in the Irminger Sea over the period 2002–2015 by Argo floats”, was completed under the supervision of Researcher Herlé Mercier.**

### Which company do you currently work for and what are your professional duties?

Since mid-December 2021, which is very recent, I have been working for eOdyn, a company based in Brest that offers expertise in measuring ocean currents and sea state by analysing AIS data used for maritime traffic. I am responsible for operational services. I am responsible for the development of the company's activities. I manage the commercial relationship with our different clients and I participate in the follow-up of the different projects.

### Can you explain what AIS data is and what it is used for?

AIS data combine two types of information: static, which characterizes the ship or its cargo; and dynamic such as position, date, speed, heading, etc. This data is mainly used in the context of safety at sea.

### Have you been employed anywhere else before?

Before joining eOdyn, I had worked for 5 years for Altran, one of the biggest French consulting companies. First as a consultant in oceanography and meteorology, then as Head of Scientific Activities and finally as Sales Manager for the Brest branch.

### What prompted you to choose eOdyn and Altran? To answer this question, please start by talking about your choice of Altran, and then tell us what brought you to eOdyn.

What interested me in choosing Altran was the possibility of working on different projects and of acquiring various skills that were complementary to what I was doing during my thesis. It allowed me to increase my skills in these areas. I found it very rewarding. I had the opportunity to develop professionally, so it was an interesting and rich experience.

I then chose to join eOdyn for two main reasons. Firstly, to refocus on an activity where the stakes are scientific above all. My recent functions at Altran had gradually distanced me from science, which was a regret. The second was to rediscover the dynamics of a company on a human scale. Altran is now part of the CapGemini group. When I left, the group had just reached 300,000 employees. At eOdyn, the team consists of about ten people. It's a big change, but it's a guarantee of proximity to the people and the teams

### Is your current job fulfilling, and if so, what brings you the most satisfaction?

Yes, I am very satisfied with my job!

I left the technical side in 2019, when I took up my position as Scientific Manager and then Commercial Manager. This is a career move that I am extremely satisfied to have made. It has allowed me to open up to the professional world in a much broader way. Before, I was only focused on my scientific projects. This development has enabled me to understand how a private company works

in a large group, how business development works and how to be a manager. Through the accounts, I was responsible for, I discovered the world of banking, defence and the agri-food industry. These five years have been very rich. The least satisfying aspects of the job for me were the very fast pace of work, the emergencies to be dealt with on a daily basis, all the time... It was psychologically heavy, more than physically. The pace and atmosphere at eOdyn are calmer. What seems to me to be important in a job is also the confidence given to a person to entrust him with new responsibilities. It is this trust that is given to me that is most rewarding in my eyes.

**Would you be willing to share with us your professional victories and failures?**

This is not an easy question!

For "success", on a personal level, I would say my professional development. And professionally, the maintenance and development of Altran Brest's scientific team, notably with the setting up of research agreements with Ifremer and the recruitment of two young doctors who are now involved in projects for our clients. One of them has just taken up the position of Scientific Leader, which will open up new professional prospects for him, and I am very happy for him. As far as "failures" are concerned, if I can count my thesis experience as professional experience, I regret that I was not allowed to participate in an offshore campaign during my thesis, when the opportunity was there.

**Is your current job related to the doctoral studies you completed?**

At Altran, I was recruited as a young doctoral student, an interesting status for companies that can benefit from the Research Tax Credit (a tax provision in France). This allowed me to work on both internal research projects and projects for our clients. Without a doctorate, I would not have had such opportunities. Altran is a service provider. We therefore work on projects for our clients. Thanks to my status as a young doctor, I was able to work on internal research projects at the same time, thanks to the Research Tax Credit. This allowed me to develop my skills in scientific subjects. This is a model that Altran uses for its scientific teams, which makes their research more dynamic. This company collaborates with research organisations such as Ifremer, which is directly linked to the laboratory where I prepared my thesis.

I have now (since 2019) moved away from the operational aspect of the research work but my scientific training gives me the scientific credentials to exchange with the different actors we work with, which is very important.

**In your opinion, do doctoral studies create ample career opportunities, inside and outside academia?**

In my opinion, yes. The ocean is at the heart of the balance of our planet. It is a vulnerable system whose resources are immense and precious, but fragile and limited. As we become collectively aware of the need to preserve it, the economic sectors must rely on research and expertise in marine sciences. There is an increasing number of private players working on this issue.

**Did the university, your host laboratory, where you prepared your PhD, open up opportunities for you?**

At the time of my doctorate, we were not encouraged. But as far as I was concerned, I knew when I started my thesis that I would not continue in a post-doctoral process. I was not planning to apply for positions in public research, at the CNRS, at IFREMER, for a whole host of reasons.

I wanted to move towards the business world, without really knowing where I was going, because I didn't have much information. When I went to the research teams and tried to get information, I didn't really get an answer. Because it

wasn't their idea to train a doctor to do anything other than basic research in universities or research organisations.

**In your opinion, has this evolved?**

Yes, and in the right direction! It is very good. When I think back to the image of companies that I had six years ago, it is not at all the reality of the field today. For me, I was very lucky to have the Altran opening. One of their consultants worked at Ifremer. I met her, she explained to me what the activity of the company consisted of and indicated to me what the possibilities were. Then there was a combination of circumstances, a job opportunity a year after obtaining my doctorate.

Apart from Altran, I think there were other possibilities, but I really did not have the information.

**What sort of skills have you developed during your doctoral studies and which one of them would you rate as the most and least useful?**

In fundamental knowledge, it is mainly scientific skills, particularly in physical oceanography.

For transversal skills, clearly my synthesis and writing skills; oral communication; popularisation and of course respect for deadlines, autonomy and rigour. I would add analytical skills and English.

**You don't mention the method of setting up a project?**

Not really, because I was not involved in this aspect during my thesis.

*I wanted to move towards the business world, without really knowing where I was going, because I didn't have much information. When I went to the research teams and tried to get information, I didn't really get an answer. Because it wasn't their idea to train a doctor to do anything other than basic research in universities or research organisations.*

**Ok,....**

And so, for interpersonal skills, teamwork, listening skills, flexibility, communication. Listening, in fact I learned more in the field!

**How would you evaluate the skills you acquired during your doctoral training and their relation to your current professional requirements?**

When you look at my career path, you quickly understand that the technical and scientific skills I acquired during my thesis served me during my first years, and currently they do not serve me in my daily life. They are not the ones I use the most. It's rather the rigour, the respect of deadlines. The thesis teaches us to develop our analytical skills, which is essential in everyday life. Our writing and communication skills are essential. These are the skills that have helped me the most to meet my professional requirements.

**What training courses have you taken that would not be of use to you, or that would not be relevant to what you are planning to do?**

I would say that the most important ones are really communication, listening and autonomy.

I had the opportunity during my thesis to test and parameterise Argo floats in the Ifremer test tank. Argo floats are autonomous underwater instruments capable of measuring different parameters (T°, salinity, pressure, oxygen...) of the ocean up to 4000 m deep, as they drift in the ocean waters. I have never used the skills I acquired during this experience, which I did find fascinating. (laughs).

**Which acquired skills do you appreciate the most?**

The ones I appreciate the most are perhaps oral communication, and I spoke about this a little earlier, the popularisation of scientific results. I really enjoy exchanging and sharing around a scientific subject. For me, sharing knowledge is very important for raising awareness of our subject among young people and outside players. It is a part that I like very much and I am quite comfortable in this exercise.

**Did your employment after doctoral studies go without problems or was it rather a challenge?**

Finding a job was not complicated in the sense that the Altran opportunity arrived a few months after my thesis defense when I was on a fixed-term contract in a public organisation, which I left to sign this permanent contract. I was aware of the opportunity that was offered to me, it was a real chance.

On a personal level, it was a bit complicated. I joined Altran when I had just had a little boy, he was just three months old...(smile). But my employer was very understanding and gave me the time I needed to combine my family and professional life. So it went well.

How did I feel about my first status as an employee? I did not enter my thesis as a student but as someone involved in a research mission that would be validated by a diploma, I did not live it as simple studies. My transition to professional life in a company was therefore not a break. The difference when I joined Altran was the word "permanent" on my contract.

**Is that reassuring?**

Yes, it's totally reassuring! To be honest, I didn't really know what I was getting myself into, but the word "permanent" was reassuring, and it allowed me to think about the next step in my career.

**What would you like to share with the current doctoral students and future doctoral graduates?**

For doctoral students, a piece of advice perhaps: open up to the business world during your thesis. In terms of awareness it is important, considering the difficulty to integrate in a post-doctoral research position in the academic world.

So establish and maintain a network of different actors in your field, be present on forums, meet and maintain exchanges with your network. At least for yourself, but also so that the different actors identify you.

**You talk about networks, which networks do you mean? LinkedIn?**

Yes, but more widely. There are a certain number of information sites, such as the World Sea Campus, and fairs like Sea Tech Week in Brest, which bring together all the players. We must not hesitate to meet them, to open up to the world, this is what I call going towards the networks. You have to dare, there's no risk...

Academic research is one thing, but the world of companies is extremely rich and fascinating; it's worth taking an interest.

And, another thing, there are other sectors to explore: education and the associative field. I will give the example of a friend, guided by her passion for the ocean, who became the scientific coordinator of an association that contributes to the implementation of oceanographic expeditions under sail in little or unexplored maritime areas to promote a better knowledge of the ocean.

**Can you give us the name of the association, and we will give you the link?**

Yes of course, OceanoScientific.

One last piece of advice: if you want to present your CV in a company, adapt it to the "company" format, it is very important! Be relevant and concise, don't forget to highlight the transversal skills acquired during your doctorate, they are as important as your technical and scientific skills. This will also show that you are able to take a step back.

Finally, express your motivation and passion for your subject. Be positive and smiling and the world of work will smile on you!

**What message would you like to pass on to people who employ or would employ doctors?**

I have noticed that there is a gap in the perception of the doctorate in France. Companies have the image of doctors who have worked on very specific and theoretical subjects, and who are trained exclusively for academic research. But things are changing, the reality is that thesis subjects are often close to the reality of the market.

Thus, in addition to their specific and specialized technical knowledge, it is necessary to convey the message that doctors possess many crosscutting skills such as communication, teaching or project management, for example. By opening up to the business world, the doctor is at the junction of the two worlds, which is a huge asset for becoming a key element in the field of innovation.

To employers, I say: Trust the doctors!

Thank you Anne!





Lia Siegelman

## **Convincing planetary scientists that physical oceanographers could help understand Jupiter's turbulence**

**Lia Siegelman, PhD, a French-American national currently living in California in the USA. She was awarded a doctoral degree in the discipline of Physical Oceanography from the Doctoral School of Coastal and Marine Sciences of Brest University in 2019. Her doctoral thesis, entitled "Ageostrophic dynamics in the ocean interior", was completed under the supervision of Prof. Patrice Klein and Pascal Rivière.**

### **Which company do you currently work for and what are your professional duties?**

Since July 2020, I work at SCRIPPS, Institution of Oceanography, University of California, San Diego. My responsibilities are those of a post-doc, so most of my working time is dedicated to research.

### **Has your job changed?**

On paper it has not changed that much, I started with a study that involved observations, then a modelling study, the content has changed but the responsibility of the job has remained the same.

### **Have you been employed anywhere else before?**

I did a first post-doc of 5 months at NASA (Jet Propulsion Laboratory and California Institute of Technology in Pasadena, California) mainly to finalize my thesis results.

### **What prompted you to choose SCRIPPS at the University of California and this post-doc?**

I applied for a postdoctoral fellowship at Scripps, which I was awarded. Scripps funds my work entitled: "Genesis and persistence of Jupiter's polar cluster of vortices". It is a great to be able to choose your own research topic, but also the person you want to work with, because I have a lot to learn from this particular professor.

### **Is your current job fulfilling, and if so, what brings you the most satisfaction?**

Yes, I am certainly very satisfied with my job!

For me, I would say that the most rewarding aspect of my job is teamwork, the fact that I get to interact with people with different expertise. It is very rewarding to regroup all these competencies to answer questions that one could not answer on its own.

What might be trickier is to maintain a healthy work-life balance, but it is up to me to be rigorous about it. When research gets exciting, I tend to get carried away (laughs)!

### **Would you be willing to share with us your professional victories and failures?**

I would say that one of my accomplishments is the transition between my doctorate and my postdoctoral research and managing to convince planetary scientist that physical oceanographers could help understand Jupiter's turbulence.

### **Is your current job related to the doctoral studies you completed?**

During my doctorate, I studied on vortex interactions in the ocean, and now I'm looking at these interactions in the atmosphere of Jupiter, basically applying the same fluid dynamics concepts, ... just on a different planet!

Yes, so it is pretty much completely linked with my doctoral studies. I would even say that without my doctorate studies; I absolutely could not do it.

### **In your opinion, do doctoral studies create ample career opportunities, inside and outside academia?**

Yes, of course, because when we study oceanography, it is related to the Climate, which is one of the major problems we are facing. There are many opportunities outside of academia: in the green industries, climate advisory policies, but also machine learning and big-data related jobs or even outreach opportunities with organisations like Océanopolis in Brest.

### **What sort of skills have you developed during your doctoral studies and which one of them would you rate as the most and least useful?**

The fundamental skills are very important. Thanks to my thesis supervisor and the people I was in contact with during my thesis, I acquired solid hard skills.

My thesis supervisor taught me everything I know about geophysical fluid dynamics. Remote sensing experts at NASA explained the intricacies of various satellite products. I also used data collected by instrumented elephant seals in the Southern Ocean. The scientists who developed the tags explained me how they worked as well as their limitations. As a by-product, I developed data analysis skills and programming skills that are translatable for others jobs than being a researcher. For instance, in the field of big data and, machine learning.

I should also mention all the vital soft skills. For instance, in my job, I am in contact with people from around the world; it is an opening to different cultures, to different ways of working. You need to show openness and flexibility in your way of thinking and working, to truly understand your collaborators. The goal being to form a team that is better than the sum of its parts.

### **How would you evaluate the skills you acquired during your doctoral training and their relation to your current professional requirements?**

They are totally in line with my current job. Doing a post-doc can be seen as a direct continuity of doctoral studies. The scientific skills and the soft skills that I developed as a graduate student are essential to the job I am currently doing.

### **What training courses have you taken that would not be of use to you, or that would not be relevant to what you are planning to do?**

... I don't really know, maybe Physics/biology interactions. Even though they are not so useful today, they may well be in the future!

### **Which acquired skills do you appreciate the most?**

I was really lucky to meet a great doctorate advisor. He taught me a lot of things, from an oceanographic point of view, but also from a human point of view, how to do research, how to navigate the entire research world. I will be eternally grateful to him for all our exchanges.

*During my PhD, I studied on vortex interactions in the ocean, and now I'm looking at these interactions in the atmosphere of Jupiter, basically applying the same fluid dynamics concepts, ... just on a different planet! Yes, so it is pretty much completely linked with my PhD studies. I would even say that without my doctorate studies; I absolutely could not do it.*



**Did your employment after doctoral studies go without problems or was it rather a challenge?**

So far, it has been a pretty smooth transition from being a graduate student to being a postdoc.

**What would you like to share with the current doctoral students and future doctoral holders?**

Do research on a subject you are passionate about, with people you genuinely appreciate. I even think that working with someone that inspires you can be even more important than the research topic!

**Is a thesis work a partnership?**

In my experience, absolutely!

**What message would you like to pass on to people who employ or would employ doctors?**

I am under the impression that in France, the degree of doctor is not always recognized to its true value. It is important to know that doctors are not bookworms who are not adapted to the professional world. On the contrary, they are rigorous and assiduous people who have dedicated three years of their life on a specific subject. They are therefore people capable of carrying out a complex project, and of facing the eventual difficulties encountered along the way. Doctors are full of qualities that makes them well suited for the industry!

Many thanks Lia for this exchange!





Vanilla Temtching Temou

## **A doctor is not a researcher disconnected from reality. He is a project leader**

**Vanilla Temtching Temou, of Cameroonian nationality, currently living in France. She was awarded a doctoral degree in the discipline of Mechanics, Mechanical Engineering, Fluid Mechanics and Energy in the University of Brest in 2020. Her doctoral thesis, entitled “*Experimental and numerical study of fluid-structure interactions on flexible composite hydrofoils*”, was completed under the supervision of Professors Jacques-André Astolfi, Gilles Ausias and Benoit AUGIER at the Research Institute of the Ecole Navale, in partnership with the company SEAir, the IRDL and IFREMER of Brest. The defense took place on September 18, 2020.**

### **Which company do you currently work for and what are your professional duties?**

After my thesis, I continued on a permanent contract with the company SEAir which financed my thesis. I am currently in charge of CFD (Computational Fluid Dynamics) calculations and hydrodynamic experiments. SEAIR is involved in the nautical field as an expert in the flight function on boats via the addition of hydrofoils. On a daily basis, I am in charge of the numerical simulation of the hydrofoil behavior in water and of the experimentation part on this theme. I also intervene on the experimentation part, in particular on the behavior of structures in water. My work is therefore focused on the whole experimentation part, from the organization to the technical process. I am also involved in the financing of research at SEAIR, mainly in the drafting of technical files for research tax credit or innovation tax credit.

### **Has your job changed since the end of your doctorate?**

Yes, there have been changes in both my responsibilities and the content of my missions. During the thesis I was working mainly on the needs of my research subject, which was more focused on sailboats and flexible hydrofoils, whereas today, thanks to the expertise acquired during my thesis, I perform all the hydrodynamic studies, and my work has direct application to customer projects and internal research. I am now involved in the financing part of the research, an aspect I did not address previously.

### **What prompted you to choose to stay at SEAir?**

Well, I started my thesis at SEAIR right after graduating from engineering school, in the aeronautical field. I was seduced by the research topic on “boat flight” which is, in my opinion, halfway between the hydrodynamic and aerodynamic fields. Integrating the company and applying the expertise developed while improving it was the logical continuation of my thesis.

To continue the adventure with SEAir is exciting, because their practices are very innovative and this arouses my interest enormously. We are working on foil technologies (flying boat) which are becoming more and more popular but there are still many open fields to research.

### **Is your current job fulfilling?**

Yes, I am very satisfied with my current job, which is in my field of interest. My expertise allows me to carry out my missions.

### **What brings you the most satisfaction?**

Anything to do with research culture is very rewarding. There are things that are not necessarily all done, sometimes you have to do a lot of bibliography work to answer problems, consult scientific articles, look at the work of the competition and make sure that you develop new methods and can develop them. All this research is really rewarding.

### **So everything is fine?**

I would say Yes, everything is fine. I would like to point out that when you are doing a thesis and working on a specific academic field in a laboratory, you are not privileged enough, you have three years to complete your research project. In a company, you work more often in project mode in a team and there are several constraints that you have to know how to manage, notably the respect of the budget and the deadlines. It is important to be aware of this

***I am in charge of the numerical simulation of the behaviour of hydrofoils and I am also involved in the experimental part, in particular on the behaviour of structures in water. My work is therefore focused on the whole of the experimentation part, from the organisation to the technical process.***

### **Would you be willing to share with us your professional victories and failures?**

In terms of failure, I could cite as an example, a study on the navigational failures of a boat. It was not quite working as expected... and so I had to study the reasons for its failures, one on its practical behaviour and the other on its dynamic behaviour. I fulfilled the first part of the contract, but on the second, due to lack of time and the company's imperatives, I was unable to provide an answer. For me, there is frustration in this type of situation.

Fortunately, there are success stories, several projects that have been completed. You may have heard of EFLyCO, a project that SEAIR carried out for the military. It was about experimenting hydrofoils on the fast boats of the navy commandos, the ETRACOs. This equipment has several operational interests for the military: sailing faster, reducing fuel consumption, stabilizing the boat, limiting the wake, reducing noise, etc. I was in charge of the fluid part of the foil design. I worked on modelling the behaviour of the foils in the flow in a design

loop with the naval architect and the structural engineer. To be able to carry out these interactions and see the foil being manufactured and then sailing on the boat is a real achievement for me.

**Is your current job related to the doctoral studies you completed?**

The link between my thesis and my work is direct, because of my particular case, a doctorate prepared in a company.

**In your opinion, do doctoral studies create ample career opportunities, inside and outside academia?**

Yes, absolutely, in France, there are wide opportunities available to us, outside the academic field. In industry, industrial research, but also in consultancy firms, doctors are recruited. They may not all be involved in fundamental research, but rather in R&D (research and development) and they help companies with technical part of funding processes. And let's not forget the law firms for all that has to do with patterns or intellectual property !

**Were you aware of this when you were finishing your doctorate?**

Yes !

**And, did you have any opportunities in the academic world, or did you know from the start that this would not be your choice?**

Yes, in addition to my opportunity with SEAIR, I had a postdoc opportunity in the research center that I declined.

**What sort of skills have you developed during your doctoral studies and which one of them would you rate as the most and least useful?**

In terms of fundamental skills, during my thesis, I worked on mechanics. It's a multidisciplinary theme: I worked on aspects of fluids and material structures. I developed a lot of skills in these areas, so I refined my expertise. Within the laboratory, at the Naval School Research Institute, the collaboration with the other doctoral students and researchers has been extremely enriching, both on the fundamental side and on the teamwork aspect.

What are the most important ones in your current work?

My sense of pedagogy, which I acquired by participating in teaching.

I prepared my thesis in partnership with four different companies, so I had to show a sense of organisation, the ability to manage interactions, to manage the project and to ensure coherent follow-up.

I would add writing skills, through the publication of scientific articles. And of course English skills!

**And what about social and relational skills?**

Life in a research team undoubtedly develops our social and relational skills.

We have to be in contact with other researchers, work as a team, present our work internally and at conferences. Exchanges allow us to create links, collaborations, networking, it's important!

**How would you evaluate the skills you acquired during your doctoral training and their relation to your current professional requirements?**

With my job, my current position, I know that the skills I acquired during my thesis are essential. They allow me to carry out the projects, I work on in terms of research. My training allows me to go far beyond the work of an engineer, of someone who does not have a doctorate. And on the relational level, my skills allow me to communicate with the architect, with the structural engineer, ... with all the people involved in the construction of a boat.

**Which acquired skills do you appreciate the most?**

The technical and scientific aspects and the teamwork side. I think all our skills are important. I really enjoy the communication side, which I have developed at international conferences and networking.

**Did your employment after doctoral studies go without problems or was it rather a challenge?**

For me it was easy, I would say, because it was really continuity. I was already in place and the difference is just that now I'm full time in the business.

**What would you like to share with the current doctoral students and future doctorate graduates?**

To the doctoral students, I would say that you have to anticipate the end of the doctorate. From the beginning of the thesis, you have to try to prepare a real professional project in order to be able to orientate the acquired skills and above all to know how to communicate on your skills, how to sell yourself. You have to bear in mind that the doctorate is a major research project. During their work, they are 'project leaders', they work with different actors, they are responsible for their work. At the end of the thesis, they are therefore able to carry out other projects within a company or an organisation.

**What message would you like to pass on to people who employ or would employ doctors?**

I would tell them that a doctor is not a researcher disconnected from reality. He is a project manager who is an expert in his field and who is able to integrate into the industrial world and bring a lot to a company.

Thank you Vanilla!



The background of the image features a series of concentric, wavy lines in various shades of yellow and orange, creating a dynamic, organic pattern that resembles a stylized sun or a ripple effect. The lines are centered and expand outwards, filling the entire frame.

University of Cádiz





Ana Borrero

## When you work doing what you love you will never work again

**Ana Borrero, PhD, a Spanish national currently living in Norway (Trondheim). She was awarded a doctoral degree in Marine Science and Technology at the University of Cadiz in 2016. Her doctoral dissertation, entitled Kinetics of mobility and toxicity in marine sediments due to possible CO2 leakage: Effects and responses of bacterial communities, was completed under the supervision of Inmaculada Riba and Tomas Angel del Valls.**

### What is your current place of employment, your position and professional duties?

Since January 2021 I am the Environmental Research Coordinator of Seaweed Solutions AS (SES) based in Trondheim (Norway) as a permanent staff, although I started in April 2019 as a seaweed cultivation assistant with a temporary contract. My duties were to maintenance of the cultures, conditioning kelp in the lab, run some experiments depending on the needs and assisting in the farm during the monitoring and oceanographic data collection.

In SES we cultivate *Saccharina latissima* (sugar kelp) and *Alaria esculenta* (wing kelp) in two different locations in the Norwegian coast (Frøya). Our kelp is sold to farms to feed pigs or cows, to companies such as Bettafish in Germany which produce vegan food like Tu-Nah pizza, among others. We also provide/sell seeds to other different sea farms along the Norwegian coast. My responsibilities as environmental research coordinator include many different tasks such as management and follow-up environmental research projects; monitoring the growth and quality of the seaweed from the farm; collection, management and analysis of oceanographic data; and planning and execution of hatchery R&D tasks to improve the cultivation protocols.

### Have you worked at another institution or company before, or as self-employed?

Between my PhD and this job, there is a gap of time of 3 years where I did a Postdoc at the Norwegian University of Science and Technology (NTNU) and I worked with a temporary contract in 2 different private companies called Cryo-genetics AS and Planktonic AS. Both are in Trondheim.

### Why did you decide to work at your current employment? Is this the best place for you?

To be honest, I always thought that my path was going to be in the academia. That is exactly why I continued my scientific career doing a postdoc. I never thought on doing something different. My brain, energy, passion, and my heart were just focused on that goal. However, when I finished my postdoc, I had to work to survive and pay the bills, but of course in the meantime I was continuing applying for funding/projects/positions, publishing papers, having meetings to expand my network to be an outstanding candidate and stay in the academia. That period was the most stressful period in my life. Not even the PhD! Basically, I had two jobs and I was not getting paid for one of them. I worked during the day at SES and as soon as I arrived at home I worked in my "not paid job" until night. However, I was still thinking that it was worthy because I was working on what I wanted to be. So, for some months I kept me in that situation until



I started to work in SES with a temporary contract. A new way of seeing the life was opened in front of me. I discovered that there is plenty of manners to do science being part of the R&D and participate in research projects with less stress and normal working hours. So, when the CEO offered me a permanent position, I just accepted. I found the perfect job for me and my family because now I have quality time with them.

**What brings you the most satisfaction in your current job?**

I can combine my two passions: family and science. This job allows me to feed my needs as a professional and as a mother.

**Would you be willing to share with us your professional victories and failures?**

I always consider myself very positive and I am the typical person who see the glass as half full. So, I like thinking that my professional failures (like not getting a job after two rounds of interviews, not getting funding after several months of work, among others) helped me to reach my major victory which is having a job which fulfils all my desires to do science and have a fantastic family life. So, in one way or another my failures are also victories.

**In which areas (if any) does your current job correlate with your PhD studies?**

This question is super important. When you are doing your PhD or you are done, you feel like any of your skills/knowledge cannot be applied outside of what you have been doing until now. You can feel like academia or research is the only place you can work. But that is NOT true. Private sector offers you the same opportunities in terms of science but more applicable.

In my case, being a chemical oceanographer with expertise in environmental chemistry, marine microbiology, and ecotoxicology, help me a lot in my current job working with seaweed, in terms of design and run experiments, understand the water column to improve our production, work with oceanographic instruments to get reliable data, etc. If you just stop for a second and make the exercise of evaluating how your skills they could be applied, you will realize that you have more potential than you thought.



*Having a PhD does not mean that you will not have any challenges in your future jobs/career, but you will know how to face them, how to solve them, or at least where to look for options.*

**In your opinion, does completing doctoral studies provide more job opportunities?**

This is a tricky question. From my experience, my answer is yes and no. I know, I know. It is ambiguous but let me explain it to you because it depends on what type of job you are applying for. Some job offers are focused for MSc level for example, so if you have a PhD, you will be considered as overqualified by the recruiters. Thus, your application can be declined soon. However, not all the recruiters have the same vision. So, you never know basically.

Besides, I feel that today there are more people with PhD studies so having a doctoral degree does not guarantee you more job opportunities. Maybe it was like that in the past. What makes you attractive is to differentiate from others.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

Anything you do/learn/read during your PhD will be useful. I am 100% sure about that. But if I have to say the most useful one, I will say: problem solving!

**Did your employment after obtaining the PhD go smoothly or did it present you with any challenges?**

Having a PhD does not mean that you will not have any challenges in your future jobs/career, but you will know how to face them, how to solve them, or at least where to look for options.

**What message would you give to PhD students who dream of finding a satisfying job?**

Never give up, explore other sectors, and always apply; even if you think that your profile is not suitable. You never know who you are competing with, and you never know if the recruiters see something interesting which makes you stand out.

**What message would you give to PhD advisors?**

Encourage your students to collaborate with both research and private institutions.



Jesus C. Compaire

## **New findings on marine sciences are revealed every day, don't become rusty and keep learning**

**Jesus C. Compaire, PhD, a Spanish national currently living in Argentina. He was awarded a doctoral degree in Marine Sciences at the University of Cadiz in 2014. His doctoral dissertation, entitled Life cycles, trophic relationships, spatio-temporal distribution and habitat preferences of the resident fish fauna in a rocky intertidal zone of the Gulf of Cadiz: Assessing the state and indicators for conservation, was completed under the supervision of Milagrosa C. Soriguer.**

### **What is your current place of employment, your position and professional duties?**

Currently, I am working a Postdoctoral researcher at Research Center for the Sea and the Atmosphere (CIMA/CONICET-UBA) and French Argentinean Institute for the Study of Climate and its Impacts (UMI-IFAECI/CNRS-CONICET-UBA) in Argentina.

### **Have you worked at another institution or company before, or as self-employed?**

Previously, I was a postdoctoral researcher in the Biological Oceanography Department at CICESE in Mexico. My research there assessed the connectivity and dispersal levels of the coastalneritic ichthyoplankton community in the western Gulf of Mexico, in order to infer its vulnerability to oil spills.

### **Why did you decide to work at your current employment? Is this the best place for you?**

I decided to work at CIMA/CONICET-UBA – UMI-IFAECI/CNRS-CONICET-UBA because this institution has an outstanding international prestige in the field of marine sciences and climate change.

### **What brings you the most satisfaction in your current job?**

This postdoctoral position to work with fisheries and oceanographic data jointly is a great opportunity to improve our knowledge on physical- biological coupling processes that affect marine resources. That information is key to achieving sustainable management of the resources.

### **Would you be willing to share with us your professional victories and failures?**

Every time that I learn or unveil something in my field of knowledge it is an enjoyable moment, which fills me with emotion because I am collaborating to improve our comprehension of the marine environment. Yet, at the same time, I start to think that marine sciences are a complex field of knowledge where a lot of variables are connected... So, I would say that victories and failures are feelings which go together unflinching in the research journey day by day.

### **In which areas (if any) does your current job correlate with your PhD studies?**

My PhD studies were based on the study of intertidal fish biology and ecology and how the environment could affect them. And as I mentioned above, in my

current job I am evaluating how fisheries landings could be influenced by the shifts in ocean conditions. So, the answer is... in all areas!

**In your opinion, does completing doctoral studies provide more job opportunities?**

Yes, there is a lot of job opportunities for a PhD. However, at the same time, job offers at this level are very specific. I mean, you will have the possibility to apply for a wide variety of vacancies but you have to ensure that your expertise fully fits the job offer to avoid wasting time.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

I learned about marine ecology, physical oceanography, statistics and programming tools. Marine sciences are a multidisciplinary study field, so I can't rank them. Nevertheless, based on my expertise and collaborations with colleagues of other areas, I would say that statistics and programming are transversal for any scientific study.

*Every time that I learn or unveil something in my field of knowledge it is an enjoyable moment, which fills me with emotion because I am collaborating to improve our comprehension of the marine environment.*

**Did your employment after obtaining the PhD go smoothly or did it present you with any challenges?**

There are several challenges after ending a PhD, and getting a job is one of the most outstanding. When you end your studies you have to decide what you want to do and that is not easy. When I ended, I looked for a job abroad in other groups to be able to learn new things. That is a great experience to increase your knowledge, but it is also true that sometimes is hard to deal with it (usually you will go far away and keeping in touch with your family and friends become a tough task).

**What message would you give to PhD students who dream of finding a satisfying job?**

Work hard every day. Working on science to live is a hard challenge. Every single day that goes researchers are more competitive, and you must not (you can't) fall asleep and stay behind them. Nevertheless, you must also be able to disconnect from work and enjoy your leisure time.

**What message would you give to PhD advisors?**

I am plenty grateful to my advisors. I am a lucky person, dealing with a researcher in training is not easy, and all of them were patient and friendly to me. I learned from them about science, but also about human relationships. only have two messages: i) Thank you!, and ii) I would like us to see one another more frequently.



Beatriz Díaz Garduño

## There are two options: do what you should do or what you want to do

**Beatriz Díaz Garduño, PhD, a Spanish national currently living in SPAIN. She was awarded a doctoral degree in Conservation and Management of the Sea at the University of Cadiz in 2018. Her doctoral dissertation, entitled *Environmental risk assessment of effluents from wastewater treatment plants in marine ecosystems*, was completed under the supervision of Catedrática María Laura Martín Díaz y Prof. Titular Carmen Garrido Pérez.**

### What is your current place of employment, your position and professional duties?

Currently, I have been working as a freelancer on my own project for two years. I am a copywriter and content creator, I am dedicated to communication and digital marketing for the environment sector, and animal life. I have clients from the private and public sector, from freelancers, SMEs or larger companies to universities and research teams.

### Have you worked at another institution or company before, or as self-employed?

Before dedicating myself to copywriting, I worked for the private sector in companies related to the Environment and others that did not. As for the public sector, I have had contracts at the University as a technician and at the CSIC.

### Why did you decide to work at your current employment? Is this the best place for you?

When I finished my doctorate my passion was to disseminate the results obtained and make them interesting for all types of audiences. Transforming that content into formats that could be attractive to anyone motivated me a lot. This is how I decided to train in the world of marketing and communication and start the new adventure of being the communication link between the person who discovers and generates solutions and the population that needs it. It really is a job that I am passionate about, but working conditions as a freelancer in Spain are very complicated, so if I had the opportunity to work with a company that shared my values and let me continue to grow and develop as a professional, I probably wouldn't mind working for others.

### What brings you the most satisfaction in your current job?

What really satisfies me the most is being able to grow and pivot my profession to where I feel I should and with my own values, learn with each project I collaborate for and constantly meet incredible people.

### Would you be willing to share with us your professional victories and failures?

I believe that there are no professional failures in my career, everything is learning and every step I took was necessary to be where I am right now. If you mean more difficult moments, without a doubt leaving the path of investigation was one of the most complicated. On the one hand, my family and friends expected me to follow a path that as I progressed, it was ceasing to make me happy. Without a doubt facing myself and accepting that was not

what I wanted to be, it was a turning point. And on the other hand, leaving the path that you are supposed to follow, to choose a "risky" professional life such as being a freelance self-employed person, is not always welcomed, supported or understood by your environment.

I am passionate about science and research, but I do not agree with the evaluation parameters, the way of measuring success and the sacrifices that the sector requires to continue on the crest of the wave. This was clearly what made me change course.

I loved my time as a researcher, but I like my current role as communicator and transformer of these messages to the rest of the world even more. In a way, I feel that I continue to be linked to the sector but from another perspective that is equally important and necessary.

Although it is a role that perhaps in Spain is not well known, in a few years all research groups, universities and national and international projects will need to incorporate specialists in digital communication and marketing.

The need to disseminate their work in a professional manner and to be able to free themselves from this burden for which they do not have material time, have no training and are not within their competencies as teachers or researchers is increasingly evident.

On the other hand, the gulf between academia and ordinary people (who pay and subsidize part of the project money with their taxes) must be made so narrow that it disappears. Citizens have to know that science is at their service and they have the right and duty to know that knowledge is generated and tested and what it is for in each case.

**In which areas (if any) does your current job correlate with your PhD studies?**

My doctorate was very applied to the conservation of ecosystems, the use of natural spaces and the legislation on environmental pollution.

Specifically, it could be said that I do not apply anything directly in my day to day, but indirectly, I work with the scientific method on a daily basis and use all the tools and experience that those years gave me to deal with my clients, whether they are entrepreneurs or researchers, helping me to put myself in their place, understanding their technical language and helping them achieve their goals through communication.

**In your opinion, does completing doctoral studies provide more job opportunities?**

In my opinion, doing a PhD makes you show yourself that you are capable of doing what you set out to do.

It is not so much that you learn about the subject in which you specialize, but also, if not more about work discipline, methodology, organization, the ability to work as a team, to coordinate with different departments, colleagues, work in environments multicultural, learning languages, traveling, developing as a person, etc.

Therefore, I would say that the doctorate gives you tools and qualities that are very suitable for new job opportunities, but that they are not measurable or demonstrable in the current job search system in Spain.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

As I listed in the section I think the qualities are many but it is difficult to demonstrate if you are going to leave the academic field. And although it is difficult to say from most to least useful without knowing what you aspire to, they could be in this order due to learning difficulty.

1. Ability to overcome and resolve conflicts
2. Coordination with other professionals and colleagues

3. Achievement of objectives
4. Application and monitoring of methodologies and protocols
5. Work in multicultural environments and languages
6. Management and analysis of data sets and statistics
7. Ease of adapting to other countries and moving from residence

**Did your employment after obtaining the PhD go smoothly or did it present you with any challenges?**

My case was special because I already started working at the CSIC before finishing my thesis on a subject that was not exactly my PhD.

Really, each stage always has something challenging, but if I had to say something, reconciling family life with a research career was really a full-blown "challenge".

**What message would you give to PhD students who dream of finding a satisfying job?**

Well, I would tell them to squeeze each stage and live it without thinking about the future but visualizing, from time to time, where they would like to go to know if they are on the right path.

At the same time, I would say that there are no pre-established paths. You can make the decision you prefer, change as many times as you need and get what you were looking for in several ways. The important thing is not how you will do it but what you want to do. The how has many forms, what moves you inside is only one. Do not regret „what you did not do“, do whatever you want.

And finally, that dreams always come true when you do what you are passionate about and what comes from your heart. Dream, because reality always surpasses fiction.

***I loved my time as a researcher, but I like my current role as communicator and transformer of these messages to the rest of the world even more. The important thing is not how you do it but why you do. In a way, I feel that I continue to be linked to science but from another perspective that is equally important and necessary.***

**What message would you give to PhD advisors?**

I would tell supervisors that each person is different and has their circumstances. When they did the thesis, there were different working conditions than those of each of their doctoral students according to their class; therefore, it is good to be informed of the new labor paradigm and to be consistent.

And finally, that their role is to accompany and support the students in this stage, but to remind them that they are not their property, that they continue to have life outside of the thesis and that after the thesis ends and life goes on.

And to sum up, as the saying goes: the one who knows more is not the best teacher, but the one who teaches the best. This is my general opinion regarding the PhD tutoring process and is also based in the experience of other colleagues.

I think it is important to me to act as everyone's voice. I was very lucky with my supervisors, Laura and Carmen, both personally and professionally, and couldn't imagine having had a better path during my PhD. Thank you so much for everything!



M. Ángeles Gamaza Márquez

## Be the change you want to see in the world

**M. Ángeles Gamaza Márquez, PhD, a Spanish national currently living in United Kingdom. She was awarded a doctoral degree in *Marine Resources* at the University of Cadiz in 2019. Her doctoral dissertation, entitled *Managing multi- species trawl fisheries in southern Europe for biological and economic sustainability. The gulf of Cádiz case study*, was completed under the supervision of Ignacio Sobrino y Karim Erzini.**

### **What is your current place of employment, your position and professional duties?**

I work at the Centre for Environment Fisheries and Aquaculture Science (CEFAS) based in Lowestoft (UK). I have been working here for over two years as fisheries regulatory advisor and fisheries scientist. I have a permanent contract working for the British Government as a civil servant.

### **Have you worked at another institution or company before, or as self-employed?**

Yes, I worked at the Instituto Español de Oceanografía (IEO) in Cádiz (Spain), as a senior research technician. The IEO is a public research institution focusing on marine research, that also provides technical advice and support to the government, and that has various centres around the country.

### **Why did you decide to work at your current employment? Is this the best place for you?**

It was a good opportunity to work at a higher category (and pay band) than the one I had whilst working at the IEO. Besides, CEFAS is a well-recognised marine scientific organisation where I saw a window to learn new methods, broad my knowledge and take new challenges.

### **What brings you the most satisfaction in your current job?**

Using scientific evidence in the real world by advising on National Infrastructure developments offshore. Also, networking across national and international organisations. Besides, the possibility of being promoted based on knowledge and experience is very rewarding.

### **Would you be willing to share with us your professional victories and failures?**

Yes. As victories, I would highlight finishing my PhD whilst actively working, as well as receiving positive feedback on my performance from my colleagues and supervisors and being promoted in a short time. As failures, not being able to develop the methods and results of my PhD within the area of study.

### **In which areas (if any) does your current job correlate with your PhD studies?**

Fisheries research and management

### **In your opinion, does completing doctoral studies provide more job opportunities?**

Yes and no. I could have applied (and get) the same job role without a PhD. However, I recognise that having a PhD helped to support my application. It definitely depends on the role; most of my colleagues at CEFAS do not hold a PhD.



**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

Apart from a strong fundamental knowledge, as without it I would not have passed the interview stage and would not be able to understand and deliver my daily tasks, I also developed important soft skills, as well as interpersonal and social ones. Among them, stress control, project management, innovation and creativity, critical thinking, flexibility, and adaptability. While stress control has been the most useful one, I would not rate any of them as the least useful.

*In fact, there are many people working in the same company, doing the same job I do, that do not have a PhD or intent to follow this path. Therefore, my advice is making sure the PhD students are genuinely willing/needing for a PhD and do not encourage those who are unsure to follow this path.*

**Did your employment after obtaining the PhD go smoothly or did it present you with any challenges?**

It went smoothly, as I applied for my current job and was selected for it before my PhD Viva. The only difficulty was to have to move countries.

**What message would you give to PhD students who dream of finding a satisfying job?**

Don't give up, try different routes and paths to achieve your goals. Be creative, positive and attend as many seminars and congresses as possible. Do networking. Give yourself a break, travel. Apply for jobs elsewhere.

**What message would you give to PhD advisors?**

PhD studies take much time, energy and self-esteem from PhD students, to the point to make them sick, feel of little value or brainless. In some instances, it is not worth the suffering for what you get. In my case, although my knowledge and experience (partially acquired during my PhD studies) got me to where I am at the moment, I could have got the same job without being a doctor. In fact, there are many people working in the same company, doing the same job I do, that do not have a PhD or intent to follow this path. Therefore, my advice is making sure the PhD students are genuinely willing/needing for a PhD and do not encourage those who are unsure to follow this path.



Cristiano Venícius de Matos Araújo

## **I always dreamt of working as scientist in a research institute in some area of environmental sciences**

**Cristiano Venícius de Matos Araújo, PhD, a Brazilian national currently living in Spain. He was awarded a doctoral degree in Ecotoxicology at the University of Cadiz in 2010. His doctoral dissertation, entitled *Desarrollo de ensayos de medida de toxicidad basados en la respuesta de microalgas bentónicas (microfitobentos) (Development of tests to measure toxicity based on the response of benthonic microalgae (microphytobenthos))*, was completed under the supervision of Ignacio Moreno Garrido and Julián Blasco Moreno, from the Instituto de Ciencias Marinas de Andalucía (ICMAN-CSIC).**

In 2002, I had my first contact with ecotoxicology, a science that fascinated me. From this point, I set a goal that was to study how contaminants affect the species and ecosystems. As I always felt a special interest by animal behaviour, since 2011, when I started my postdoctoral period, I have worked in behavioural ecotoxicology, which is my main research line.

### **What is your current place of employment, your position and professional duties?**

I am currently working as a Researcher at the Instituto de Ciencias Marinas de Andalucía (ICMAN-CSIC), where I got a permanent position in December 2021 within the Ecology and Coastal Management group. ICMAN-CSIC is a public research centre, located in the province of Cadiz (Spain). My main duties include project management, laboratory work, and the publication of research papers, but I also supervise students (undergraduate, master, and doctoral students) and participate in science dissemination activities.

### **Have you worked at another institution or company before, or as self-employed?**

When I finished my PhD, I was granted a postdoctoral fellowship at the University of Coimbra (Portugal), where I worked for five years. In 2016, I gained a two-year postdoctoral contract from the Spanish Ministry of Science and Innovation as a Juan de la Cierva Incorporación researcher at the ICMAN-CSIC research centre. Then, in 2019 I was granted a very competitive postdoctoral position from the Spanish Ministry of Science and Innovation as a Ramón y Cajal researcher, also at the ICMAN-CSIC.

### **Why did you decide to work at your current employment? Is this the best place for you?**

The work environment is very good. I already enjoyed it while doing my PhD and that's why I decided to return and try to find a permanent position there, after a few years of postdoctoral training elsewhere. Furthermore, I have access to good infrastructure, and I can fully develop my research duties with all the support from the staff (laboratory technicians, administrative staff, etc). Finally, the quality of life in Cadiz is great, which is an added value.

### **What brings you the most satisfaction in your current job?**

Having the opportunity to produce knowledge and to learn on a continuous basis is very satisfactory. Moreover, it is very rewarding to be able to train students and technicians and to provide them the possibility to work.

**Would you be willing to share with us your professional victories and failures?**

I would say that my main professional victory is to have reached enough independence to be able to manage my own line of research. As for failures, I would stress the difficulty to communicate in English.

**In which areas (if any) does your current job correlate with your PhD studies?**

My field of research focuses on environmental studies, specifically in ecotoxicology; that is the same area I developed my PhD studies.

**In your opinion, does completing doctoral studies provide more job opportunities?**

No, only if one wants to be independent researcher at research centres or universities.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

I believe that all the skills I developed during my PhD are useful, although I would emphasize critical thinking. Some other skills include communication capacity, creativity, initiative, and flexibility.

**Did your employment after obtaining the PhD go smoothly or did it present you with any challenges?**

It was very hard and challenging, due to the excessive pressure to maintain a high productivity.

**What message would you give to PhD students who dream of finding a satisfying job?**

Do not go with the flow, choose the job that you feel fulfilled with.

**What message would you give to PhD advisors?**

PhD students should be considered more than simply technicians. Our role is to help their training as researchers.

*I believe that all the skills I developed during my PhD are useful, although I would emphasize critical thinking. Some other skills include communication capacity, creativity, initiative, and flexibility.*



Maria Puig

## The importance of knowledge transfer beyond academia

**Maria Puig, PhD, a Spanish nationality, currently living in Basque Country. She was awarded a doctoral degree in Marine Sciences and Technologies at the University of Cadiz in 2017. Her doctoral dissertation, entitled "Natural factors affecting shoreline behaviour. Case study of Bay of Cadiz", was completed under the supervision of Laura Del Río and Javier Benavente.**

### What is your current place of employment, your position and professional duties?

My current place of employment is TECNALIA Research and Innovation. TECNALIA is the largest centre of applied research and technological development in Spain, a benchmark in Europe and a member of the Basque Research and Technology Alliance.

I have been working in this research institution for the last year on a 2-year fixed term contract. I am a senior researcher and my professional duties are:

- Development of national and international bids for private and public entities (e.g. municipalities, regional governments, European Commission).
- Technical development of projects related to climate change adaptation, such as climate risk assessments, analysis of pluvial floods and definition of adaptation.

### Have you worked at another institution or company before, or as self-employed?

Yes, I worked at an engineering company (Idom, architecture, engineering and consulting). I had a permanent contract and I had similar responsibilities, but they were not focused on research.

### Why did you decide to work at your current employment? Is this the best place for you?

I decided to work in my current company because it allows me to continue doing research and participating in European research projects. For this reason, I consider my current company a good place to further develop my career.

### What brings you the most satisfaction in your current job?

The greatest satisfaction is to be able to work with a multidisciplinary team.

### Would you be willing to share with us your professional victories and failures?

Yes, I wouldn't mind. As victories, I consider having led international projects and conducted workshops with stakeholders from different cultures. As failures, I would highlight the fact that I have not been able to fully develop certain studies due to lack of time.

### In which areas (if any) does your current job correlate with your PhD studies?

Climate change adaptation is a cross-cutting area that allows you to work on many aspects. Although my current projects in Tecnalia are linked to the study of river and pluvial flooding, I have also been able to develop other studies, such as the adaptation action plan for the Basque Country's coastline. The latter study is closely related to my undergraduate and master's studies but not to my PhD.

**In your opinion, does completing doctoral studies provide more job opportunities?**

The two jobs I have had after my doctorate have been thanks to being a doctor in the coastal field. However, I have been able to experience in job interviews how the private sector does not consider having a PhD beneficial as they are looking for profiles with experience in the world of work and not in the world of education.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

Among the main skills I acquired was to be decisive and executive. I consider both of them fundamental.

**Did your employment after obtaining the PhD go smoothly or did it present you with any challenges?**

Managing stress was one of the first challenges I had to face. In addition to that, working in other areas in which I was not an expert was also a challenge.

**What message would you give to PhD students who dream of finding a satisfying job?**

I would suggest that they should not only focus on their field of study.

**What message would you give to PhD advisors?**

I would recommend that they give continuous support to doctoral students. To this end, I would recommend setting up regular meetings to guide and orient the student. Provide the necessary tools for the development of the thesis and encourage research into new aspects.

***Climate change adaptation is a cross-cutting area that allows you to work on many aspects. Although my current projects in Tecnalia are linked to the study of river and pluvial flooding, I have also been able to develop other studies, such as the adaptation action plan for the Basque Country's coastline.***



Eduardo Ramírez Romero

## At the edge between blue and green

**Eduardo Ramírez Romero, PhD, a Spanish national currently living in Spain. He was awarded a doctoral degree in Marine Sciences at the University of Cadiz in 2013. His doctoral dissertation, entitled Plankton patterns in the Strait of Gibraltar derived from tidal and meteorological forcing, was completed under the supervision of Dr. Carlos M García, Dr. Miguel Bruno and Dr. Diego M Macías.**

### What is your current place of employment, your position and professional duties?

I am currently employed as a postdoctoral fellow at the Instituto de Ciencias Marinas de Andalucía (ICMAN-CSIC), which is a public research centre. I started working there about one month ago with a temporary contract linked to a research project.

My tasks involve data processing and analysis (e.g. biogeochemical models, environmental variables and climate change projections, fisheries stocks), as well as developing ecological models.

### Have you worked at another institution or company before, or as self-employed?

Since I finished my PhD in 2013, I have gained several research positions at various institutions, including: (1) the GEOMAR Helmholtz Centre for Ocean Research (Kiel, Germany); (2) the Instituto Mediterráneo de Estudios Avanzados (IMEDEA), a public research centre belonging to both CSIC and the University of the Balearic Islands, that is located in Mallorca (Spain); (3) AZTI, a technological research centre (Basque Country, Spain); and (4) the Instituto Español de Oceanografía (IEO), a public research institution belonging to the Spanish Ministry of Science and Innovation, focused on marine research; more specifically, I worked at the IEO centre in Cadiz (Spain). All those positions were short-term contracts linked to specific projects.

### Why did you decide to work at your current employment? Is this the best place for you?

On one side, I found the project very interesting, and, on the other side, I thought it could potentially improve my career development chances. Furthermore, the research centre is placed in Andalucía, close to my hometown.

### What brings you the most satisfaction in your current job?

Being able to explore new scientific hypothesis is very satisfactory. Besides, as a researcher I can manage my own time which provides a good degree of freedom.

### Would you be willing to share with us your professional victories and failures?

The main positive aspect of being a marine scientist is to have acquired a broad and multidisciplinary vision of the oceanography, both from a theoretical and methodological point of view. However, due to the job instability inherent to this profession and the fact that all the postdoctoral contracts are short-term, I have not been able to fully develop all the ideas and projects I have been involved with.

**In which areas (if any) does your current job correlate with your PhD studies?**

My current position is strongly related with my PhD studies. I'm in charge of conducting oceanographic data analysis, physical-biological coupling, biogeochemical modelling, etc., which were the same mains tasks I did during my PhD.

**In your opinion, does completing doctoral studies provide more job opportunities?**

Yes, but only within academia (universities or public research institutions).

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

The main skills I developed include planification, time organization, perseverance, problems resolution, teamwork, writing skills, science communication, critical and analytical thinking, or computer programming.

The most useful ones were critical and analytical thinking, and computer programming.

The least useful one was to avoid problems among researchers or research groups.

*My current position is strongly related with my PhD studies. I'm in charge of conducting oceanographic data analysis, physical-biological coupling, biogeochemical modelling, etc., which were the same mains tasks I did during my PhD.*

**Did your employment after obtaining the PhD go smoothly or did it present you with any challenges?**

Considering that I still don't have a permanent position and that all my contracts have been temporary, I would say that my employment has been very challenging. There's a generalized lack of opportunities, mostly related with the lack of financing, that has forced me to continuously move from one place to another. This continuous emigration has not allowed me to settle down anywhere. Besides, it is very tiring to be continuously looking for a new job.

**What message would you give to PhD students who dream of finding a satisfying job?**

Focus on specific targets. Learn to evaluate where to make the biggest effort, so you can choose correctly. Do not forget to take enough time to rest and that your mental health is important.

**What message would you give to PhD advisors?**

Do not forget that the PhD students are persons and, as such, they might have personal issues, they need to take care of their mental health, and they need to have time to rest. Do not get your PhD student involved in your disagreements with other colleagues.



María Jesús Bellanco Esteban

## Work with passion

**María Jesús Bellanco Esteban, PhD, a Spanish national currently living in Spain. She was awarded a doctoral degree in Earth Sciences at the University of Cadiz in 2019. Her doctoral dissertation, entitled EL FLUJO MEDITERRÁNEO EN EL GOLFO DE CÁDIZ: TRANSFORMACIÓN, EVOLUCIÓN Y ACOPLAMIENTO CON AGUAS SUPERFICIALES (The Mediterranean flux in the Gulf of Cadiz: transformation, evolution, and coupling with surface waters), was completed under the supervision of Ricardo F., Sánchez Leal, PhD**

### What is your current place of employment, your position and professional duties?

For the past five years, I have been working at a company related with the offshore wind power sector. This company provides wind resource measuring campaigns using buoys. The buoys, powered by means of renewable energy sources and batteries, provide wind, wave, current, and meteorological data. I am responsible for data project management and buoy-fleet monitoring.

### Have you worked at another institution or company before, or as self-employed?

My academic and professional life has been built around the ocean. I am a graduate of the Cadiz University in Marine Sciences. During the college years, I collaborated with the Marine Geology department. After my BSc degree, I obtained a Master of Science in Oceanography at the same university. When I finished the master's degree, I worked at the Applied Physics Department of the Faculty of Marine Sciences for some time until I obtained a PhD fellowship in the Spanish Institute of Oceanography, at the Cadiz Oceanography Centre. I was offered my current position at the company before finishing my PhD, and I have been working there for the last 5 years. I spent the first 3 years at the headquarters in Barcelona and since 2020, I was allowed to work from Cadiz for personal reasons.

### Why did you decide to work at your current employment? Is this the best place for you?

I was fascinated by the company since the very beginning: it was a young company, dedicated to the renewable energy sector, and that operated at sea, where they sampled a massive amount of meteorological and oceanographic data. Besides, when I started working there, we were only four employees; the work environment was so friendly that we even used to joke about our roles by saying that one person was dedicated to the money, another one to the iron, another one to the electrons and myself to the data... We are currently more than 30 employees. I must say that it has been an amazing experience to see the company grow bigger.

### What brings you the most satisfaction in your current job?

I get the greatest satisfaction when we are about to finish one project: it is amazing to see how, after we work on a database spanning one or two years, we obtain results that help increase the number of homes that can get energy from renewable sources.



**Would you be willing to share with us your professional victories and failures?**

All the professional victories are a result of the teamwork. However, I believe that our biggest victory was to successfully finish the first project. At that time, we only had one buoy, there were only four of us, and yet we managed to demonstrate that we were as competitive as others. Regarding failures, of course there were some, but the most important thing is to learn from them so you can avoid them in the future.

**In which areas (if any) does your current job correlate with your PhD studies?**

In my current position, I have to analyze a large amount of field data and to write reports. That is quite similar to the tasks I had to do during my PhD. Moreover, the oceanography knowledge I developed during my PhD has greatly helped me to identify problems or to find an appropriate explanation to certain patterns in the datasets, among others.

**In your opinion, does completing doctoral studies provide more job opportunities?**

I believe it depends on the job position, the company, and the person themselves. Many companies do not value a PhD and might even reject candidates because they hold a PhD, simply because they fear that those candidates will have big salary and career growth expectations. However, other companies are increasingly giving more importance to hiring doctorate holders for certain positions, since they consider that it gives more credibility to have doctors covering those positions.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

The most useful for me are the ability to control stress and to be able to face challenges by elaborating a plan to achieve them. Perhaps, the least useful skill is creativity, but understood as inventing new ways of doing something that is established and proven to work well in the world of industry. One needs to be creative in many aspects, but without trying to reinvent the wheel.

**Did your employment after obtaining the PhD go smoothly or did it present you with any challenges?**

I defended my PhD thesis when I was already working at the company where I currently work, so in my case there was no challenge in that regard. The challenge was to combine work and thesis during a long time, which I remember especially hard.

**What message would you give to PhD students who dream of finding a satisfying job?**

They have to fight to achieve their goals; they have to aim high and think that the effort is worth it, but not at the expense of everything that matters to them and makes them happy.

**What message would you give to PhD advisors?**

I would advise them to remember those mistakes that their PhD supervisors made with them, so that they do not make the same mistakes with their students.

***In my current position, I have to analyze a large amount of field data and to write reports. That is quite similar to the tasks I had to do during my PhD. Moreover, the oceanography knowledge I developed during my PhD has greatly helped me to identify problems or to find an appropriate explanation to certain patterns in the datasets, among others.***



Emma Reyes

## People who feel that Marine Science is just dolphins and whales, might also think that the ocean is just water

Emma Reyes PhD in Marine Sciences (University of Cádiz), is the Head of the HF radar Facility at SOCIB. She is a physical oceanographer with over 15 years of experience in operational ocean observing and forecasting systems. Her research interests include coastal ocean dynamics at key circulation chokepoints, air-sea interaction, remote sensing oceanography, oil spill transport and dispersion. She has been involved in several projects (CMEMS-SE INCREASE, Jerico NEXT) focused on HF radar data standardization, harmonization of HF radar maintenance best-practices, advanced products development, and its integration in downstream services (as PI of the project IBISAR). She is currently part of the HF radar task team of several European projects (e.g. CMEMS-In Situ TAC phase II, EuroSea, Jerico-S3). In addition, she is a member of the EuroGOOS HFR Task Team, being also a cochair of MONGOOS-HFR since 2019.

In the framework of the SOCIB's end-user engagement strategy, it must be highlighted the participation of Emma as a member of the Steering Committee to support the implementation of the agreement between SOCIB and the Spanish Maritime Safety and Rescue Agency, since 2017, and SOCIB and the Spanish Port System, since 2019. In addition, aligned with the SOCIB's strategy for stimulating the training of new generations of oceanographers and technicians, Emma is also a member of the Steering Committee between SOCIB and the University of Cádiz, since 2021.

Emma Reyes, PhD, a Spanish national currently living in Spain. She was awarded a doctoral degree in Marine Sciences at the University of Cadiz in 2015. Her doctoral dissertation, entitled "A high-resolution modelling study of the ocean response to wind forcing within the Strait of Gibraltar", was completed under the supervision of Dr. Alfredo Izquierdo and Dr. Miguel Bruno.

### What is your current place of employment, your position and professional duties?

I have been employed as Head of the High-Frequency Radar Facility at SOCIB (Balearic Islands Coastal Observing and Forecasting System) since 2016 under a fixed-term contract. SOCIB is a Unique Scientific and Technical Infrastructure (ICTS) that operates a coastal ocean observing and forecasting system, belonging to the public research sector.

Over the last six years, I have been specifically involved in: the calibration, configuration and operation of High Frequency Radars (HFR); the implementation of data standardization and data quality control tests as well as quality assessment procedures; the study of spatio-temporal variability in different dynamic environments; the development of added-value products and downstream data services to enhance maritime emergency response; the writing of research grant proposals; the coordination of public-private partnership projects; the collaboration with other researchers in the context of the HFR network at the European and regional level and in the scope of international funded projects; and the representation of SOCIB HFR facility at local, national and international scene.

### Have you worked at another institution or company before, or as self-employed?

I have previously worked in different research positions at the University of Cádiz under several fixed-term contracts.

**Why did you decide to work at your current employment?  
Is this the best place for you?**

SOCIB is an internationally recognized and well-established institution in operational oceanography and marine research. During the last years at the University, I have considered SOCIB as a benchmark institution for contributing to scientific excellence, technology transfer and knowledge dissemination.

I have always been interested in narrowing the gap between science and society, since I have always firmly believed that scientific evidence is critical to solving major societal challenges, but also that it alone is not enough. My greatest motivation over the years has come from transferring my research's outcomes to operational tailored products and science-based societal applications providing user-oriented services to different stakeholders, being this fully aligned with the SOCIB's mission.

My best place will always be where my career and core values align and where I feel happy, satisfied and fulfilled, while enjoying my day-to-day work.

**What brings you the most satisfaction in your current job?**

I carry out several and very diverse tasks related to operational, research, training, networking, management and outreach activities that challenge me in my current role so thus, I rarely feel bored at work. That means I have the chance: i) to learn new things, in a very multi- disciplinary and collaborative framework and taking advantage of training opportunities; ii) to gain new skills, as part of the HFR team of big international projects, that can support my future goals and my career prospect; iii) to exchange thoughts with my colleagues and to have friendly relationships with other researchers of my and other scientific fields; iv) to engage with end-users by means of collaborative projects and agreements; and v) more recently, to contribute to training the next generation of marine scientists and technicians, in favour of my personal satisfaction and benefiting the establishment of a win-win relationship with the students.

**Would you be willing to share with us your professional victories and failures?**

One of the accomplishments I am most proud of is the coordination of the IBISAR public- private partnership project ([www.ibisar.es](http://www.ibisar.es)) as Principal Investigator, the first time in my career. The second one is the achievement of the record high in terms of HFR data availability last year, after having completely rebuilt the HFR radial site from Ibiza in a record time of 4 months (after an unfortunate incident in 2017). The most recent milestone has been the publication of a collaborative work, together with 42 co-authors from 22 institutions belonging to 7 different Mediterranean countries, which has been achieved during the difficult times of the COVID-19 pandemic. The signature of the agreement of collaboration between SOCIB and the University of Cádiz in June 2021, in which I have been actively involved together with several colleagues from both institutions, has been very important to my personal motivation and my job satisfaction.

Examples of failures are linked to the rejection of different proposals, after putting a lot of efforts in their submissions and pooling many scientists from several intersectoral and international institutions: one of them was the proposal under the acronym "CRUSOE", a Marie Skłodowska-Curie Actions – European Training Networks (ETN); "ROSOME" was another proposal in which I have actively participated. This COST Action was submitted for several consecutive years without success. Recently, I have made great efforts to participate in a call for equipment from the State Subprogram for Research Infrastructures and Scientific- Technical Equipment that was finally rejected. But by falling all over again, I am starting to learn to pick myself back up without forgetting that "today's defeats will be tomorrow's victories". Undoubtedly, my personal fight has always been trying to improve my work-life balance, avoiding to put my job

before family, friends, relationship and personal growth.

**In which areas (if any) does your current job correlate with your PhD studies?**

I think that my previous work experiences are very well related to my current job profile.

My research is focused on coastal ocean dynamics at key circulation chokepoints, combining met ocean multi-platform in-situ and remote-sensing data as well as atmosphere-ocean models. During my PhD I was more focused in the implementation and validation of met-ocean models and in analysing their outcomes, while in my current position, I am more concentrated on the multi-disciplinary data, particularly derived from HFRs, while I continue the collaboration with modellers.

Models and HFR data are both gridded data so thus, the geophysical data analysis and their applications are very similar. However, their challenges and limitations are different, especially in the coastal areas.

In addition, both the Strait of Gibraltar and the Ibiza Channel, are well-known circulation chokepoints.



***My greatest motivation over the years has come from transferring my research's outcomes to operational tailored products and science-based societal applications providing user-oriented services to different stakeholders (...).***

**In your opinion, does completing doctoral studies provide more job opportunities?**

Yes, it does, at least in my case and in my environment. I think that a doctoral degree is worth it, particularly in terms of personal satisfaction by achieving your personal goals, by meeting your career objectives and, of course, by gaining extensive knowledge and expertise that will contribute to broaden our understanding of the world. Furthermore, I firmly believe that my first job opportunities were heavily influenced by the transferable soft skills (i.e. self-motivating, project management and teamwork, analytical and critical thinking and reasoning, problem-solving, creativity, writing and communication skills, empathy), combined with the technical skills and knowledge, that I gained during my PhD thanks also to my supervisors. In addition, on the one hand, being goal oriented helps me to stay focused for long periods of time to be able to complete research projects and to understand what it takes to achieve big goals. On the other hand, the building of a close network of colleagues and peers over the course of my PhD (e.g. participating in conferences, summer schools, research stays, oceanographic cruises, etc.) has allowed me to build further connections in my current position and to collaborate with recognized experts and researchers in the subject.

Nevertheless, pursuing a PhD does not always mean being paid more, reaching more senior positions, accessing more high-level and leadership jobs, being regarded as prestigious or becoming an asset.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

I think that it was a combination of knowledge, motivation, aptitude and technical capabilities with soft skills, as above mentioned. The most useful skill that I developed in my PhD was the proficiency with different programming languages and scripting languages, working with a Linux environment. The least useful were highly specialized courses out of the scope of my PhD that provided me a limited skill set that I have never used.

**Did your employment after obtaining the PhD go smoothly or did it present you with any challenges?**

I think my employment after obtaining the PhD went very smoothly. I obtained my doctorate degree in February 2015 and I joined SOCIB in February 2016. During the year, I was working as a Post-Doc in the Applied Physics Department of the University of Cadiz.

**What message would you give to PhD students who dream of finding a satisfying job?**

Besides technical skills developed and the knowledge gained related to your research, I think that it is worth seizing every opportunity during your PhD for developing and further improving your soft skills, by participating in PhD contests, workshops, summer schools, conferences, internships in other institutions, scholarships across various countries, etc. It is also helpful to embrace every challenge to take on something completely new (e.g. offer yourself to be the one in your group who gives the project presentation, start using Linux environment, participate in teaching and training activities, joint a research team at some department in the University, embark on an oceanographic cruise, start learning Python or R with online courses, help your supervisors to manage projects and to write proposals, etc.). Keep always in mind that most of the science's greatest achievements are the result of cooperation, so thus, you should never forget the positive impact of collaboration and teamwork and act consequently (e.g. build your own network of contacts, participate in task teams, discuss periodically your experiments and your findings with your colleagues and evaluate their feedback, join newsletters from projects or institutions of your interest aligned with your research, etc.). It is also important to talk to your peers, friends, family and supervisors to avoid isolation and to keep you motivated and inspired.

**What message would you give to PhD advisors?**

I will always be grateful and deeply indebted to my supervisors for their commitment and dedication during my PhD program and research work, for their invaluable guidance and research advice and for their understanding and support. They offered me many opportunities that allowed the development and the further improvement of my soft-skills, providing me a wide range of competences to conduct a transdisciplinary research. Furthermore, they inspired me to be brave for embracing the challenges ("If they think I can do it, I can probably do it or at least I must try it") and to live real world experiences while I was student. Thank you for not telling me the answer, instead showing me how to ask the right questions.



Pablo Quero García

## Science to support local sustainable development

**Pablo Quero García, PhD, a Spanish national currently living in Spain. He was awarded a doctoral degree in Management and Conservation of the Sea at the University of Cadiz in 2021. His doctoral dissertation, entitled *Marine renewable energy and marine spatial planning: analysis of the European context and recommendations for the case of Spain*, was completed under the supervision of Juan Adolfo Chica Ruiz and Javier García Sanabria.**

### What is your current place of employment, your position and professional duties?

Currently, I work as a project manager in the Provincial Energy Agency of Cádiz -permanent staff-. It is a non-profit foundation with funding by the Provincial Government of Cádiz. The Agency was created in 2006 within the framework of the Intelligent Energy for Europe (Directorate-General for Energy and Transport – European Commission) from a growing concern surrounding the deficiencies existing in the current outlook on energy and fostered by the plan of establishing energy management agencies on both local and regional level.

The Agency (APEC) works in close contact with local public entities and key stakeholders, developing and disseminating sustainable energy management throughout the province on behalf of the Provincial Government (45 municipalities, 1.2 million inhabitants): it develops legal and technical assessment among municipalities and other stakeholders, offering assistance about sustainable technologies, good practices or the best financial solution to perform renewable or efficient energy projects. APEC has also experience in international and national projects management (including H2020, Interreg, etc.) and in behaviour change through actions such as education, training and increasing awareness among specific target groups (especially public representatives and civil servants) on topics dealing with the energy efficiency and renewable energy, climate change and so forth. It is, therefore, ideally placed to act as the link between public administrations, private sector, knowledge centers and citizens to promote innovation, knowledge transfer and skills and attitudes improvement on climate change, sustainable development and environmental protection.

### Have you worked at another institution or company before, or as self-employed?

No.

### Why did you decide to work at your current employment? Is this the best place for you?

Don't know if it is the best place but in my opinion it's an excellent position to work as it offers me the opportunity to develop different skills and use knowledge learnt during my degree (and PhD now) and delve into interesting topics such as renewable energy and climate change. As regulation and knowledge/ technology related with these topics is still evolving, daily work is a constant challenge that pushes you be up-to-date with the latest available knowledge in order to offer the best answer. It also let me share experiences with other European colleagues and gives me the chance to build up a wide professional network.

**What brings you the most satisfaction in your current job?**

Climate change and energy transition are two of the most important challenges that European society must face in the beginning of the 21st century. I really feel my work is useful and valuable for developing European and national policies sustainable energy and climate action goals in my region. European projects also let me to exchange experiences and to learn from best practices already implemented in other EU regions.

**Would you be willing to share with us your professional victories and failures?**

During the last ten years that I have worked in my current position at the Agency I had the opportunity to participate in many projects. If I had to highlight any, I would say promoting and implementing European initiatives in the region (such as Covenant of Mayors, or different EU funded projects) or supporting municipalities to improve their public procurement procedures by including sustainability criteria. Regarding failures, I have to admit that after all this time it is still difficult to face some tasks, like for example to develop proposals about innovative topics or to engage some target groups in participatory processes.

**In which areas (if any) does your current job correlate with your PhD studies?**

Renewable energies are both main topics in my thesis and my job.

**In your opinion, does completing doctoral studies provide more job opportunities?**

In general, I'm convinced that improving your qualification is always positive in order to access to labour market. In this particular case, and focusing on energy-climate project management sector, topics are relatively new, so many projects may include research and innovation tasks that require experts with PhD studies in order to ensure proper project implementation and successful results. So, despite the fact that it is not a mandatory requirement, completing doctoral studies could have a positive effect on employability in this sector.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

The capacity to study and analyze topics from a scientific scope, and also the ability to present data/information in an interesting way for the target audience have been principal skills developed during my PhD. These soft skills and interpersonal skills are especially important for my current job as I have to deal daily with other project managers and local representatives, managing data from different sources (including raw data, scientific or policy reports, etc.) that needs to be presented in an intelligible way. Projects also require the participation of



***In general, I'm convinced that improving your qualification is always positive in order to access to labour market. In this particular case, and focusing on energy-climate project management sector, topics are relatively new so many projects may include research and innovation tasks that require experts with PhD studies in order to ensure proper project implementation and successful results.***

some colleagues in different tasks, so team working and communication are essential to this job. I believe there are no irrelevant skills. Perhaps I would say that scientific text writing is not so important as most part of the time the real need is to "translate" scientific texts to political representatives or citizens.

**Did your employment after obtaining the PhD go smoothly or did it present you with any challenges?**

As previously stated, some of the skills acquired/trained during the PhD are really useful for developing my current job, so in some way we could say that PhD has improved my performance and the quality of my work.

**What message would you give to PhD students who dream of finding a satisfying job?**

I would like to encourage them to continue with their PhD studies. In some moments they could feel that the effort isn't worth it, but, even if the PhD doesn't give them a direct employment opportunity, the experience and the knowledge acquired during the PhD is valuable at personal and professional level.

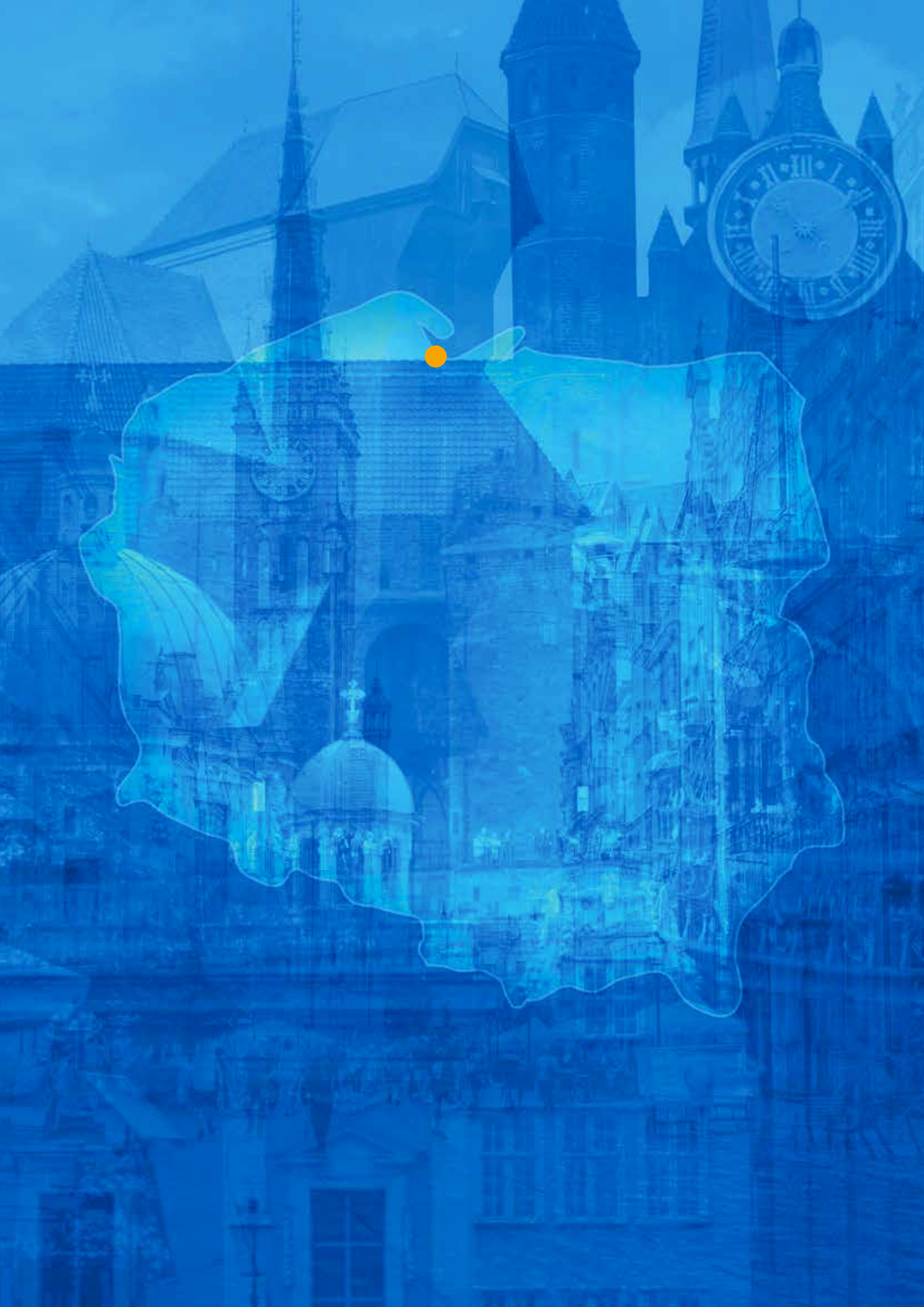
**What message would you give to PhD advisors?**

For PhD advisors I would like them to remember that their mentoring is essential for PhD students to achieve their goals. A good PhD advisor could save time/efforts and bring PhD results to another level of excellence.





**University of Gdańsk**





Janusz Andryjenko

## My whole life in the marine industry

**Janusz Andryjenko, PhD, a Polish national currently living in Gdańsk. He was awarded a doctoral degree in the discipline of Economics in the University of Gdańsk on 13 December 2010. His doctoral dissertation, entitled *Quality costs as part of the process of improving business competitiveness (case study of a maritime transport enterprise)*, was completed under the supervision of Prof. Janusz Żurek, PhD, D. Sc.**

### What is your current place of employment, your position and professional duties?

For sixteen years, I have been working at Chipolbrot – Chinese-Polish Joint Stock Shipping Company in Gdynia, which provides services in the generally perceived maritime transport. I currently hold the position of the head of the quality and safety department. Formally, I am "designated person ashore" (DPA). In accordance with the requirements of maritime conventions, I am the liaison between a ship crew and company directors on all matters regarding quality and safety, including antipiracy or antiterrorist security. Ship crews contact me about a broad spectrum of problems with management systems, environment protection, ship security. I also run the management system according to the EN ISO 9001 standard in the company, which means supervising audits and all matters that refer to quality. Therefore, it is an interdisciplinary, interdepartmental function, and I have a very great deal of responsibilities in my job description.

### Have you worked at another institution or company before?

My entire professional life has been built around the marine industry. I am a graduate of the Gdynia Maritime University. After college, I took a job in Warsaw at the Ministry of Transportation. I dealt with affairs pertaining to maritime transport, ship repair yards. A year later, I came back to the Tricity and began working at Chipolbrot, where I was employed for more than two years. We were creating the EN ISO 9001 quality management system and the management system for the safe operation of ships and pollution prevention in accordance with the ISM Code. By the end of the 90s, I was offered a job at Gdańsk Shiprepair Yard "Remontowa", where at first I was part of the promotion department, then I transferred to the organisation department, which handled internal quality control, and finally, on the basis of my evaluation, I was promoted to the Ship Repair Management Department. I moved up the career ladder from an assistant to a project manager deputy. I had worked at Gdańsk Shiprepair Yard "Remontowa" for seven years. Then in 2005, I went back to Gdynia and Chipolbrot for personal reasons.

### You have been at Chipolbrot for nearly twenty years. Is it, then, the place that meets your professional expectations?

When I was working at the Ministry of Transportation, I already knew that I would like to integrate my professional future with a maritime company, not with an institution supervising the areas of marine security. Duties carried out at the Ministry are in a natural way full of bureaucracy, and I saw myself in more of an operational and practical function. I like facing situations which can bring something new and surprising every day. As the head of the quality and safety department at Chipolbrot, I manage precisely such situations every day.

### **What brings you the most satisfaction in your current job?**

Frankly, I am the most fulfilled when there are no issues and we do not encounter many obstacles during a multitude of seaport inspections. A lot of satisfaction brings me the fact that I have access to many situations that reveal irregularities and I have an opportunity to react more quickly, thus, solve problems effectively.

### **Would you be willing to share with us your professional victories and failures?**

I believe that professional accomplishments are the result of the work of an entire team, which I am a member of. So I do not recall any spectacular individual achievements. However, an important part of my professional career was working at the Ministry of Transportation, when Poland was aspiring to join the European Union and the Polish legislation was being adapted to international standards. I participated in projects related to the introduction of the new Ports and Harbours Act (1996). As a young man, I cooperated at the time with members of parliament and other people within the marine industry, which allowed me to gain interesting professional experiences. To this day I am still glad that when I was a novice deputy head of repairs in Gdańsk Shiprepair Yard "Remontowa", I had a chance to be the "firm's first impression" – I was always sent to the clients who were visiting us for the first time. As far as failures are concerned, in my current job, they have always been related to so-called force majeure, uncontrollable events, not dependent on us, our ship crews and the state of ship maintenance.

### **To what degree does your professional career correlate with your PhD studies?**

To a rather significant one. The title of my doctoral dissertation was Quality costs as part of the process of improving business competitiveness (case study of a maritime transport enterprise). Hence, I combined here the two areas – the marine industry and economics. In general, however, in our everyday life, and, undeniably, in the actions of each enterprise, economy is essentially everywhere. For instance, not meeting the standards of quality or safety translates into the company costs, which was also included in my doctoral thesis. Combining expert knowledge of the marine industry and economics allows for me to be involved in a variety of interesting undertakings. For example, I am a board member of one of our partnerships in the leisure and tourist sector.

### **Does obtaining a PhD provide more job opportunities or broaden professional horizons?**

I think that the situation is entirely different for people who begin their PhD studies and prepare their doctoral dissertation right after college, and for people who have a certain, well-established position in their career. In a highly competitive environment, large companies or foreign corporations, writing a doctorate by young people, who just begin to follow their professional path, may cause some problems, such as other employees' fears for their jobs. If, however, you have a founded professional status, a PhD may be an added value. Still, it needs to be emphasised that in the business sector, experience, knowledge and competences are valued above all.

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**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

I wanted to complete my PhD project right after college, but I recognised that the lack of professional experience and practical knowledge would not allow me to formulate and prove an original hypothesis in my marine industry. I decided to gain work experience first, and I began the doctoral studies when I had ten years of practice and a wealth of work experience in an international company under my belt. In my case, the goal at the time was to broaden and develop the already-acquired knowledge. Apart from courses in economics required to pass exams, there were also those that interested me because of working in an international enterprise. The first category may include classes in quality research methods, didactics, higher education methodology; the second – those that relate to transport and logistics development policy, international relations, accounting and economic policy. An added benefit consisted of other students, who gained their experience from working in firms or universities. Consequently, doctoral studies were a forum for an exchange of ideas, which I value immensely. They looked more like MBA studies, where people learn from each other, and lecturers are wise men with the insight of students. I do not remember any skills or experiences that were not beneficial at all. It was a time put to very good use.

**Would you care to share a message or observation regarding the hardship of completing a doctoral thesis and dissertation defence with current doctoral students?**

Without a doubt, it is worth enduring this hardship. You need to have an explicit aim and answer the question: what do I want to achieve? The knowledge gained during doctoral studies and while working on a doctoral thesis is very advantageous, it gives you a significant, general picture of the issues and problems that you can face in your company and your business sector. In my case it is the invaluable knowledge of the marine industry.



Tomasz Bednarz

## Virtual marine worlds

**Tomasz Bednarz, PhD, a Polish national currently living in Gdańsk. He was awarded a doctoral degree in the Field of Humanities in the University of Gdańsk in 2015. His doctoral dissertation, entitled *A historical and archaeological study of De Jonge Seerp – the late eighteenth-century Dutch ship*, was completed under the supervision of Prof. Beata Możejko, PhD, D. Sc.**

### Where do you currently work and what are your professional duties?

I work at the National Maritime Museum in Gdańsk as a supervisor of the digitalisation department. At the same time, as an underwater archaeologist and a doctor of history, I deal with the exploration of shipwrecks in the Gulf of Gdańsk. For the last several years, I have conducted "the Gulf of Gdańsk Shipwreck Virtual Open-Air Museum" project, which focused on documenting underwater shipwrecks with the use of digital methods of documentation. Right now I am at the stage of drawing research conclusions, which will result in publications regarding this matter.

### Have you been employed in another institution or company before?

I completed my master's studies in archaeology in 2000. Several months later, in 2001, I started working at the National Maritime Museum in Gdańsk as an assistant in the underwater research department. Afterwards, I was promoted to an adjunct, but my professional career "accelerated" once I was awarded a PhD. After many years of working as an adjunct, I immediately became a certified curator. This is the highest position in museology, and holding a doctoral degree is a job requirement in this case. Afterwards, an idea to create a digitalisation department at the National Maritime Museum in Gdańsk emerged. This department would manage documentation, shipwreck exploration, and digitalisation in general, for the purposes of our museum. I participated in establishing this department and I became its supervisor a short while after receiving a PhD.

### Did your employment after completing the studies and being awarded a doctoral degree go without problems or was it a challenge?

I consider the fact that I was employed at the National Maritime Museum in Gdańsk to be a collection of different circumstances – the place and time I found myself in then. Many archaeology graduates did not take working at a museum into account at all, due to very low salary. To this day, I remember my first paycheck and what a ridiculously small amount it was. However, I was fortunate enough not to have to be influenced by the necessity to generate higher income right after college, so in my case the decision was not difficult.

### Why did you choose the National Maritime Museum and is it the best place of employment for you?

In my case it was a matter of education. With my qualifications and competencies, in order to work in my chosen profession, selecting a position at a museum was practically my only option. I also had appropriate letters of recommendation. While writing my master's thesis at the University of Gdańsk, I frequently visited the National Maritime Museum to use the museum's materials. Therefore, I was already slightly recognisable when I was being hired here. The fact that I was employed at the National Maritime Museum in Gdańsk was a bit of a coincidence.

I have to admit, though, that it was a happy accident, since I am able to fulfil my professional aspirations here.

**Is your current job fulfilling for you, and which areas would you indicate as the most satisfying?**

Like I mentioned, I can fulfil my professional aspirations here. Essentially, my two fields of interest bring me the most satisfaction. One is digitalisation, so preparing and executing everything that is related to introducing new technologies in the area of digitalisation in our museum. We were able to apply solutions so new that we have become pioneers of sorts in the museology world. While contrasting the level of technological advancement in the area of digitalisation, we definitely stand out in comparison to other museums, not only in Poland. The other area refers to the opportunity to explore the underwater shipwrecks and indulge my scientific passion. I wrote and published a lot of papers and I intend to publish more, so I still grow as a researcher.

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**Is your current job related to the doctoral studies you completed, and in which areas do you use this experience the most?**

After completing my master's studies, I had a rather narrow background of a historian's research workshop. PhD studies allowed me to familiarise myself with this workshop and develop it. Of course, I am not an expert, but because of it I had an opportunity to collaborate with several brilliant historians and learn from the masters. I discovered and explored different research methods rather extensively, which allows me to move freely not only in the world of archaeology but also history. Moreover, I try to use that knowledge in my publications by combining the two disciplines.

**Would you be willing to share with us your biggest professional success stories and failures?**

What I consider to be a success is that my doctoral dissertation was published in 2019 in the form of a book entitled *De Jonge Seerp. the study of the late eighteenth-century Dutch ship*. Thanks to that, the National Maritime Museum



in Gdańsk was honoured in the Sybilla 2019 contest in the category of scientific and research projects. It is a prestigious contest for museums, organised by the Ministry of Culture and National Heritage, in which the most important museal event of the year is being awarded. Another success is the National Maritime Museum in Gdańsk receiving the Sybilla 2016 award itself in the category of digitalisation and new media for *the Gulf of Gdańsk Shipwreck Virtual Open-Air Museum. Recording and Inventory of Underwater Archaeological Heritage* project. However, I do not recall to have witnessed particularly unpleasant events, though one always wishes to do more and be better.

**In your opinion, does completing doctoral studies and obtaining a PhD open up wider job opportunities?**

That should naturally be the case and most instances are probably like that, even though it surely depends on the field of science and the job market in a particular sector. I also know of situations in which people were hiding that they held a doctoral degree in order to be able to get a job below their qualifications. I get the feeling that a PhD has become a bit common. There are plenty of people who obtain it for the prestige alone, not due to a real need for the development of their professional career. Additionally, I notice that in some universities obtaining a doctoral degree is possible with a minimal workload.

**What sort of skills have you developed during your doctoral studies and which one of them turned out to be the least and most useful?**

Some courses have developed my general knowledge, not professional, but I would not call them impractical. The most effective, however, were seminars that during my doctoral studies that were based on group work – preparing and referring different subjects. It was a good formula, since I intended to write my doctoral dissertation rather expeditiously. Systematic preparing and referring a variety of topics during seminars made the dissertation write itself to some extent. I also certainly developed the aforementioned history workshop, and I gained the ability to create something that we call historical narrative, which is useful in writing scientific articles.

**Would like to share a message with current doctoral students, future PhD graduates?**

Preparing a doctoral dissertation and obtaining a PhD requires effort, time and often personal sacrifice. But it is worth going to the trouble. I would only like to warn everyone that a doctoral dissertation needs to be written systematically, taking an appropriate research tool into consideration. In my case the doctoral studies, dissertation and all the effort that went into it, contributed to measurable effects both in the professional and financial aspects. I believe that it was the right choice of direction for my professional career development.





Leszek Frankowski

## Mission – protection of the environment

Leszek Frankowski, PhD, a Polish national currently living near Gdynia. He was awarded a doctoral degree in the discipline of Earth Sciences in the University of Gdańsk in 1999. His doctoral dissertation, entitled *"The circulation and transformations of different phosphorus forms at the sediment – water interface in the Pomeranian Bay"*, was completed under the supervision of Prof. Jerzy Bolątek, PhD, D. Sc.

### Which company do you currently work for and what are your professional duties?

I have worked at the Water and Sewage System Company in Gdynia, called for short PEWIK GDYNIA Sp. z o.o., since the year 2000, so for twenty one years. In the beginning of my professional career, I was an analyst, I tested water and wastewater samples in an atomic absorption spectrometry (AAS) laboratory, among others (examining it for metal contents). After a while, I was promoted to a supervisor of the Water and Wastewater Laboratory Department. Presently, my responsibilities include planning and organising the laboratory's ongoing tasks, informative support of clients and executing the department's personnel policy. Our laboratory has been accredited since 2006, and I also perform the role of a quality supervisor. This is an additional function, whose purpose is to provide maintenance and gradual development of the scope of accreditations, which are granted by the Polish Centre for Accreditation. We attain accreditation No. AB 697, the current scope of which can be found on the following website: [www.pca.gov.pl](http://www.pca.gov.pl). Accreditation in a testing laboratory is associated with plenty of responsibilities and requirements specified by the PN-EN ISO/IEC 17025:2018-02 standard: "General requirements for the competence of testing and calibration laboratories." Apart from a series of technical requirements, the standard demands us to keep extensive system documentation. Ongoing organisational tasks and supervision over the documentation unfortunately leave me with not enough time for samples testing, even though I have to admit, I sometimes miss it.

### Have you been employed anywhere else before?

For a year between my PhD studies and the job at PEWIK GDYNIA, I was employed at Hydromega, a Gdynia-based company, which dealt with power hydraulics. I worked there as an expert for environmental protection equipment.

### What prompted you to choose PEWIK GDYNIA?

The main motivation was the urge to apply the knowledge and skills I obtained during MA and PhD studies in my professional work. I decided that I would hate to lose five years of studies and four years of work and study during the doctorate, on things unrelated to it.

### Is your current job fulfilling, and if so, what brings you the most satisfaction?

There are a few such areas. We are a very good team, a well-oiled machine. What is important to me is contact with people from other departments and the opportunity to visit facilities, such as water treatment stations or wastewater treatment plants. Even after many years, it is still a job that interests me. But above all, I feel that the work that we do is simply essential. We perform testing of drinking water and wastewater on various stages of treatment and sewage

sludge. One of the goals of our company is to increase the quality of the treated wastewater that enters the Puck Bay. The duty of the laboratory that I supervise is to support the control of this process. On the Wastewater Treatment Plant Department's request, our laboratory tests the sewage that enters the treatment plant as well as the wastewater that is introduced to the Puck Bay in Mechelinki. The laboratory also tests the water samples in order to control the treatment process in the water system. Our accredited and valid results are demonstrated to outside institutions, including the Environmental Protection Inspectorate or local sanitary and epidemiological stations.

**Would you be willing to share with us your professional victories and failures?**

Our laboratory currently operates in two locations: the Wastewater Laboratory that is based in the Dębogórze Group Wastewater Treatment Plant, and the Water Laboratory, which is situated in Gdynia. For many years our dream was to have one central water and wastewater laboratory. A few years ago the management of our company decided to begin construction of a state-of-the-art facility in Rumia. Apart from relocating current laboratories, we will be able to create new ones for microbiological, sensory, and chromatographic analysis. A purchase of many new devices and equipment is likewise planned. I believe the biggest professional success will be relocating to the new lab.

It is difficult to brag about your failures. Problems do occur, but thanks to a strong and experienced team we have been able to solve them for all those years and look towards the future in order to improve.

**Is your current job related to the doctoral studies you completed?**

In my current job I see a considerable similarity to the analysis that I carried out during my PhD studies. I performed chemical analyses of seawater and seabed sediments, and I cooperated with the National Marine Fisheries Research Institute. We conducted testing during research cruises around the Gulf of Gdańsk and the Pomeranian Bay. Tasks at the water system laboratory are different in nature, but many research methods are similar, so the analytic experience I gained during my doctoral studies was very useful. The skills of using data analysis software, which I developed while completing the PhD studies, proved to be very helpful in the laboratory work as well.

**In your opinion, do doctoral studies create ample career opportunities?**

I believe that PhD studies clear the path for people who plan to continue their academic career, because they substantially prepare you for research and didactic work. I had a chance to stay at the university, but I made a different decision. I suspect that in my case a PhD impacted a fast-track promotion. However, I think that those are very individual experiences, and I do not know whether this road is for everybody.

**What sort of skills have you developed during your doctoral studies and which one of them would you rate as the most and least useful?**

The most useful, particularly in the early stages of my professional career, was the substantive knowledge and the aforementioned analytical skills, thanks to which I was able to start working in the laboratory without any trouble. Moreover, good command of computing turned out to be immensely valuable. I began my PhD studies in 1994, so at a time when computer availability was not as obvious as it is nowadays. I had access to computer programs during my doctoral studies, and already then I could practise using applications like Excel, Statistica, Surfer, Grapher, and I was able to conduct data analysis with the use of those programs. The knowledge was certainly helpful in the water system lab, for instance in preparing the first drafts of the procedures regarding method validation and estimating their uncertainty.

However, when I was promoted to a supervisory position, what I found to be quite useful were the communication and organisation skills, which I developed during the doctoral studies, for instance conducting classes for students and master's students or obtaining financial resources for research.

It is difficult to say, though, what turned out to be the least beneficial. For example, many different devices and laboratory techniques, which I was introduced to during the doctoral studies, have fallen into disuse. Yet, thanks to those skills, it was easier to master new techniques afterwards.

#### **Did your employment after doctoral studies go without problems or was it rather a challenge?**

I guess it was not problematic. I secured my first employment from a job listing, and later on I found out that there was an opening for a chemist in the lab at PEWIK GDYNIA. I was granted an interview, after which I received an affirmative answer.

#### **What would you like to share with the current doctoral students and future PhD graduates?**

A PhD is a very good way of developing a professional career for young, ambitious, and open-minded people. However, you need to answer the question whether you wish to continue your academic work or you would rather cooperate within the industry or with research and development centres. I think it is worth establishing contacts with companies already during PhD studies, and search for those that are open to the experience of working with young scientists, which provides an opportunity not only for research work, but also to run a business profitable for a particular sector of the economy.

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Małgorzata Geringer d'Oedenberg

## Environmental protection from a practical perspective

**Małgorzata Geringer d'Oedenberg, PhD, a Polish national currently living in Gdańsk. She was awarded a doctoral degree in the discipline of Earth Sciences in the University of Gdańsk in 2001. Her doctoral dissertation, entitled *The role of benthic macrofauna in oxygen and inorganic nitrogen fluxes between sediment and bottom water in the coastal zone of the Bay of Puck*, was completed under the supervision of Prof. Maciej Wołowicz, PhD, D. Sc.**

### **What is your current place of employment, your position and professional duties?**

I work at the water and sewage system company „SAUR Neptun Gdańsk” Spółka Akcyjna (SNG SA), and I deal with matters that pertain to environmental protection from a procedural, legal, and organisational aspect. My job is related to employing the acts that are in force in Poland in the areas of environmental protection: environmental protection laws, water law act, waste act, and those on collective water supply and wastewater disposal. The scope of my duties includes securing permissions, which are required by law in regard to water system company functioning, implementing current procedures, and supervising their execution from a legal, organisational, and practical standpoint.

### **Is your job directly related to maintaining the marine environment clean?**

Yes, but not only. Part of the overseen issues is transporting treated wastewater to the environment, including to the Gulf of Gdańsk. A wide area of environmental aspects that interest me in my job involves also matters that refer to the utilization and protection of drinking water reserves, as well as air emission or waste management.

### **How long have you been employed at SNG SA, and did your position and professional duties change during your employment?**

I started working even before the doctoral dissertation defence. At first, I was briefly employed at the Office of Helsinki Convention, that is the Convention on the Protection of the Marine Environment of the Baltic Sea Area from 1992, which was supposed to enter into force in Poland in the year 2000. It was a three-month experience; however, an interesting one, since it allowed me to look at the marine environment protection from an international organization's perspective. Nevertheless, I was searching for a different target job. I tried to get hired at SNG SA as a specialist who would deal with the protection of the environment. At the same time, I also submitted my application to a job agency, in which I indicated I could work as a French translator. It turned out that it was exactly what SNG SA needed at the time. Therefore, I was hired for that position in October 1998, but I waited for the creation of a target position, namely an environmental specialist, which happened in February 1999.

### **You are also a city tourist guide. Can you tell us more about that job?**

It's my passion. I have always been interested in our region. Besides, I enjoy connecting with people, talking about history, places and other elements that illustrate it... During my last year of intramural studies at the University of Gdańsk, I enrolled in a foreign tourist guide course. Then, in 2012–2013, I completed a Tricity tourist guide course, and I have been guiding sightseers, who visit our region, ever since. Afterwards, I developed my competencies by completing

other courses, including a Malbork Castle tourist guide. I also completed a postgraduate programme in Gdansk studies at the University of Gdańsk.

#### **Why did you decide to work at SNG SA and is it the best place of employment for you?**

I did not have the chance to continue my research work. However, during my studies I took an apprenticeship in the laboratory of a water and sewage system company in Stockholm. I had an opportunity to conduct observations of treated wastewater entering the Stockholm Archipelago. Subsequently, my master and doctoral theses were related to research conducted in the Bay of Puck, in the area of wastewater treatment plant outlet in Swarzewo, so this topic had been my interest for a long time. And yet, I was interested not only in the marine environment, but also in the land activity that could result in its protection. I considered it an interesting path towards the development of my professional career.

#### **What brings you the most satisfaction in your current job?**

Working at SNG SA is rewarding and fascinating, because the company's actions have a real influence on what is going on in the environment. However, at times it is also frustrating. Regulations on environmental protection are often changing, which contributes to a lot of turmoil. Observing the environment and its changes from a practical point of view of someone who exploits this environment, makes you uncover and understand plenty of topics. Sometimes, however, in order to do some good, you are forced to think outside the box, not only using your scientific knowledge and expertise in regulations. You have to practise communication skills. Accomplishing goals, often through patient compromising, does actually bring a lot of satisfaction.

#### **In which areas is your job related to your doctoral studies?**

One of the common denominators is the fact that during my PhD studies I conducted research in the area of wastewater treatment plant outlet in Swarzewo. Another one is related to the knowledge of analytics, which is necessary while planning tests conducted by our laboratory and evaluating achieved results, and, above all, understanding the processes that we deal with.

#### **Would you be willing to share with us your biggest professional success stories and failures?**

I do not recall any major failures... Perhaps, I regard staying too long in one professional environment as a bit of a failure. On the other hand, I think that my professional success is being open to other possibilities and areas of activity, such as for instance working as a tourist guide. It allows me to constantly improve and break with the routine.

#### **In your opinion, does completing doctoral studies open up wider job opportunities?**

That depends on the field of science, in which one obtains a doctoral degree. In Poland, it also regrettably depends on the gender, since some employers are still afraid of employees who are, in their judgment, too educated, particularly women. It is very unfortunate and we need to fight with this stereotype.

*Working at the water and sewage system company SAUR Neptun Gdańsk (SNG SA) is rewarding and fascinating, because the company's actions have a real influence on what is going on in the environment. (...) Observing the environment and its changes from a practical point of view of someone who exploits this environment, makes you uncover and understand plenty of topics. Sometimes, however, in order to do some good, you are forced to think outside the box, not only using your scientific knowledge and expertise in regulations. You have to practise communication skills. Accomplishing goals, often through patient compromising, does actually bring a lot of satisfaction.*

However, it is worth putting an effort to get a doctoral degree. PhD studies broaden your horizons, teach you to see what is unobvious on the face of it, they give you the skill to gain knowledge on your own. It makes further professional development and self-sufficiency in different job positions easier.

**What sort of skills have you developed during your doctoral studies and which one of them would you rate as the most and least useful?**

I participated in my PhD studies in the mid- to late 90s. At the time, there was no possibility of taking part in lectures and classes. Our doctoral studies programme consisted of conducting research work, including of course preparing a doctoral dissertation and conducting didactic classes with students. It had an impact on the development of our skills and competencies. As far as research is concerned, in particular, I learned how to connect and analyse different issues from various fields. Whereas, conducting didactic courses allowed me to establish connections with people more freely. Thanks to working with students and participating in scientific conferences, I also developed the skill of public speaking, which was useful for conducting trainings and in my job as a tourist guide. During my doctoral studies I collaborated with French scientists, so I practised my French at the same time, which later on opened up job opportunities for me. It is, however, difficult for me to unequivocally say that some skills proved to be impractical. About ten years after completing my studies, I came back to oceanography for some time – I again had the opportunity to conduct research connected with marine life in collaboration with the Institute of Oceanology of the Polish Academy of Sciences. It turned out that the skills acquired during my studies that had not been used for ten years were beneficial again and allowed me to participate in research cruises to Spitsbergen twice.

**What message would you give to PhD students?**

Undoubtedly, the mere fact of undertaking third cycle studies and conducting research is highly developing. Nonetheless, you cannot forget that not everyone will be able to take up research work afterwards. It is important to observe the job market within one's professional expertise – in the business environment as well as in public institutions. It is worth knowing how people who come from scientific centres are perceived in the job market. Not all employers feel comfortable hiring someone who, in their opinion, is overqualified and may potentially become their competition. You also need to take into account the fact that PhD graduates enter the job market at least four or five years later than their peers. Regardless, doctoral studies represent a time of inner self-development and becoming stronger in the fight against obstacles, which is certainly worth the effort.



Andrzej Gierszewski

## The sea surrounds us from everywhere

**Andrzej Gierszewski, PhD, a Polish national currently living in Gdańsk. He was awarded a doctoral degree in the field of History in the University of Gdańsk in 2016. His doctoral dissertation, entitled *The Curonian Spit and the Curonian Lagoon in the Middle Ages (until the year 1525)*, was completed under the supervision of Prof. Wiesław Długokęcki, PhD, D. Sc.**

### **What is your current place of employment, your position and professional duties?**

I work at the Museum of Gdańsk as an adjunct. I hold the position of a supervisor of the communication and promotion department. The condition of my employment at the museum in 2016 was writing an EU project. I started in the marketing department with administrative responsibilities associated with a specialised scope, such as graphic design. Additionally, my duties included cooperating with the business environment, final recipients, and simultaneously, writing an EU project for the Wisłoujście Fortress. After six months of employment, I also took over the responsibilities of a press secretary, and since November 2019, a supervisor of the established communication and promotion department. This rather wide range of duties requires me to sacrifice many hours for work, which calls for a combination of substantive and administrative capacity, like for instance managing a team, arranging a work schedule, and planning a promotional budget.

### **Have you been employed at another institution or company before?**

I began in the amber industry. Subsequently, just before completing my doctoral studies, I started working at the current National Maritime Museum in Gdańsk. I was brought in to carry out the 'Crossroads 2.0.' project, executed by parties from Poland, Lithuania and Russia, whose aim was, among others, to promote the archaeological heritage of those three regions. Once that project was completed, I came back for a while to amber craftsmanship. And right afterwards, I took a job at a new place, which I am affiliated with to this day, namely the Museum of Gdańsk.

### **Why did you choose the Museum of Gdańsk?**

You may say, jokingly, that the Museum of Gdańsk chose me. The director, who took office in 2015, hired me with a specific idea of preparing an EU project in mind.

### **To what extent are the projects you handle related to marine topics?**

The National Maritime Museum operates in Gdańsk, and that is exactly where the history of the sea and its people is unfolded. In the Museum of Gdańsk we tell the story of Gdańsk, also as a port city, always drawing attention to the fact that the sea has always facilitated the period of prosperity, such as for example in the XVII century. There are other precious "marine" facilities in the Museum of Gdańsk, like the Wisłoujście Fortress or the Guardhouse no 1. at Westerplatte.

### **Is your current job fulfilling, and what is the source of the most satisfaction?**

Although according to the act, I am not a museologist, I find great joy as one in seeing how an audience enters into different interactions with an exhibition, how they react to the story we tell. One of the tasks that brings me the most



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satisfaction is the "Benefactors of the Gdańsk Museum" programme, as part of which you may donate items related to the history of Gdańsk to our museum. The possibility of honouring people from all over the world, who appreciate social effort put into the development of museology and history of Gdańsk, is a thing that adds a deeper sense into everyday work.

**What are your professional victories and possible failures in your current job?**

The greatest success is our wonderful team working at the museum, without whom nothing would be possible to accomplish. The rest, like awards, honourable mentions or words of gratitude, are a pleasant bonus. Failures usually result from the nature of museum work, where there is a multitude of events and plenty of responsibilities that go with it. Even though museums are considered a static place, it turns out that they are a breeding ground for ideas and their application, which sometimes, out of necessity, must be left without particular care. But those are more like stumbles, which can always occur, given such intensity of the job.

**To what extent is your current job related to your doctoral studies?**

To a small one. I wrote my doctoral dissertation on the general history of the Middle Ages, and, by definition, a museum should not be a place where you have the time to attain scientific fulfilment. The added value, on the other hand, is that medieval studies are a little like playing a detective. A whole falls into place from sparse information. That is a valuable skill, useful in professional life.

**Does obtaining a doctoral degree open up wider job opportunities?**

In companies related to the sector of humanities, such as museums, a PhD is an advantage. When applying for a job, PhD holders are seen as experts in their field of science, even though a doctorate is not required in administrative tasks, and essentially does not make things easier. In the private sector, humanists with a doctoral degree do not have it as easy, since it is frequently believed that they cannot be offered a job below their qualifications or that scientists simply do not fit in with their profile. I had worked like that in one of the Pomeranian companies for two years. I did not tell anyone anything about my doctoral degree there.

**What sort of skills have you developed during your doctoral studies?**

I consider PhD studies to be an expansion and practical usage of the knowledge

gained during first and second cycle studies. I also developed soft competencies in regard to communication and teamwork. I met incredible people in the faculty and university doctoral students councils, I got involved in the university social life. The scholarship that was paid out at the time did not amount to much, but still, it did motivate you to work. Moreover, during my PhD studies I realised that you must maximise your chances in the job market through developing additional skills. I completed a postgraduate programme in social communication, which opened up new possibilities for me.

#### **How would you rate the usefulness of the skills acquired during your doctoral studies?**

Aside from already-mentioned soft competencies, a design of writing a scholarly work itself teaches you to notice what is the most important, and to have the skill of moving from the specific to the general, and vice versa. It is essential while formulating a concept of strategy operations at work, and later on in its implementation. During PhD studies one can also learn that action requires energy, lots of flexibility, and understanding, which correlate to a better functioning in the business environment.

#### **Did your employment after completing the doctoral studies go without problems or was getting a job more of a challenge?**

Employment in museum studies can sometimes pose quite a challenge for a young person. New positions are created rarely and there is usually not a lot of turnover. I was not employed in a regular way, but rather, like I mentioned, to complete a particular task – prepare a project. However, for some time now the situation at the Museum of Gdańsk is a little different, and the attitude has changed a bit as well. Over the last year, we have hired several new employees, and we plan to employ more in the years to come. This is a changing institution which seeks out people with experience, also from outside the industry, and those who wish to gain experience.

#### **What message would you give to current doctoral students and future PhD graduates?**

Putting an effort into writing a doctoral dissertation is a task worth doing as long as you have passion, willingness to be dedicated, and people who support you. I knew by my first year of studies at the University of Gdańsk that, upon their completion, I would undertake PhD studies, and I am certain that the years were worth the effort. However, it is connected with plenty of sacrifices in your personal life. Before making that decision and saying "yes", it is worth checking whether the challenge and adventure that a PhD offers pairs with your life priorities. And considering where you see yourself in a year, five years or in a decade.





Dorota Lost-Siemińska

## I was born in Gdańsk, with a view of the shipyard

**Dorota Lost-Siemińska, PhD, a Polish national currently living in London. She was awarded a doctoral degree in the discipline of Law in the University of Gdańsk in 2002. Her doctoral dissertation, entitled *Principles of law of environmental maritime salvage*, was completed under the supervision of Assoc. Prof. Wojciech Adamczak, PhD, D. Sc.**

### What is your current place of employment, your position and professional duties?

For the past ten years, I have been working at the International Maritime Organization (IMO), which is a highly specialised agency of the United Nation that defines the standards of maritime security, marine environmental protection and civil liability for pollution caused by ships. I am the deputy director of the external affairs and legal department and the legal office supervisor. The department maintains contact with embassies and representatives of other countries accredited by the organization. It also manages media relations and promotes our organization. The main task of the legal department is to offer legal services. My expertise is applied in all legal affairs, both external, such as contracts concluded by our organization, and internal, e.g. employee disputes. But above all, we organise meetings, including diplomatic conferences, during which countries ratify international treaties and amendments, and adjudicate legal and technical matters. The legal office holds an advisory position during such meetings, and the final form of legislative acts is of course decided upon by the member states.

### Have you worked at another institution or company before?

I was writing my doctoral thesis and doing my legal apprenticeship simultaneously. Once the defence was concluded and I passed the doctoral exam, I joined one of the larger law firms. However, working as an attorney in an office did not sit well with me. At that time, I was communicating with professor Jerzy Młynarczyk and professor Zdzisław Brodecki, and I even wondered whether becoming a lawyer was the right choice for me. The professors told me that the Ministry of Transportation was looking for attorneys specialising in marine issues. It was a time when Poland was preparing to enter the European Union, and, concurrently, a time of an economic boom. So there weren't that many applicants for a job at the ministry, since the wages were very low. I submitted an application, and I moved, with my husband who also received a job offer in the capital city, from Gdańsk to Warsaw. I began working at the Ministry of Transportation and Marine Economy in the marine transport department, and I fell in love with it right away. I was carrying out tasks associated with the legislative process that pertained to the adaptation of the Polish law to the European Union law with regard to marine issues. My master's and doctoral theses were both on the topics that referred to international treaties, so I could participate in the process of formulating law on both a domestic and international level, which was fascinating to me. I participated in international meetings held in Brussels, New York City and London, and I represented Poland in the International Maritime Organization meetings.

### Why did you decide to work at IMO? Is this the best place for you?

I was born in Gdańsk, in a place with a view of the shipyard. Both my mother

and my aunt wrote their master's theses in the department of maritime law. The first time I participated in a maritime law seminar, I was six – my mom took me to a conference. Therefore, the sea is in my blood. I was not sure right away who I wanted to be, but I have always loved the sea, and I was fascinated with the maritime law. And at IMO this type of law is being established. I couldn't have imagined a better career and a better place to work.

**What brings you the most satisfaction in your current job?**

The most moving moment is when the president of a conference, that settles affairs regarding, for instance, marine environmental protection or improving the security of passengers on ships, concludes it with the words: It is so decided. Together with my team, we then feel like we are part of the process, which is a major step forward in the field of maritime law. It is a touching moment and nearly all of us have tears in our eyes. We also get a lot of satisfaction from the fact that our analyses or legal advice are beneficial, and they constitute a helpful guideline for the other member states. We are glad to be able to contribute to establishing international law.

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**Would you be willing to share with us your professional victories and failures?**

While working at the Ministry of Marine Transportation, I took on a role of a delegate representing Poland in a diplomatic conference, at which the member states dealt with hazardous substances and civil liability for marine pollution. I was the vice-president of this conference and I endorsed the final act with my signature. It was a very important and satisfying moment in my professional career. But the biggest stride was joining the IMO legal team, and, later on, my nomination for a legal office supervisor and the deputy director of the department. I am very proud of that. Failures... you cannot win all your cases and not everything goes the way we want it to. However, you have to take it into account as a professional risk. I do not regret any of my professional decisions. And even though I do not work as an attorney, the knowledge I acquired during the law apprenticeship and in my brief time as a lawyer are very useful.

**In which areas does your current job correlate with your PhD studies?**

Legal opinions drafted in our department do not resemble trial documents or opinions formulated in a law firm. They are more comparable to doctoral theses with chapters and footnotes, they have an academic feel. I learned that sort of extensive analysis and meticulous writing during my PhD studies. The knowledge of maritime law, which I developed while preparing my doctoral dissertation, proves exceptionally useful as the basis for my actions.

**In your opinion, does completing doctoral studies provide more job opportunities?**

That's a difficult question. The answer depends on an individual case, and where a particular person comes from. In the Anglo-Saxon system a PhD is awarded only to those who wish to stay in the university and devote themselves to science and academic work. Yet, the Germans pay a lot of attention to degrees

and titles. At IMO, where the working environment is international, very few employees have PhDs and it is not a prerequisite for employment. However, we do have our own academic institutions: the IMO International Maritime Law Institute and the World Maritime University in Malmö, Sweden. I often lecture there and the fact that I have a PhD is immensely helpful. Therefore, completing a doctoral dissertation and obtaining a PhD is very valuable for me personally, but it is not the reason why I was hired. What was important was that I had worked in the marine administration before and that I was the director of the marine transport department.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

I conducted classes for students, organised scientific meetings and seminars during my doctoral studies. I learned discipline, self-control, perseverance, and hard, arduous work. All of those skills are of use to me at my current job, and some of them also in everyday life. However, I lacked practice. I was writing my thesis in the marine field, not having ever been on board of a merchant ship. I believe it is important for a person, who prepares a doctoral dissertation in a particular field, to know it from the practical perspective as well. It depends, obviously, on a particular PhD student's situation. Some people write their doctoral thesis while already working in their profession, and they have a great deal of experience. I was preparing my doctoral dissertation right after college. It was a doctoral thesis on maritime salvage and my practical experience was obtained on a maritime salvage ship, not in a law firm that deals with those issues. So I had to organise the hands-on training on my own. I don't recall, however, any courses that were not useful, and I don't feel any sense of a waste of time.

**Did your employment after PhD studies go smoothly or did it present you with any challenges?**

Every next job was a challenge for me, but I didn't have any problems with employment. I was very lucky. Family tradition and my passions helped me choose my professional career path. I met many wonderful people who guided me. I will always be grateful to my professors Brodecki, Adamczak, and Młynarczyk, whose support and advice I could always rely on. When choosing a position, I wasn't forced to be swayed by the salary, I could let myself make my dreams come true.

**What message would you give to PhD students who dream of finding a satisfying job?**

It is important to be ambitious and aim high. It is not worth taking the easy way out. It is, however, worth it if you set the bar high and establish ambitious goals, because reaching them fills you with an abundance of joy. Then comes a moment when not only can you derive immense satisfaction from your job, but also enjoy its benefits.



Joanna Maciak

## Dreams come true

Joanna Maciak, PhD, a Polish national currently living in Gdynia. She was awarded a doctoral degree in the field of Earth Sciences in the University of Gdańsk in 2017. Her doctoral dissertation, entitled *The risk evaluation of petroleum derivatives on the Baltic Sea environment versus legislation*, was completed under the supervision of Prof. Elżbieta Niemiryecz, PhD, D. Sc., and Marek Gromiec, PhD, D. Sc., an assistant thesis advisor.

### What is your current place of employment, your position, and professional duties?

Currently, I am an employee of the Institute of Meteorology and Water Management of the National Research Institute in Gdynia (IMGW-PIB). I am a senior expert in the Research and Development Centre in the Department of Oceanography and Baltic Sea Monitoring. My job requires me to perform laboratory analyses of the acid-base system in the Baltic Sea and tag microplastics in the bottom and marine sediments. I have also been participating in scientific and research cruises as a hydrologist since November 2020.

### Have you been employed anywhere else before?

Under an employment contract, I have not. During my doctoral studies, though, I was employed on two occasions under an order contract as an academic and didactic teacher of apprenticeship for second-year navigation students on the school sailing vessel "Dar Młodzieży". I was hired at the Institute of Meteorology and Water Management for a 6-month internship towards the end of my PhD studies, while my doctoral dissertation was under review.

### Your doctoral dissertation thesis is interdisciplinary.

Yes. My doctoral thesis is interdisciplinary. My dissertation was on research related to tagging petroleum-derivative compounds in the Baltic Sea sediments, and it was closely connected with the legislation in force.

### Why did you choose the Institute of Meteorology and Water Management?

The reason I chose IMGW-PIB was the scope of the monitoring research, which is being conducted as part of a monitoring program of the Polish marine areas of the Baltic Sea by the Department of Oceanography and Baltic Sea Monitoring. Monitoring is fairly extensive, and it involves the physical, chemical, and biological parameters, concentration of hazardous substances, including heavy metals, persistent organic pollutants, and radioactive isotopes in various grids, marine debris that accumulates on beaches, and drifts in the water column along with microparticles. Research conducted at the Department of Oceanography largely coincided with the topic of my doctoral thesis, which is why I decided to apply for an internship at the Institute of Meteorology and Water Management.

### You combine research work with other responsibilities. Is the current place of employment satisfying for you, and what is the source of the greatest satisfaction?

I currently integrate lab work with participation in monitoring cruises, which take place regularly, six times a year. Working at the institute is undoubtedly a major source of satisfaction. It provides me with a tremendous opportunity for professional development and collaboration with groups of experts, both national and global.

### **Is your current job related to your doctoral studies?**

In some respects, yes. I still conduct environmental research. During the doctoral studies, I dealt with petroleum derivatives in the bottom and marine sediments. Currently, I also handle the same environment grids, but I mark other parameters.

### **Would you be willing to share with us your most important success stories and professional failures?**

The most notable success for me is completing the doctoral studies, which required many years of hard work and a great deal of sacrifice, but also my dissertation was also honored by one of the reviewers. Working at the Institute of Meteorology and Water Management and participating in research and monitoring cruises constitute a substantial amount of success for me as well. By taking part in research cruises, I continue my passion for sailing and navigation. As far as failures are concerned, surely, there have been a few, but I try to elicit the positive out of them, dwelling on it is a waste of time. I consider failures to be part of professional experience.

### **How can your environmental research be integrated with meteorology?**

Taking into account the dangers that result from the observable climate change and its real impact on a widely-understood natural environment, including marine ecosystems, my research has fundamental meaning for comprehending basic connections of meteorological conditions on marine environment elements and their functioning. Extreme phenomena, such as storms that occur more often and have a more violent course, are becoming a growing problem. They cause significant environmental damage. They can also increase the risk of releasing pollutants and hazardous substances deposited in the bottom sediments in the water column into the Baltic Sea by means of, for instance, resuspension, that is, the redistribution of insoluble sediment particles in the water column due to water motion.

### **In your opinion, do doctoral studies open up new job opportunities?**

Yes. I believe that completing doctoral studies provides new job opportunities not only in academia but also in other institutions that pertain to broadly defined science. Finding a job within one's academic expertise and qualifications after completing doctoral studies is not easy. A lot of my colleagues got employed in industries that have nothing to do with their doctoral research topics. A very important element of PhD studies is the opportunity to participate in interesting and professionally useful courses and trainings. It provides excellent chances of finding yourself in the job market. Knowledge and skills acquired this way may prove to be very valuable in a new job.



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**What sort of skills have you developed during your doctoral studies?**

Above anything else, the skills that relate to methods and methodology of the conducted research, but also advanced knowledge involving the newest accomplishments in conducted research, of basic and detailed nature.

**How do you rate the usefulness of those skills in your current workplace?**

I greatly value qualities like conscientiousness, openness, and curiosity. Currently, I participate in different workshops and courses, the same way I did during my PhD studies. In times of the pandemic, an opportunity opened up to take part in events online, to have an exchange of experiences and collaborative education with people from all over the globe. In my field, and in science in general, that is absolutely essential. Everything I have learned during my doctoral studies, I try to use in my work, and there are no skills that I would label impractical.

**In your case, was employment after college a challenge, or did it go rather smoothly?**

I have to admit that finding a job after obtaining a doctoral degree was a challenge. As I already mentioned, it is not easy to secure employment at a university after a doctoral dissertation defence, which is why I decided to try to find a job outside the academia. My first steps were directed to the labour office in order to register for unemployment, expecting to find an interesting offer there. I was faced with a painful reality there. I was offered a job below my qualifications and in no way related to my education, while I really wanted to continue working in the science sector. When I discovered that there is a chance to obtain a scholarship on your own and complete an internship provided that you find an institution that would hire you, I decided that my goal would be to identify such an institution. I wrote dozen of emails, and I did it! I completed an internship at the Institute of Meteorology and Water Management. I learned then that you have to fight for what is yours, and you cannot give up when you receive a reply that your education is excellent, but there are no job openings or time and opportunity for an internship...

**What message would you like to convey to current doctoral students?**

My message will be very simple: you have to believe in your own abilities and strive to reach an established goal. It is not always easy, but with hard work, determination, involvement, and a smile on your face, you can achieve a lot. You cannot give up. Dreams really do come true.





Marcin Szerle

## Gdynia – my love, my passion

**Marcin Szerle, PhD, a Polish national currently living in Gdynia. He was awarded a doctoral degree in the field of History in the University of Gdańsk in 2012. His doctoral dissertation, entitled *Sanitary condition and health protection in Gdynia during the interwar period*, was completed under the supervision of Prof. Marek Andrzejewski, PhD, D. Sc.**

### **What is your current employment position and your professional duties?**

I am a certified museum custodian and, currently, a supervisor of the Centre for Research on Gdynia at the Gdynia City Museum. It is a new unit whose purpose is to undertake and coordinate projects and scientific activities related to the history of Gdynia. Apart from organising the work of the Centre, my current responsibilities include research introduction and conduction, as well as designing, future coordination and scholarly editing of two book series that the museum plans to launch. The first one will include the doctorates that pertain to Gdynia, while the other refers to its monograph developed for the 100th anniversary of granting Gdynia its municipal rights, which happened on February 10th, 1926. We took steps to collaborate as part of an agreement in this area with the Faculty of History at the University of Gdańsk, and in the future with the UG Publishing House as well.

### **What type of research do you conduct as part of museum work?**

It is directed mostly at exploring the history of the city in the context of the aforementioned anniversary of granting municipal rights to Gdynia. As part of an editorial team that is being appointed, I will handle the coverage of Gdynia's history in the interwar period as well as the management of a series of publishings that refer to the past of the contemporary Gdynia area in different time periods – from the ancient times to the present era. This research is also related to the maritime economy, a sort of liaison between Gdynia and the world through the sea, as well as to migration, largely recognised social issues and modern architecture, which Gdynia is very much associated with.

### **Have you been employed in another company or institution before?**

I have worked at nearly every level of a professional path in museology. Immediately after the master's thesis defence in 2003, I was employed at the Gdynia City Museum in the Science-Educational Department, and I spent more than nine years there. My education helped me with my employment – I majored in museology, but I minored in two additional specialisations: the history and culture of Pomerania and material culture history, and I also completed my student apprenticeship at this museum. My passion was not without significance as well – I have always been interested in Gdynia as a family town, which is why the choice of a master's thesis topic was not difficult. My primary task at the museum was conducting promotional and educational activities, particularly for children and adolescents. However, I missed the research work, which is why rather promptly, because already in 2004, I undertook the doctoral studies at the University of Gdańsk, with my employer's approval. After the doctoral dissertation defence, I got a job offer at the Emigration Museum in Gdynia as a researcher. I had been employed for several years at this museum in the History and Science Department that was being created. As the first, and thereafter, the most experienced substantive employee within the team, I participated in

the development of a permanent exhibition, I fulfilled the responsibilities of a collections conservator, and I conducted research work. In 2018, Assoc. Prof. Jacek Friedrich, PhD, D. Sc. suggested that I come back to the Gdynia City Museum, to the Centre for Research on Gdyni, which was supposed to be established beside the museum.

#### **Why did you choose the Gdynia City Museum as the best place of employment for yourself?**

Primarily, because of the consonance of my scientific interests with the museum's profile and my passion. I have never hidden the fact that the reason for switching jobs was the lack of possibilities to implement my research for the Gdynia City Museum on a larger scale. Now that we have such opportunities, I cannot imagine a better place outside the academic environment.

#### **Is your current job fulfilling for you, and what is the greatest source of satisfaction?**

The source of the most satisfaction is the opportunity to implement research work connected with the history of Gdynia, which is, pretentious though it may sound, my love. I still actually believe that there is a place for scientific research in museums, and that research centres may operate as their units, collaborating with academic circles.

That is exactly why I have consequently and relentlessly been pointing to that direction in my work. Nonetheless, I always want to use all of my experiences, combining them together to make a whole. That refers to both the didactic experiences at the museum (I am also an active tourist guide), and to those gained by cataloguing collections and while organising exhibitions.

#### **In which areas is your job related to your doctoral studies?**

My current job is rather closely related to the PhD studies – it is a field of conducting research projects, queries, preparing scientific presentations and participating in conferences, as well as promoting the knowledge of Gdynia.

#### **Would you be willing to share with us your biggest professional success stories and failures?**

A success is certainly being awarded the highest degree in museology, that is a certified museum custodian. I also have a realistic influence on building an image, direction and strategy of my institution. I gained competencies that allow me to co-create this facility. As an expert, I collaborate with other museal and cultural institutions, I conduct historical lectures, architectural discussions or historical walks. The opportunity to promote the knowledge brings me a lot of joy. As far as failures are concerned, I have not yet published my PhD, and terminated, or, as I like to think of it, only suspended my work on habilitation. I had spent five months overseas on a post-PhD internship, a so-called *post-doc*,

***Completing PhD studies allowed me to change jobs, increase my salary, and improve my professional position. A PhD made it possible for me to obtain a certified museum custodian degree, which is a promotion in the case of a museologist. Perhaps not right away, but gradually, step by step, every employer came to appreciate that I was awarded a doctoral degree, thanks to which I can perform increasingly compelling tasks and projects. I joined a group of academic reviewers and consultants. Completing a PhD is not easy, it presents a multitude of professional and personal challenges, but in my view, nowadays, a doctoral degree strengthens your professional position in the job market, where a master's degree is often not sufficient enough***

which was supposed to be an introduction to habilitation. Afterwards, I was awarded another scholarship abroad and the Polish Studies Association grant. However, staying abroad for several years would have been too difficult for personal reasons. Moreover, considering the length of my employment, I would like to have a larger scientific contribution on my record. I wish I had been able to convince the Emigration Museum in Gdynia to establish an actual history and research department with a accepted complete programme that I proposed. Nevertheless, I drew conclusions from each and every one of those stumbles, since I regard them as such, and I have a feeling that I am in a good place right now.

#### **Does completing doctoral studies open up wider job opportunities?**

In my case completing PhD studies allowed me to change jobs, increase my salary, and improve my professional position. A PhD made it possible for me to obtain a certified museum custodian degree, which is a promotion in the case of a museologist. Perhaps not right away, but gradually, step by step, every employer came to appreciate that I was awarded a doctoral degree, thanks to which I can perform increasingly compelling tasks and projects. I joined a group of academic reviewers and consultants. Completing a PhD is not easy, it presents a multitude of professional and personal challenges, but in my view, nowadays, a doctoral degree strengthens your professional position in the job market, where a master's degree is often not sufficient enough.

#### **What sort of skills have you developed during your doctoral studies and which one of them would you rate as the most and least useful?**

While I was attending my doctoral studies, they were unfortunately more of a revision of the programme rather than extension of the knowledge from the period of my master's studies. However, I improved my research workshop, and that is what is the most useful in my current job. The requirement of conducting classes for students instilled confidence in me and developed my abilities to speak publicly. I also met a number of wonderful people and those acquaintances have evolved into friendships and professional collaboration. If master's courses are more analytical, PhD studies constitute a step forward, they broaden your horizons and teach you the skill of cross-sectional and synthetic thinking.

#### **Did your employment after completing the doctoral studies go without problems or was it a challenge?**

In my case employment after master's studies and post-PhD hiring went swimmingly, without any problems. The acquired knowledge and developed competencies fulfilled the expectations of every employer – I was and am treated like a expert in my own field.

#### **What message would you give to current doctoral students, future PhD graduates?**

I would like to tell them that undertaking doctoral studies and writing a doctoral dissertation is worth it, because of the personal development, an opportunity to broaden one's experience, acquire competences, maximise one's chances in the job market, as well as gain perspective. I also believe that a person with a doctoral degree is able to introduce plenty to a team in a company or institution, since a PhD contributes to the acquisition of skills and new knowledge, which makes an employee more reliable. Such a person's competences and experience authorise them to become essential employees within a team and to join the supervisory ranks.



Michał Tuszyński

## A practical and academic perspective

**Michał Tuszyński, PhD, a Polish national currently living in Gdynia. He was awarded a doctoral degree in the field of Economics in the University of Gdańsk in 2017. His doctoral dissertation, entitled The impact of transport accessibility on the development of municipalities as exemplified by Gdynia between 2003 and 2013, was completed under the supervision of Prof. Włodzimierz Rydzkowski, PhD, D. Sc.**

### **What is your current place of employment, your position and professional duties?**

I work at the Port of Gdynia Authority SA (Zarząd Morskiego Portu Gdynia S.A.) as a project manager and development project specialist. I manage the company's strategy, strategic planning and development of the trans-European transport network (TEN-T), as well as legal and economic determinants of seaports, in particular, Polish ports. I perform various types of analyses and formulate opinions, which may become the basis for making long-term decisions. I also collaborate with international and domestic seaport partners, since we undertake ventures that have a common interest to us, such as the development of Motorways of the Sea or the integration with the port hinterland. Additionally, I represent the Port of Gdynia in the European Sea Ports Organisation in Brussels (ESPO), which is the principal entity implementing the EU transport policy in ports.

### **Have you been employed at another firm before? If so, what were your professional duties?**

I worked at the City Hall in Gdynia, where I handled the maritime economy affairs and the city's strategy in that respect. We formed ideas on the TEN-T network development in the Gdynia urban node, which pertains to both the port city and the port, as well as collaboration with the stakeholders, particularly in the sector of TSL (transport&logistics). I was able to advance effortlessly in such a way from one institution to the other, having the required education, competencies, and experience, including the necessary areas of cooperation with industry institutions, at both those places. A transfer of knowledge, exchange of information, and connections with certain experts allowed me to understand the specificity of the regulations' environment functions on an institutional level. That is precisely why I currently perform economic tasks, especially those related to the transport policy within the structure of the port authority.

### **Why did you choose the Port of Gdynia?**

At the time I was working at the City Hall in Gdynia, the focus of the company was on transport-related issues and on the potential for reaching the city as a location easily, particularly for entrepreneurs and business in general. The Port of Gdynia is situated in the centre of the city, which posed a challenge, sometimes even problems, that were supposed to be solved in the port-city relation. I used this relation in projects I carried out, in a variety of papers and articles, including scientific ones. I entered an institution that works on infrastructure and the improvement of conditions for conducting transport and logistics operations with the experience of working in the city. My port and city experience complemented each other. Moreover, port tradition runs in my family, since my great grandfather Franciszek and his brother Józef built the first port quays since the 1920s as part of a team under the supervision of engineer Tadeusz Wenda, the port construction manager. Moreover, my great grandfather's cousin, Fr. Teodor, was the first port chaplain, who blessed and participated in the opening of newly-constructed port

buildings, including the current headquarters of the port authority, which is the pearl of the Polish modern architecture.

#### **What is the source of the greatest satisfaction at your current job?**

I derive the most satisfaction from cooperating with the port authority board, colleagues and our partners, as well as from fulfilling my duties. I have a very strong team and we strive to achieve our common goal, that is the port's improvement. This, so to speak, port's enhancement is a very tangible everyday experience. Furthermore, I can combine the professional, economic, and business experience with lectures and research at the university, let alone the transfer of knowledge onto the students. What is intrinsic is that I share my experience with them, since I am not only an academic, but also a practitioner.

#### **Is your current job related to your doctoral studies?**

Certainly, I try to fully apply the knowledge and skills I developed during my doctoral studies, particularly while writing my doctoral dissertation.

#### **What sort of skills did you develop during your PhD studies, and which ones would you rate as the most and the least useful?**

I had the opportunity to learn from the masters. While proceeding my Master's studies in the Faculty of Law and Administration, the notable Professor Janina Ciechanowicz-McLean provided me with the foundation for my research work. During my PhD studies in the Faculty of Economics, my mentor and supervisor was Professor Włodzimierz Rydzkowski, who, being a theorist and a practitioner himself, not only put forward the role and meaning of transport in the economic life, but also epitomised the "university's majesty". Professor Monika Bąk educated me on a university attitude: it is about fostering a university culture, which can be further adopted in our professional environment. Professor Dariusz Filar, who was a member of the Monetary Policy Council, provided us with economic knowledge and taught us to understand economic processes. I learned how to use statistical data and how important the statistics are in research from Professor Mirosław Szreder. As far as expert transport knowledge is concerned, in particular, I would single out a married couple – Professor Danuta Rucińska and Professor Andrzej Ruciński. In the area of city development and city policy with regard to transport development, I would name Professors Olgierd Wyszomirski and Krzysztof Szałucki. They always combined theory with practice – at the time of system transformation in Poland they established the fundamentals of city transport market in Gdynia. Professor Szałucki was also a long-time treasury of the city, and he explained the individual architecture of financing in the municipality area, which also has an influence on the port's development. I also recall my discussion with the late Professor Mirosław Krajewski, vice-rector for development and finance in the University of Gdańsk at the time, with whom I consulted certain aspects of my doctoral dissertation. I concluded that with regard to the infrastructure development in the University of Gdańsk we were experiencing the so-called Kalecki's paradox (Michał Kalecki was one of the most prolific, world-class economists, who formulated the theory of investment, methodology of planning and economic situation analysis). Newly-constructed buildings, large infrastructure supply base, which has an impact on the University's faster growth, would generate high costs of their maintenance in the future, which would in turn limit that growth due to rising costs maintenance. I considered whether such an extensive investment development would make sense given the demographic decline and progressively smaller number of students. Professor Krajewski acknowledged those fears, but inferred that it was precisely the moment that we needed to use for our benefit. Unless we exploited the European Union resources, we would not build scientific and research facilities, we would not specialise in particular fields, including the marine economy, and we would not become competitive in the future. I am very close to such a wide, holistic, and, at the same

time, strategic way of thinking, which I gathered from my PhD studies.

#### **In your opinion, do doctoral studies open up wider job opportunities?**

Yes, provided that we actually want to apply the skills and knowledge gained during our doctoral studies in our work, and not just make use out of the "Dr." prefix before our name. PhD studies and a doctoral degree surely improve professional prospects, which, however, does not mean that they facilitate finding a job in accordance with particular education.

#### **Was your employment after doctoral studies a challenge or did it go rather seamlessly?**

A professional advancement in my case was rather smooth. However, without my own involvement and effort, it probably would not have worked. Today, I am the only PhD graduate in my company, the port authority. But that does not in the slightest mean that I am smarter or more competent than my other colleagues. It has more to do with a certain responsibility and obligation to work harder.

#### **Would you be willing to share your greatest success stories and professional failures?**

I always think positively, long-term, and that is why it is difficult for me to point out failures. What I regard as my success is the fact that I am able to put my competencies and analytical skills to the port's improvement by integrating theory into practice. My knowledge is being applied, and I represent the company in many institutions in the sector. For instance, I consider my work at ESPO as a representative of the Port of Gdynia to be a success, since that is where the ideas are being established, which are afterwards proposed as legal provisions and implemented into the Polish law as well. They have a direct impact on the seaports' development, and they indirectly influence the quality of life of the city's townsfolk and Polish citizens. I also view the place I currently work at as a success, because I can use the knowledge of other people with considerable experience in the port industry, such as, the director, Leszek Jurczyk, my supervisor. He has worked at the port for more than forty years and is an excellent expert, and, at the same time, a very modest person with great propriety, who always shares his knowledge and experience with his co-workers. I think the way to understand success in the everyday professional life is best described by an old Russian wisdom: when we surround ourselves with good people and thoughts, our life and our professional and personal paths go in the right direction. I use my competencies, I improve on a professional level, and I believe I am going in the right direction.

#### **What message would you like to convey to current doctoral students? Is it worth putting in the effort?**

We should not ask whether it is worth it. Instead, we should ask what to do with the already obtained degree. A philosopher, Eric Hoffer, once said: who acquires the knowledge and learns, conquers the world. Youth does not actually rely on the birth certificate, but on an open mind that is always eager to obtain more insights. The knowledge gained during PhD studies as well as the skills of analytical thinking and information selection can be further used for professional development. I believe that 'proclivity to learn' is the essential common wisdom. Man is a homo exercens. He who does not adopt such an attitude towards life is just asking for trouble.

*I derive the most satisfaction from cooperating with the port authority board, colleagues and our partners, as well as from fulfilling my duties. I have a very strong team and we strive to achieve our common goal, that is the port's improvement. This, so to speak, port's enhancement is a very tangible everyday experience. Furthermore, I can combine the professional, economic, and business experience with lectures and research at the university, let alone the transfer of knowledge onto the students. What is intrinsic is that I share my experience with them, since I am not only an academic, but also a practitioner.*



Cezary Wawrzyński

## The region as a passion of local government official

**Cezary Wawrzyński, PhD, a Polish national living in Ostróda. He was awarded a doctoral degree in the field of Economics in the University of Gdańsk in 2012. His doctoral dissertation, entitled *The tourist use of inland waterway as an axis of social-economic development, exemplified by the Elbląg Canal*, was completed under the supervision of Prof. Krystyna Wojewódzka-Król, PhD, D. Sc.**

### What is your current place of employment, your position and professional duties?

I am a member of local authorities and I work as a secretary of the municipality. That is a position, which in accordance with the current act on local authorities in Poland, requires knowledge, higher education and specific experience, and its duties are extensive. They include, among others: filling in for and representing the rural or urban municipality mayors (depending on who is the local authority chief administrator), overseeing the work of the office, preparing and monitoring the process of producing documents and legal act projects, developing policies and internal regulations, supervising not only office employees, but also, indirectly, organisational units, such as schools, public utilities management or a municipal social services centre. Summing up, those are the responsibilities that include the proper functioning of the entire local authority, among others, carrying out the municipality's own tasks.

### To what extent are your responsibilities related to the sea?

I live by the Elbląg Canal, which is unique and well-known around the world. I have been trying to have it entered into the UNESCO World Heritage Sites for several years. Together with other municipalities and counties, we constitute the Association of Elbląg Canal Municipalities and Counties that aims to act for the development of tourism and tourist economy based on inland transport relating to the sea. The vision of development of our voivodeship is connected with tourism of the Great Masurian Lakes on the East and the Elbląg Canal on the West. Following European tendencies, we expect the inland waterways in Poland to become a common practice of spending free time, and even a way of life on water, for instance on houseboats. The idea of revitalising the Polish part of the of E70 International Waterway is an opportunity for the development of tourism for us. It is similar with the Vistula Spit excavation.

### Have you been employed at another institution or company before, and have your position and scope of duties changed?

I have worked in this position at the current municipal office for almost two years, since 2020. However, before that, I had been the secretary in the Ostróda city for ten years, and then in the Ostróda municipality for six years – altogether, that is eighteen years already. This is a distinctive position in the local authority and office, so when you take it, you have a fixed and essentially considerable scope of duties "right-away". This is an either/or situation (you either fill the position with a fully established scope of duties, or you do not fill it at all). Obviously, you can be periodically delegated (as it was in my case) to represent the rural or urban municipality mayor in a variety of organisations, associations, foundations, or supervisory councils of municipality companies, or with the local authority's participation.

### **Why did you choose the career of a member of local authorities?**

That was in some respect a coincidence and emergence of certain circumstances. I was a city councilman, I co-organised the mayor's election campaign, and it is both a "substantive" position and, by necessity, a position of "politics", since you are in fact the mayor's "right hand." Still, in the case of the current "company", it was decided upon particular knowledge reserves and the experience in municipal authorities gained beforehand, which in a way "imposes" the choice, and allows to fulfil the contest requirements as well.

### **Working in local authorities is to some extent public service.**

#### **Is it satisfying for you and what is the source of the greatest satisfaction?**

If you are committed to the work, then the job of a local authorities' member is a service, pretentious though it may sound. The specificity relies on the fact that according to the rules of democracy, every four or five years there is a verification and, you can say, the voters decide on further employment. Each year the mayor must receive a vote of approval, there is a legal supervision of a voivode over the local authorities' law. Therefore, the greatest satisfaction comes from winning the next elections, since it means that winner undertakings and substantive decisions outweighed the unwise ones. The satisfaction also derives from a situation where a municipality obtains external resources for development, such as from the European Union. This is as much a result of strategies devised before and the undertaken actions, which I participate in as well.

I broadened my general knowledge in economics and regional development, which translates into present management skills and capabilities of participating in processes related to planning and development. Moreover, I write books on regional subject matters, so useful is also the back matter and methodology of conducting research, which were provided during the studies.

### **To what degree is your current job related to your doctoral studies?**

My doctoral dissertation is more or less related to what I am dealing with at the moment. I wrote about using the inland waterway as exemplified by the Elbląg Canal, and the Canal and nautical tourism are at the centre of my interests. I completed the PhD studies in economics, and that is very useful, since economic laws are objective and universal. It is the knowledge and skills that are beneficial globally, so in the management of local municipalities as well. During my doctoral studies many classes were also related to regional development, the European Union functioning and international projects, which can be likewise valuable.



### **Does obtaining a PhD open up job opportunities?**

That still largely depends, particularly in Poland, on the region (which is connected with the level of development and wealth), population size, state of economic situation and other factors. Nonetheless, it should not even be a question that a PhD will not hurt the personal development, and it should be the opposite – single exceptions rather confirm this rule... For me personally, an academic degree is advantageous, if nothing else, for publications and written works or while participating in symposiums or conferences.

### **Would you be willing to share your greatest success stories and professional failures?**

Everything is ahead of me. The greatest success will be if we manage to enter the Elbląg Canal into the UNESCO World Heritage Sites. From the activities undertaken so far, which I treat as my great successes, I can name once pioneer-level developments in the area of healthcare and the protection of the Mazovia natural environment. In the early 2000s, as the first ones in Poland, we turned a hospital into a joint-stock company, which was a great challenge. We were also able to block the building of a particle board factory in our region. That was difficult and not everyone understood it, but consequently, it will work towards sustainable development with regard to respecting natural environment. As far as failures are concerned, there have been losses, even electoral, but they were the result of a series of different events that one could not necessarily have an influence on...

### **What sort of skills did you develop during your PhD studies?**

I broadened my general knowledge in economics and regional development, which translates into present management skills and capabilities of participating in processes related to planning and development. Moreover, I write books on regional subject matters, so useful is also the back matter and methodology of conducting research, which were provided during the studies.

### **Which skills developed during your PhD studies do you appreciate the most?**

Those include the practical matters, such as using footnotes, guidelines on quoting and the knowledge of rules that prevent you from "plagiarising". However, in general, apart from broadening the knowledge itself, it was acquiring the skills of fast searching and finding the necessary knowledge in case it is required.

### **Did your employment after doctoral studies go rather seamlessly or was it a challenge?**

I had worked in the local authorities before the PhD studies, so it was a continuation of employment. In the meantime, though, I moved to a different municipality. I took part in the contest, which I won, and presumably, a doctoral degree had a particular significance. To speak colloquially, one can believe that I had a better "bargaining chip" than the competition.

### **What message would you like to convey to current doctoral students? It worth making the effort?**

Despite the fact that we experience a deterioration of criteria and norms in force in the public space, depreciation of the old definition of professional intelligence, one is supposed to aim to increase the knowledge and invest in one's own development, because you never know when that knowledge may come in handy... But it certainly will!

**Kiel University**





Verena Dauben

## Trust yourself to do something and do it!

**Verena Dauben is an oceanographer living and working in northern Germany – on the Baltic Sea coast. By birth, she comes from the interior of Germany – far away from the sea. She studied in Southampton and completed her doctorate in 2005. Now, she works in the private sector dealing with underwater technology and has had a “very comfortable permanent position in a small company for 13 years.”**

### **Verena, how did you get from the inland to the sea and how did you end up studying in Southampton?**

During school I thought that studying oceanography would be quite interesting. To improve my English, I went to Southampton for 9 months and enrolled in a college there. Near my accommodation there, the National Oceanography Centre was currently being rebuilt. I didn't know it, but looked at it and was thrilled. After school I studied there. After that I went back to northern Germany and got a Postdoc half-time position at the marine science institute GEOMAR. Since the recognition of my degree from Southampton here in Germany was currently very difficult, I decided to write my PhD thesis – theoretically- in Southampton, but I was in Kiel at the Institute of Oceanography the whole time. I had one supervisor in Southampton and one in Kiel. So, my PhD program was completely managed in Southampton although I spent the whole time in Kiel.

### **What are your professional responsibilities in your current job?**

Since we are a small company, everyone actually has to do everything. We also have office management, but I also do my own administration. Accordingly, Senior Management, Administration and Consultancy apply. However, the official title is “System Sales Manager”. Leadership doesn't apply because we have a boss, but we don't have any hierarchies.

### **Has your position changed since you were employed in your current job?**

Not really. My job is so varied, there's always something new, but the job itself hasn't changed because everyone does everything.

### **Which of the following sectors (according to the blue economy report 2020) is more related to the scope of your company?**

It all happens sometimes. So far, I would say the main sectors are ship repairing industries, environmental monitoring and protection, wind energy but also mineral resources, extractive industry (offshore oil and gas), offshore wind power, shipbuilding and coastal defence. It is difficult to choose only 3 here, because we have to deal with many sectors equally.

### **Why did you choose your current job by the MacArtney Underwater Technology Group or rather how did you get there (referring also to previous job)?**

How I got this job, just like my PhD, did not happen in a direct way, but in a bumpy way. Since I didn't want to stay in science and it was very difficult to find a job outside of science, after my doctorate, I did a master's degree in business administration at the University of Applied Sciences in a further course of study. At the end of this degree I had to do an internship (including a master thesis), which brought me to ELAC Sonar (Electro Acoustic Sonar). ELAC SONAR is a market leader in the design, manufacture and supply of hydroacoustic systems for naval applications and I was increasingly involved in marketing. I had hoped

to stay there, but that didn't work out. However, there was a nice woman there, who knew someone at MacArtney and picked up the phone. A day later I had an interview with the company and was hired immediately.

At that time, my boss was looking for someone who was familiar with marine science and who could be loose with customers from marine technology and marine science at the same time. My employer found my training to be very innovative, as I also had knowledge of business administration in addition to my marine science studies, and he was happy to have found someone who also knew about operations and marketing.

**Which aspects of your current job are the most rewarding to you in view of your expertise?**

If I can find a good solution for the customer through the expertise I have acquired here, that is very satisfying. Sometimes customers (also from scientific fields) come with tricky problems and if I can solve them, that's great. My favourite thing is when not only can I solve problems theoretically, but also implement things on site, i.e. work practically (e.g. demonstrate devices, put them into operation...), sometimes I can get really dirty in the process.

**Does your current job position require a doctoral degree?**

No, but depending on the customers we have, it is sometimes an advantage to have such training.

**How is your job connected to your doctoral studies?**

I partly sell products that I used myself during my doctoral studies. Many of my customers used to be my colleagues. The way I learned to work. We sometimes have difficult projects where you first have to learn the science that the customer is doing, for example. Then it helps that you've learned how to do that.

**What do you consider to be your greatest professional successes?**

For one thing, I get to travel a lot, but not too much, and that's fun! On the other hand, that I found a job that deals with ocean topics. It is rather hard for oceanographers to find a job outside of science. If they don't stay in science, oceanographers usually do something completely different.

**What do you consider to be your greatest professional failures?**

When I don't get an order/project in which I have invested a lot of time. Fortunately, that doesn't happen often.

**In your opinion, after completing doctoral studies, are there wide opportunities for further career development outside the institution/university in which you obtained your doctoral degree?**

Yes, but it is very difficult. As I said before, it is very hard for oceanographers to get a job outside science. It is not communicated what you can do after graduation. I thought about it myself, that I wanted to do something with technology. But the fact that I have this job now happened more through "someone knows someone", that is, through contacts. I was lucky in that respect.

**What sort of skills did you develop during your doctoral studies and how do you rate them (from not necessary – to essential) compared with your current work requirements?**

Fundamental knowledge was rather moderately trained but is necessary in my current work. After my doctorate, I could have used statistics, but I learned very little or not really at all during my studies.

*The most important skills for my current job are, for example, being able to quickly get to grips with difficult topics and solve various problems, and thus also creativity. Our jobs are so varied and sometimes you have to really read up on scientific issues before you can solve customer problems. Listening carefully to the customer is of course also very important, as well as being able to communicate well and work in a team.*

Soft skills are essential for my current job and compared to the fundamental skills, I was able to acquire them very well. The most important ones are team work, project management, adaptation capacity, stress control, communication capacity, initiative and decision making, conflict management, change management, complex problems resolution and planning. A little less, but still good, I was able to develop soft skills like critical thinking, rationalization and innovation.

I was also able to acquire good interpersonal and social skills during my doctoral thesis and those are also essential for my current work requirements. Flexibility and self-assurance and optimism are the most important ones, followed by creativity team work capacity, self-esteem and proactivity. I don't know if I acquired empathy and active listening during my studies. I am empathetic by nature and can actively listen well. However, I feel the same way about many of the listed skills. I would say that they were used moderately during my studies, along with other skills such as leadership. Persuasion is one of the least important skills in relation to my education.

**Which of those skills are the most important ones in your current job and which do you value the most?**

The most important skills for my current job are, for example, being able to quickly get to grips with difficult topics and solve various problems, and thus also creativity. Our jobs are so varied and sometimes you have to really read up on scientific issues before you can solve customer problems. Listening carefully to the customer is of course also very important, as well as being able to communicate well and work in a team. But actually, they are all important, just some not as much as others.

Since I really enjoy my job, I value all these skills and especially the ability to be empathetic.

**Which of those skills are irrelevant in your current job?**

For my current job, it is not so important to be empathetic. That was important in my studies and in my current job I have to be able to assess my customers at most. I would also rate interpersonal intelligence as rather unimportant.

**How was your transition to employment after you finished your doctorate: seamless or challenging?**

Difficult and bumpy. I did something completely different after my PhD. I had also considered staying in academia, but that was too difficult. Then I did another degree in business administration and meanwhile worked on the publications of my PhD thesis. After my second degree, I did an internship at a company through which I got my current job (through relationships). All in all, with my second degree, internship, waiting and not knowing where to go and many applications, it took 2 ½ years to get to my current job.

**What brief message would you like to send to current PhD students?**

Hang in there! Do not give up, even if it is difficult! Deal with what you want to do and what you need for it in time. If you do not want to stay in science, then acquire the basic knowledge that you need in business enterprises, such as business thinking.

**What brief message would you like to send to current PhD advisors?**

They should take care in any case. If they accept someone, they should also accompany and advise them. This doesn't mean that they should give the students everything in bits and pieces, but simply provide more support and prepare them better for their careers.



Florian Huber

## Archaeologist, Scientific Diver, Author & Speaker

**Florian Huber, PhD, was born in Munich, in the south of Germany and holds a doctorate in Archaeology. Now he lives in the north of Germany at the Baltic Sea coast, has been self-employed in his profession for more than seven years and travels for his projects all over the world.**

### **Florian, you are a native of southern Germany. How did you become an independent underwater archaeologist?**

I have studied prehistory, anthropology, philology and Ethnology in Munich, Umeå (Sweden) and in Kiel. I served as a research assistant at the Institute of Prehistory and Early History at the University of Kiel, focusing on underwater archaeology and historic archaeology. Since 2004 I have worked as a group leader for Maritime and Limnic Archaeology (AMLA) and in 2014 I completed my doctoral dissertation on working methods in difficult lacustrine and marine waters. Expeditions and excavations have led me to various corners of the world, including Sweden, Iceland, Ghana, Mexico, Chile, New Zealand, the Azores, and Sudan. In 1992 I started to explore the seas as an avid scuba diver for example in the water-filled caves of the Yucatán Peninsula, in search of Maya and prehistoric artefacts. Then in 2013 I founded the research diving group "Submaris" with four friends. We are active in science and work for ministries of the environment, among others, but also shoot films for television and production companies.

### **What are your professional responsibilities in your current job?**

In the Submaris team we are all equal and everyone does everything. In addition, I also have my own projects, which I also manage as an independent without further help.

### **Which of the following sectors (according to the blue economy report 2020) is more related to the scope of your company?**

Since we are – as Submaris team – are divers private active, we have projects in different sectors such as marine archaeology, but also environmental monitoring and protection or marine protection and maritime transport.

### **What was your previous job and why did you choose your current job/situation?**

I had been employed at the university as a research assistant for several years, which I enjoyed very much, and did a lot of teaching, among other things. What always happens with German scientists in the universities – when they are not particularly lucky – is that my contract at the university expired and my position was not renewed. But since I knew that this would happen one day I was prepared for it. So, I was a bit forced into it but am now happy to have taken this step and about the great flexibility my current job brings with it.

### **Are you satisfied with your current job?**

Yes, absolutely, it gives me an incredible amount of freedom! Yes, absolutely, it does! So much so that I haven't applied anywhere else for years and haven't accepted any other positions, even though colleagues have offered them to me.

**How was your transition to employment after you finished your doctorate: seamless or challenging?**

Actually smooth. I, or rather all team members of Submaris, received start-up support from the local Chamber of Commerce and Industry over a period of 9 months. During the time of this financial support I already got first projects.

**How is your job connected to your doctoral studies and which aspects of your current job are the most rewarding to you in view of your expertise?**

The archaeological expertise, my training as a research diver and my doctorate.

**Does your current job position require a doctorate degree?**

You don't need a doctorate to become self-employed. But yes, in any case. Especially as a self-employed person, you then stand a bit higher on the competence level. I have never regretted that I did a PhD.

**What do you consider to be your greatest professional successes and failures?**

My greatest professional successes are to have taken the step into self-employment, to have consolidated the self-employment, i.e. that it has worked out well, and of course to know that I can make a good living with it and earn good money. My greatest failures? In my current self-employment I had no failures. But at the university it was a pity that my position was not extended. I enjoyed teaching and leading the underwater research group. But as I said, I'm glad it happened, because now I earn more money than at the university, I can do a wide range of different projects, such as writing books, making films for nature programs, working for television and, thanks to Submaris, I now also do a lot of biological work, such as mapping seagrass beds, identifying algae on Helgoland and recovering ghost nets, which I would never have done at the university. At the university the focus would have been completely different, you have your teaching and your field projects but it would never have been as varied and I probably would never have gotten into marine sciences.

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**In your opinion, after completing doctoral studies, are there wide opportunities for further career development outside the institution/university in which you obtained your doctorate degree?**

Definitely no! I knew it would be difficult, that's why I concentrated on diving during this time, I did further training on my own initiative like underwater filming, self-taught underwater photography or diving with different gases. This is what distinguishes my profile and that of Submaris, namely that we have skills that others do not have. For example, we are booked by television for underwater photography because we can do it better than the cameramen who are employed by television. Unfortunately, many people don't know that there are very poor job prospects in archaeology. When students ask me if they should choose archaeology or biology, I always advise biology – if that is what they want to do. I see a lot more opportunities in biology. As an archaeologist you can stay at the university, go to excavation companies or work at a museum. But there are far more people studying archaeology than there are positions, which even stay filled for about 30 years most of the time.

**What sort of skills did you develop during your doctoral studies?**

Few study-related fundamental knowledges skills, to roughly summarize: it was a simple study, we learned how to dig, record and photograph, but not very much beyond that. On the other hand, I was able to acquire a lot of soft and interpersonal/social skills. Team work, project management, followed by adaptation capacity, communication capacity and innovation and creativity are the most important. Less important were negotiation and stress control and absolutely irrelevant is rationalization.

In terms of interpersonal and social skills, flexibility and self-assurance and optimism were the most important, followed by creativity, self-esteem, proactivity and interpersonal intelligence. Of course, active listening is also important but not very relevant in archaeology. Since I was a leader of the underwater group at the university (while doing my doctorate), I would classify leadership and empathy as a major development. Persuasion was the least important.

**Which of those skills are the most important in your current job and which do you value the most?**

All the skills I acquired during my doctoral studies are essential. Most important are initiative and decision making, creativity, motivation and self-confidence. What I value most is having learned to be highly self-motivated, to always motivate myself, to reach out to others and to put actions into practice.

**What brief message would you like to send to current doctoral students?**

Trust yourself to do something and do it! If you have an idea, implement it immediately and try it!

**What brief message would you like to send to current doctoral advisors?**

To look beyond one's own discipline, create interdisciplinary opportunities, teach students to manage themselves and help them understand how much a scientist is worth.





Kerstin Maczassek

## Have the courage to start in other areas that are not directly related to your studies

**Kerstin Maczassek was born in southern Germany, but lives and works in northern Germany, in Kiel at the Baltic Sea. In July 2010, she completed her doctoral studies in Benthic Ecology at the University of Kiel. For the last four years, she has held a permanent position in a private company, which accompanies construction measures in the sense of nature and environmental protection.**

### What are your professional responsibilities in your current job?

I am employed in a team. Sometimes I have projects alone but most of the time we work together in a team. My main task is to give advice in terms of nature conservation. For example, if a construction project is planned (for example: a cable is to be laid through the Wadden Sea, construction of a wind turbine in the sea...) the developer must comply with certain regulations (no damage to reefs, compliance with bird breeding times, species protection, noise pollution, etc.) and to implement this we are contacted. We then advise, make an environmental construction supervision and help to make the applications for the construction project, which is then to be approved by the authority. In addition to the mainly advisory function, there is a bit of administration and project coordination, which is usually done together as a team.

### Has your position changed since you were employed in your current job?

No, the projects are diverse but the tasks are the same.

### In which sector are you currently working and which sectors are related to the scope of your company?

We are a limited liability company. I would classify it in other public sector activities. We do everything that is related to both marine and terrestrial environmental protection (species and nature conservation), regardless of location. The institute in which I work is equally connected with many sectors, so to select only 3 would not be correct. Mainly the sectors are: E- Fisheries, Maritime transport, Maritime law, Marine and coastal tourism, Electricity and water supply, Coastal defence and Ocean conservation, and to a lesser extent Integrated Coastal Zone Management.

### Why did you choose your current job or rather how did you get there (referring also to previous job)?

During my studies, I already worked for a company (as an assistant scientist) that produced ecological reports. The job paid poorly but it was fun. I had worked there for a few years before I started my doctorate. With this work I was able to acquire basic knowledge, which helped me to get my current job. There was a job posting that I applied for. I was lucky.

### How is your job connected to your doctoral studies and which aspects of your current job are the most rewarding to you in view of your expertise?

I would not have gotten this job without a science degree. Since the projects are diverse, the company I work for has graduates with different backgrounds (marine biologists, geologists, foresters).

I have developed a feeling for marine ecology and the whole coastal area, which

is important for my current work. During my PhD I often went out on the boat and dived, this also helps me now with special projects. In addition, during the doctorate you have learned to deal with texts and someone who has done a doctorate will also manage to create planning documents (or environmental assessment). In contrast to a doctorate, in my current job you just have to be careful not to get lost in the details when writing. In summary, the skills of scientific questioning, critical thinking and text writing are among the most rewarding expertise.

**Does your current job position require a doctoral degree?**

No, but it helps me in my line of work. As a construction supervisor, you are treated with more respect and given more credit if you have already completed a doctoral thesis.

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**What do you consider to be your greatest professional successes and failures?**

I consider the fact that I have always been able to work in an area that I enjoy and in which I have always been able to work very flexibly to be a success.

In my job, you can also make mistakes from time to time, but they are then discussed in the team and that's not a big deal, so mistakes don't count as failures. Failures in my field are certainly experienced by those who are not team players, but that doesn't apply to me. But at the beginning, when I applied for this job, I thought I would be able to work in my hometown. But there is a branch that is not on the Baltic Sea coast but on the North Sea coast. But after I accepted the job, I realised that I would have to commute to the North Sea coast. Since there was no alternative, I started working there anyway. But since I didn't feel comfortable with it, I felt it was a failure for a year. But my employer kept his promise and now I can work in my hometown.

**In your opinion, after completing doctoral studies, are there wide opportunities for further career development outside the institution/university in which you obtained your PhD degree?**

No, it's very difficult. I was just lucky. During my studies, I worked for a similar, smaller company that also produced ecological reports. After my doctorate, I went back to the company I worked for as a student, but since the pay was very poor, it wouldn't have been a job for the future anyway. However, this job has certainly contributed to the fact that I am here now.

**What sort of skills did you develop during your doctoral studies?**

Fundamental skills, which are important in my job, I was able to develop very strongly during my doctorate. Besides these, stress control, rationalisation, communication capacity, innovation and creativity, planning, critical thinking and project management are among the best trained soft skills. I could not develop interpersonal and social skills to a great extent, excluding teamwork, because that is something I naturally bring with me to a great extent. On the other hand, I was able to strengthen my self-esteem, optimism and proactivity.

I also gained in persuasiveness, since my boss was a tough nut to crack.

**How do you rate the skills you learned during your doctoral studies in comparison to your current job requirements? Which of the skills learned are useful and which are not?**

The fundamental skills are already very important for my current job, which I would not have gotten without my studies. The additional skills I acquired during my doctorate are moderately important – as I already said, my studies would have been enough. The other skills are more important. More important are the other skills: stress control, rational thinking, communication skills, conflict management, planning and critical thinking are among the most important, while project management and adaptation skills are among the least important. In terms of interpersonal and social skills, flexibility, team work capacity, active listening, self-assurance have been the most prominent during my PhD. I also learned a lot about persuasion, but this is not relevant in my current job. The skill I value most, and the one that is most important in my job, is being a team player.

**How was your transition to employment after you finished your doctorate: seamless or challenging?**

The transition went very smoothly. I was lucky. At the end of my doctoral thesis, this position was advertised, which I applied for and got directly.

**What brief message would you like to send to current doctoral students?**

Don't give up, keep at it. What you don't learn in the PhD, you can learn in the job afterwards. Have the courage to start in other areas that are not directly related to your studies. There are many niches, you have to find them and apply on your own initiative. Also, if you have started a job and are a bit unhappy with the situation at the beginning, give the job time. Most of the time the job becomes more and more interesting the more you get to know it and if you have a great team you can be very satisfied.

**What brief message would you like to send to current doctoral advisors?**

Also, look at the doctoral students' background. For example, after a year you could ask whether you want to stay in science or go into business and what you can do to prepare yourself better for the future. A kind of career advice would be great.



Matthieu Povidis-Delefosse

## Don't underestimate the value of the broader skills acquired throughout your PhD

**Matthieu Povidis-Delefosse is a bioscience expert who has always been fascinated by the nature and oceans. Born in France, he studied Chemistry and Biology here and in other countries such as Germany, Scotland, Thailand and Denmark. His doctoral thesis (degree 2012) brought him to the University of Southern Denmark.**

**He has been working for more than 10 years as an environmental advisor for offshore industry.**

### Matthieu, how is it that you, as a native Frenchman, live and work in Denmark and have studied here in Kiel, among other places?

I have always been fascinated by nature and the sea. During my studies, I was always interested in chemistry and biology. In the last year of my studies in France, we had the opportunity to go abroad. So, I applied for the Bio-Ocean programme, which was partly in Germany and southern Denmark. Since my degree programme was too focused on chemistry, I first had to do an undergraduate degree in biology before I could participate in the Bio-Ocean programme. So, I went to Scotland for a year to study biology and improve my English. Part of the Bio-Ocean programme was that you could do a one-year project and graduate with a Master's degree in biology. I did that, travelled to Thailand – which was pretty cool – studied marine plants and biogeochemistry and completed my Master's in Denmark. During that time, I met my wife and we both got the opportunity to do a PhD in Denmark, and now I'm here.

### What are your professional responsibilities in your current job and has your position changed since you were employed in your current job?

I offer expertise in marine environmental issues; therefore, my professional responsibility is mainly to advise offshore projects and operations how to best manage environmental risks.

My activities in the current company where I work have not changed in the 10 months I have been here.

### Which sector is related to the scope of your company?

Vattenfall is one of Europe's leading energy company that produces heat and electricity from many types of energy sources (wind, hydro, biomass, nuclear, coal and gas). I am part of the Bioscience team within the Environment and Sustainability units and I support the offshore wind energy area of our company. In our team, we work with the scientific community and support projects that, for example, investigate the effects of wind turbines on ecosystems and test new methods to reduce impact.

### What was your previous job and why did you choose your current job/situation?

Before I moved into industry, I worked in research and as an environmental consultant.

### How was your transition to employment after you finished your doctorate: seamless or challenging?

I wouldn't say it was seamless, but it was an interesting challenge. It took me a while to understand how things work in the industry. It was a bit of an adjustment because science and industry are two different worlds. I had to deal with people coming from different backgrounds, and needed to understand expectations and my role into the business. It was a challenge, but after a while I settled in very well.

**How is your job connected to your doctoral studies?**

I studied marine biology and still work in this field, so I would say there is a direct connection.

**Which aspects of your current job are the most rewarding to you in view of your expertise?**

What I find very exciting and for which I am very grateful is the opportunity to link the academic world with industry in my job.

**Does your current job position require a doctoral degree?**

In the job advertisement for my current job, a master's degree was a prerequisite. That doesn't mean they aren't grateful that I have a PhD. It wasn't necessary but it helps especially in projects where I work with scientists/universities.

**What do you consider to be your greatest professional successes?**

Science and Industry are two different worlds but can work very well together. I am very passionate about being able to build this cross-sector bridge between science and industry. So, I enjoy building and conducting any transdisciplinary projects that make this link and look at these as some of my greatest success.

**In your opinion, after completing doctoral studies, are there wide opportunities for further career development outside the institution/university in which you obtained your doctoral degree?**

In 2012, I was lucky to find a job that exactly matched my education and PhD specialty. In general, opportunities for people with a PhD education are largely open outside academia. It is maybe country-specific but, when I joined the industry about ten years ago, I often had to explain what PhD meant and how it differed from an engineer. This is no longer the case and I feel that PhD title is more and more appreciated.

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**What sort of skills did you develop during your doctoral studies and which of those skills are the most important ones in your current job?**

With regard to my studies, I was able to develop a lot of fundamental skills, everything I learned I actually still use in my current job. In terms of soft skills, team work, project management, adaption and communication capacity, planning and critical thinking were particularly important. The most experienced interpersonal and social skills are creativity, flexibility and persuasion. Some of the others are generally present in me and I would not say that they were developed or strengthened during my work.

Of all these skills, besides the fundamental skills, project management and persuasion are the most important for my current work.

**Which skills acquired during your doctoral studies do you value the most?**

I use all of these most of the time and would choose all of them but if I have to pick just one or two I would say project management and communication. I value project management and communication the most.

**What brief message would you like to send to current doctoral students?**

If you are looking to start a professional life outside academia, don't underestimate the value of the broader skills, experience and maturity acquired throughout your PhD. These are extremely valuable for your potential future employer.

**What brief message would you like to send to current doctoral advisors?**

Help students to see this (as mentioned above) and help them to put their research in a broader perspective.





Matthias Schaber

## Study what you burn for and it pays off!

**Matthias Schaber is a fish biologist who has been fascinated by the underwater world and its inhabitants since he was a kid. Born in southern Germany, he made his dream come true and relocated to the Baltic Sea coast where he studied Marine Biology and specialized in hydroacoustics in his PhD thesis (2011). Today he works in the public research sector at a German federal research institute and has had permanent civil servant position since 2015. He has found his vocation and lives it out, among other things, as a sought-after shark expert.**

### Matthias, how does someone who grew up far from the sea get such a rare and attractive position in marine biology?

Despite fancying also, a medicinal career or even considering to apply for pilot training, it became quite evident while majoring in biology for the A-levels that I would like to pursue that path. It may sound a bit corny, but in fact it was all of the colourful documentations on coral reefs, fishes, whales -anything related to marine biology-that paved the way to studying marine biology and fisheries biology. At that time, information brochures from the employment office indicated that studying biology might not be the smartest choice considering the necessity to actually find a job that also pays some bills afterwards. This however did not keep me from moving to the Baltic Sea coast and following my dream of studying marine biology. The rest is in fact a lucky combination of qualifying in the "right" topic at the right time and acquiring the required – rather specific–professional skills at a time when a position was open.

### What are your professional responsibilities in your current job and has your position changed since you were employed in your current job?

It is almost a bit of everything. My main task is to plan, coordinate, conduct and evaluate internationally coordinated scientific surveys to provide estimates on abundance and biomass of different fish stocks. Another aspect is to conduct basic and applied research in different aspects of fish and fisheries biology. Working for a federal research institute, policy consultancy is also an important part of my professional responsibilities. As head of the hydroacoustics workgroup and co-leader of the research unit "Operational Observation Systems", responsibilities also include administration as well as leadership to some degree.

### Which of the following sectors (according to the blue economy report 2020) is more related to the scope of your company?

I am working at a federal research institute. The scope of research and (policy) consultancy conducted at the institute however comprises fisheries, environmental monitoring and protection, ocean conservation and ICZM.

### What was your previous job and why did you choose your current job/situation?

After achieving a diploma degree in fisheries biology at Kiel University I hoped to be able to continue right away and do a doctoral degree, but there were no PhD positions open or available. Fortunately, about at the same time, due to the then expanding demand for marine and fisheries biologists in the consultancy sector I got a position at a private Consulting bureau in Kiel. There I conducted a lot of data collection (sea trips on chartered fishing vessels) for environmental



***The most rewarding aspects of my current job are that I feel the job I do is an important component of a joint and common approach to the sustainable use and management of our marine resources. (...) Another highly rewarding aspect is my "old" passion for elasmobranchs, which I could further follow through employing observation systems (satellite tags) to investigate migrations and behaviour of endangered sharks (...).***

impact assessments of the expanding offshore energy sector. I also did a lot of scuba diving to monitor the environmental conditions in marine protected areas along the Baltic Sea coast. That job was indeed really neat and I enjoyed it a lot – but I somehow felt a certain personal lack of scientific progress. I continued to have close ties with the research institute in Kiel, and after a few years got the opportunity to follow a PhD project in the framework of several scientific projects there. I have to admit that initially I was not too keen on learning or working with hydroacoustics –the main topic of the thesis offered. That was not my original plan, since I somehow intended to work a bit more with actual fish and rather than digital images of single fish and fish schools – but in hindsight I guess there could have been no better choice! Both did I learn to appreciate the enormous capacities of that method to investigate and characterize marine ecosystems – from coastal seas to the mesopelagic realms of the open oceans, and it happened to have been the right choice at the right time. When I was close to finishing my PhD on the distribution of cod in the central Baltic Sea –and after my temporary project contracts had been terminated-, there was a job announcement for a fishery biologist with a background in hydroacoustics at the federal research institute in –then- Hamburg. Even though I really love to see the world and travel a lot, I somehow preferred to stay in the area due to all of the social ties made in the years since my relocation to Kiel. So that position was in fact the lucky draw: It fully matched my scientific background and offered to follow a scientific career in my pursued profession at a more or less local institute. The cherry on the cake: I got that position.

**Are you satisfied with your current job?**

Yes, absolutely.

**How was your transition to employment after you finished your PhD: seamless or challenging?**

I would consider it rather seamless, since I transitioned from a research institute to another research institute. Even though some things, especially regarding administrative aspects etc. are certainly different at a federal research institute, this did not really affect my perception of the working environment and the way things are done. So in fact, the transition was really smooth. What needs to be mentioned though: I did not hold a specific PhD position but was employed

in several temporary project contracts (with the opportunity to use scientific outputs from the project work for a PhD thesis). The contracts were terminated prior to me actually finishing the PhD; accordingly, there was a temporary phase of a few months when I was unemployed (while still working on the thesis).

**How is your job connected to your PhD studies and which aspects of your current job are the most rewarding to you in view of your expertise?**

The methodology I applied in my PhD studies is the core methodology I am using at my current position. I used hydroacoustic methods to investigate the distribution (and abundance) of fish – and my current position is workgroup leader "hydroacoustics" in the research department "Operational Observation Systems" , where I am responsible for both using these methods to provide abundance and biomass estimates for commercially important fish species in the Northeast Atlantic and adjacent seas as well as tuning and further developing these methods to characterize marine ecosystems.

The most rewarding aspects of my current job are that I feel the job I do is an important component of a joint and common approach to the sustainable use and management of our marine resources. I am involved in many coordinated, international research surveys and working groups, mostly in the framework of the International Council for the Exploration of the Seas (ICES) and I feel proud to be a part of that community and to actually "achieve" something. Another highly rewarding aspect is my "old" passion for elasmobranchs, which I could further follow through employing observation systems (satellite tags) to investigate migrations and behaviour of endangered sharks, but also through my membership in several working groups and expert groups on the management and protection of elasmobranchs as well as through providing political consulting on many possible aspects of shark fisheries and conservation.

**Does your current job position require a doctoral degree?**

The job advertisement read "PhD welcome" – and I was close to finishing my PhD when I successfully applied for the position. I submitted my actual dissertation shortly after I had started the new and current position.

**What do you consider to be your greatest professional successes and failures?**

I'd say the fact that I –more or less on a daily basis- can contribute to and participate in research and work that plays a key role in the sustainable use of marine resources and the conservation of the marine environment counts as great professional success. More specifically, I held a key position in a joint and successful effort by several federal agencies to internationally protect an endangered shark species. That one was great, too.

I do not want to sound too boastful, but I cannot recall anything that I could really count as professional failure.

**In your opinion, after completing doctoral studies, are there wide opportunities for further career development outside the institution/university in which you obtained your doctoral degree?**

The method I mainly used during my PhD is widely employed in both research and science as well as e.g. in commercial fisheries – and a broad range of other applications in the marine sector. Accordingly, depending on whether the focus is on the method and its development itself or rather the employment of this method to conduct research on different aspects of marine and fisheries ecology, there in my point of view is a range of opportunities for further career development – in that specific case. This may comprise both a career with any of the established companies in the sector, and a career in a developing company, as well as rather scientific approaches to using the method in the research sector.

**What sort of skills did you develop in your doctoral studies, and which of those skills are the most important ones and which of those are irrelevant in your current job?**

Regarding the fundamental skills, I would consider the ability to scientifically formulate and analyse a research question using the specific methods applied in my Phd still as the most important ones. To be as specifically proficient as possible and at the same time open for and willing to learn other approaches is a crucial skill. Regarding the soft skills, both as head of the hydroacoustics working group at the institute and as a member of a range of international scientific working groups, I would consider team work, communication capacity, planning and initiative/decision making the most important soft skills. Team work capacity, active listening as well as interpersonal intelligence I'd assess as the most important interpersonal and social skills. Negotiation and rationalization as well as e.g. persuasion would not apply as relevant skills in my current job.

**Which skills acquired during your doctoral studies do you value the most?**

Scientific thinking, self-organized and target-oriented working. The mostly successful fight against procrastination.

**What brief message would you like to send to current doctoral students?**

Wherever possible, strive to diversify your professional skills as broad as possible.

**What brief message would you like to send to current doctoral advisors?  
(please, specify)**

Any guidance beyond the purely scientific approach is surely highly appreciated – it would be great to provide the candidates also with a head start regarding application for research grants, involvement in scientific research bodies, etc.





Ruth Gingold

## Being passionate about your job will carry you through difficult times!

**Ruth Gingold is a biologist and completed her doctorate on Benthos Ecology in 2010 in Mexico. She currently has two fields of employment: On the one hand, she has a project-related (temporary) job at the University of Kiel. On the other hand she is on an unlimited contract in a private company – two different employers that can be combined professionally.**

### Could you give us a timeline of your professional path since the doctorate?

My doctorate was completed in 2010 in Mexico, where I worked on issues of benthic biodiversity. After that, my husband, who is a paleoceanographer, and I moved to France, and in 2013 we moved to Kiel, Germany. Together we decided that it would be unsettling for two people to pursue careers in science while having a family, so after my PhD I devoted myself to our family and children, while working as an independent translator of scientific texts. I remained interested in working in science, but had no connections in Kiel. In 2017, I approached a professor at the University with my own project proposal. Fortunately, he was interested, and I spent the next two years from 2017 to 2019 as a guest scientist (unpaid) setting up the project and doing fundraising. The project was at the interface between science and environmental education, which was really interesting. Working at the University then brought me in contact with many people, among them a partner at CRM (Coastal Research and Management), an environmental consultancy firm in Kiel, Germany, where I was offered a job in 2019. Since then, I have been working at both places, CRM and Kiel University.

### What is your job profile in your current position?

Involved in joint projects, I build a bridge between the two institutions – a company of the private sector and the University. I have a variety of responsibilities, and must emphasize that I really enjoy that we work as a team. One of our common projects is called Aquator, where we support start-ups in the field of blue bioeconomy. At CRM I also work in a project called "InEVal", that looks at using starfish as an alternative to fish meal. I also do project management, supervise students, and look after aspects of conducting projects at the company.

### What made you choose this job?

I really liked that the profile of the company was allied to my qualifications, since I did my doctorate in marine ecology and I am using this knowledge now in my job. I wanted to stay in this scientific field, so it fit perfectly. Also, the people I work with are sincerely interested in moving things towards a more sustainable future. Being part of this team and the process is a dream come true.

### What do you particularly like or perhaps dislike about your current job or career path?

As I said, I really like that we work as a team, everyone contributes and supports others. I am also really enthusiastic about working in an applied field, where I feel I can contribute to improving sustainability. This was an important criterium in my career choice.

I have always been interested in science, but as a university academic I found that there is little security or life-planning possible. One lives from one short

term contract to the other – this is certainly a negative part of being a scientist. Also, in the search of a permanent position in academy, you must be prepared to move to another city or even country, which is why we as a family chose to take the path we did with just one of us – my husband – pursuing an academic career.

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#### **Which skills do you use most in your job?**

A key skill I think is being flexible and interested in many aspects of the job – I have to be able to take a project through all phases from management to implementation and doing the science. Being motivated is an important part of it – I am motivated to make the world a better place! Another skill is in using scientific, analytical thought processes, that are necessary in data analysis, interpretation and publication.

In addition to being flexible, one really needs tenacity to see a task through, no matter how complex. Sometimes this calls for improvisation and thinking out of the box! What's also important, and part of this, is taking responsibility for one's work, so to be able to work independently when necessary, and, on the other hand, have good communication skills to be able to work in a team.

#### **Which skills from your doctorate do you bring into the job?**

Since I work in the same field, scientific knowledge of marine ecosystems and biodiversity is really important to my work now. But other than this, during my doctorate I learned to be independent, finding solutions to problems and persevering at the task. Presenting and defending my work, during conferences, in talks and during the disputation is also useful now, when we need to pitch or present our work or simply when discussing with colleagues. The scientific discussion is an important part of developing solutions.

#### **How was the transition from academia to your present job?**

For me personally it was sometimes a bumpy road. In retrospective, everything went well, but when I was on my way this was not always that clear. The good thing was that my husband had a salary and he supported me to find my way back to work after I had looked after the children for many years. I was "free" to do what I was interested in, at least for one to two years. After I had independently worked as a translator for some years, entering the University, even unpaid, and then getting my current job at CRM and a paid job at the University, I felt incredibly optimistic about "getting back on track". It was and is very empowering!

#### **Any messages to researchers currently doing their doctorate?**

I would just advise people to inform themselves of the academic system, especially possibilities after the doctorate which can be precarious and uncertain. Specifically, to think early on about what they may want to do outside of academia, to have a plan B. When I did my doctorate this was not spoken about. One should be aware that there is also hard competition in academia especially as one progresses after the doctorate.

Lastly, I would say be passionate about what you are doing – that will carry you through difficult times



Susanne Landis

## I combine both my passions – creative arts and science

**Susanne Landis is an evolutionary biologist and received her doctorate at GEOMAR Helmholtz Centre for Ocean Research Kiel in 2014. Since 2017 she has been working in the field of science communication in the private sector.**

### Could you give us a timeline of your professional path since the doctorate?

In 2014, I completed my doctorate in marine ecology and evolution, working on host-parasite interactions in a warming ocean. Following this, I debated with myself the pros and cons of going on to a postdoctoral position. My background was in science but I had also done two semesters at a Fine Arts and Design school before my doctorate. Ultimately, in 2016 I founded, together with a friend, our own start-up company that did science visualization. We built up our portfolio and had clients, and I realized that this is really what I am passionate about – to visualize science! So when, in 2017, a position opened at the Science Communication Lab (SciCom Lab) in Kiel I jumped at it and have been there ever since.

### Please describe your profile in your current position – what does your work entail?

I'm primarily responsible for the conception of products such as interactive digital posters, illustrations and films. Since I have a research background, I have direct contact with clients to understand their communication needs and content, and am the person who transfers this into a storyline and narrative for communication. I then pass this on and work with designers and programmers who implement these into the final product. Our clients include large organizations such as the DESY in Hamburg and universities in Germany and Europe. We work on all kinds of topics from astrophysics to archaeology and ocean sciences. Basically, I am in close contact with the scientists and dive into the science by reading papers and making myself familiar with the research.

### What made you choose this career path and company?

As I said, my passion has been in creative arts as well as science, and I have found a profession that combines both, so it is ideal for me. My colleagues at SciCom Lab are really great – the working atmosphere is harmonious and we work as a team; this is really important to me!

### Can you think of any major successes or failures you have experienced?

Just the ability to work on what I love to do is a success for me! It's nice also to be recognized by awards, such as the "Kantar Information is Beautiful" award in 2019 or the German Design Award Gold, that we recently got for the interactive poster "Explore the Ocean". I can't think of any big failures, but of course there is always the uncertainty of how to proceed from here – I am in a rather small niche with a unique job description so the number of job offers is not large.

### Which skills do you use most in your current job, and how do these relate to skills you acquired during your doctorate?

The detailed knowledge I obtained during my doctorate was not as crucial as the skills I obtained. Certainly, the ability to read and understand primary scientific literature, how research is conducted and how scientists think and collaborate is something that I learned during the doctorate that is crucial for my current

job. I am familiar with scientific writing, finding and interpreting research data, and am at home with scientific language – these are all the skills I use daily!

During the doctorate I took several courses that were really useful, such as writing for the public and different presentation techniques. I think the social skills were innate in that I had them already. Things like conducting lab work are skills I haven't used since then!

For my current job I had to acquire additional skills in professional programmes such as Adobe Illustrator and also more detailed graphic skills, such as how to visualize an abstract.

#### **How was the transition from academia to your present job?**

It was certainly a challenge – I had to find a small niche where my skills and my passions would fit with a job! Being self-employed was great, but acquisition of clients remained a challenge. I felt more secure when I started at the SciCom Lab: being employed definitely reduces my stress level. However, with the support of my partner, our family and friends, we have been quite secure. It's important also to maintain a balance that I do at home, with friends, doing sports and being on a holiday!

***Just the ability to work on what I love to do is a success for me! It's nice also to be recognized by awards, such as the "Kantar Information is Beautiful" award in 2019 or the German Design Award Gold, that we recently got for the interactive poster "Explore the Ocean".***

#### **Any messages to researchers currently doing their doctorate?**

Looking back, I'd say that if you know you don't want to stay in science, you should take courses in other directions to broaden your horizon. It certainly helped me to implement what I learned in terms of science visualization by building a portfolio that opened jobs to me later on. I also think it's important to follow your passion, that is what makes one happiest!



Sven Neulinger

## Valorising scientific skills as a bioinformatics consultant

**Sven Neulinger has completed his doctorate in 2008 in the field of Marine Microbiology in Kiel, Germany. A few years after graduating, he founded his own company, together with a colleague.**

### Could you give us a timeline of your professional path since the doctorate?

In 2008, I completed my doctorate at the then Institute für Meereskunde-GEOMAR (IfM-GEOMAR) in Kiel, Germany in the field of marine microbiology, then I continued there for a few years as a Postdoc in the same field. Postdoc positions were precarious, so in 2011 I spent a few months getting additional qualifications in project management, and then went back to science at the Institute for Clinical Molecular Biology at Kiel University. It was there that I immersed in bioinformatics, learning the tools and skills for next-generation sequencing and sequence analysis. I was involved in supporting and advising colleagues and doctoral candidates in bioinformatics; I quickly learned that, while sequencing itself was relatively easy to carry out, bioinformatic and statistical evaluation and interpretation was much more complex! With a colleague in the working group, the idea was sown to start our own business, since it was evident that these services are needed. A further three years followed as a post-doc before, in 2015, my colleague and I took the leap to form our own start-up. Since September 2015, we have been the founder-partners in our consultancy omics2view.consulting GbR.

### Please describe your profile in your current position – what does your work entail?

Apart from conducting bioinformatic and statistical data analysis, my colleague and I meet regularly to discuss new methods and the strategic direction of our company. Of course, we also answer questions from clients and write quotations. Sometimes even the greatest entrepreneur is just an office jockey.

### What made you choose this career path?

The decision to start our own company came from the realization that we had considerable expertise in bioinformatics, as well as a background in science. These are skills in high demand, and we were certain that we could valorize these, while being independent external consultants. We are also able to apply our expertise to other clients and fields. Also, within the academic system, short-term contracts and a precarious job situation make long-term planning difficult, which contributed to this decision.

### What do you particularly like or perhaps dislike about your current job or career path?

An advantage to being external consultants is that we now interact at eye level with our clients. Being a service provider is a different situation from being a member of the University team. It is a comfortable professional situation and allows us a certain self-determination. We are also in a position to determine the spectrum of our services and expand to clients in other areas with similar needs. Of course, there are challenges associated with being self-employed. We deal with a volatile market and sometimes contracts are irregular, although to date we have had no major problems with acquisition of clients. We have established



a successful advertising strategy involving paid keyword searches in web-based search engines and have regular long-term clients. Nonetheless, one must be able to tide over difficult periods in a company.

**Can you think of any major successes or failures you have experienced?**

A success for us was certainly when we were awarded the Innovation Prize of the "GründerCup KielRegion 2016." For me a success is being able to do what I enjoy and have expertise in, on my own terms.

If I think about "failures" I recall that I started out with the single goal of reaching a professorship that I have not (yet) achieved. This also caused me to be more single-minded in academia rather than pursuing other options. In retrospect, I realize that I did not succeed in networking and getting the patronage that is important in the academic system to achieve that goal.

**Which skills do you use most in your current job, and how do these relate to skills you acquired during your doctorate?**

A lot of the technical and scientific skills that I use now I acquired during my doctorate. These include deep knowledge of biological systems and molecular biological methods. Key aspects of that period such as giving scientific talks, writing publications, pitching ideas, and knowing how a lab functions are all skills I draw on for my work. Also knowing how the system of science works, and how funding constraints and projects work is really useful. The detailed expertise in state-of-the-art sequence analysis and interpretation was part of my post-doctorate. The project management training I took taught me the importance of stakeholder management and communication.

In retrospect, from my current job, I think knowing more about the business aspects of starting a company would have been really useful – I mean the financial, fiscal, and legal knowledge that I had to learn on the fly

**How was the transition from academia to your present job?**

I experienced transitioning from the University to my own company with my business partner and colleague as very liberating! We did not take external funding, but received support in the process from the Chamber of Commerce and Industry that helped as well.

**Any messages to researchers currently doing their doctorate?**

Think carefully about your options within and outside the academic system! Be aware of the limited perspective as a post-doc and the need for a strong network and supporter. Whichever way you choose, you'll need certain skills to get there that you can acquire along the way. If you ever get lucky enough to lead your own team, remember that empathy is at least as important as expertise!

*An advantage to being external consultants is that we now interact at eye level with our clients. Being a service provider is a different situation from being a member of the University team. It is a comfortable professional situation and allows us a certain self-determination. (...) A success for us was certainly when we were awarded the Innovation Prize of the "GründerCup KielRegion 2016."*



Thurid Otto

## Networking during your studies is very important

**Thurid Otto received her doctorate in (marine) Biology from the University of Kiel and graduated in 2012. Now she has a permanent position as head of a department in a government institution dealing with nature conservation.**

### **What are your professional responsibilities in your current job and has your position changed since you were employed in your current job?**

I work at a state institution and I am a ward manager. My tasks range from leadership to administrative tasks. Organisation is also a broad field, as we supervise and advise on various nature conservation projects. I have a lot of responsibility for the implementation and monitoring of the projects, but I am also in demand for technical advice on specific nature-related issues.

### **Which of the following sectors is more related to the scope of your company?**

Terrestrial conservation, including coastal areas.

### **What was your previous job and why did you choose your current job/situation?**

Before that, I worked on a small island in sustainable fisheries management and marine conservation. I had a lot of temporary contracts and you can never be sure if you would get more contracts. So, I was looking for a permanent position and I also wanted to go back to my home country. Then came the job advertisement for my current position. I achieved what I wanted. I work in nature conservation, in the country of my choice, and I have a permanent position.

### **Are you satisfied with your current job?**

Yes, absolutely!

### **How was your transition to employment after you finished our doctorate: seamless or challenging?**

At first it wasn't easy, but I think it was mainly because I just applied for the wrong jobs. You have to think carefully about what you want to do and what you need for it. After my PhD, I needed something simple again and applied for a project (simple work with fish: measuring, determining...) for which I was overqualified. At that time, I simply wanted to do it, but my doctorate was certainly a hindrance in the application. Then I was self-employed and worked for the WWF. However, I only got this job through a good network of a friend. But here, too, the projects were always interrupted and I was unemployed in between. After that, I got the job on the small island, as already described, but I also only got this job through a good network.

### **How is your job connected to your doctoral studies and which aspects of your current job are the most rewarding to you in view of your expertise?**

Although I have a degree in natural sciences and work in nature conservation, the two topics actually have nothing to do with each other. Professionally, I'm doing something completely different. But everything I learned in terms of other skills, such as time management, organisation, recognising complex interrelationships... helped me a lot, of course. My career has more or less built on each other. My luck to have got this job with a management position is a combination of the soft skills I learned at university and the professional expertise I got in my jobs before.

***Supervisors should take care of their doctoral students and use their own relationships and networks to connect doctoral students, for example to send them to conferences or other meetings and encourage them to network.***

**Does your current job position require a doctoral degree?**

No, but I think it was beneficial.

**What do you consider to be your greatest professional successes and failures?**

My greatest success was my luck. I wasn't well connected myself, but I knew someone who knew someone. So, I got the chance to work at the WWF (World Wide Fund For Nature), which certainly goes down well on your CV if you want to work in nature conservation. The same applies to the job afterwards and now I have achieved what I wanted.

I would say my biggest failure was wasting too much time and energy applying for the wrong jobs (where I was overqualified).

**In your opinion, after completing doctoral studies, are there wide opportunities for further career development outside the institution university in which you obtained your doctoral degree?**

No not in my field and in my time. There are areas with more or less post-doc positions and you should think about what you want during your studies and network and make contacts.

**What sort of skills did you develop during your doctoral studies?**

From a professional point of view, what I learned was very special and it was clear to me that this type of work would then be completed and not continue. You learn a lot about yourself during the doctoral thesis. It quickly became clear to me that I didn't want to stay in research, but I finished it anyway. If you want to stay in research, you should look for a topic that offers good opportunities for further projects.

During my doctoral thesis, I had some setbacks that you learn to deal with. Team work, project management, organisation, looking at things critically and flexibility are the skills that I have developed and strengthened the most.

All of these experiences were useful for my current job and all the skills I learned are still important.

**Which skills acquired during your doctoral studies do you value the most?**

I think the most important thing for me is flexibility. I deal with constantly changing topics and different characters that you have to adapt to. The daily routine is also not structured, sometimes there is a lot of action in the morning,

sometimes in the afternoon and sometimes on the weekend. Spontaneity is also very important.

**What brief message would you like to send to current doctoral students?**

The technical knowledge is important, of course, but in my field only a few really work in what they have learned. It is very important to network during your studies. A friend of mine did an internship at an information centre during her studies and is now the director there. It's also helpful to get in touch by phone before you apply for the job. My last point would be: think carefully about what exactly you want, because for some jobs you are overqualified with a doctorate.

**What brief message would you like to send to current doctoral advisors?**

They should take care of their doctoral students and use their own relationships and networks to connect doctoral students, for example to send them to conferences or other meetings and encourage them to network.





Stefan Krause

## A leadership position at a state environmental agency

**Stefan Krause completed his doctorate in 2012 in the field of Marine Geobiology in Kiel, Germany, where he comes from. Since 2021, he has a leadership permanent position at a state environmental agency.**

### Could you give us a timeline of your professional path since the doctorate?

Sure. I started by doing a Diploma (Masters) in marine biology in Kiel and Cape Town back in 2000. My introduction to science was not great, so I left academia to work in a private consultancy for the following eight years. The work was really diverse – I was diving, going on fisheries cruises, conducting environmental impact assessments and managing projects. Around 2008, I returned to science to do a doctorate – I was curious, wanted to pursue my dream of doing research, and also thought it would improve my career opportunities. In 2012, I completed the doctorate, working on microbial-mineral interactions in the deep sea. This was followed by a post-doc, and working as a science project manager, but the job precariousness and lack of career perspectives made it difficult for me to continue in academia. Thus, when an opening at the LLUR (State Agency for Agriculture, Environment and Rural Areas) came up, I jumped at it and have been the head of department for Coastal Waters there since 2021.

### Please describe your profile in your current position – what does your work entail?

I now have a leadership position within a state agency, so about 90% of my work is administrative and dealing with personnel. I'd estimate that 10% is related to scientific content. Basically, I was an expert and now it's my job to see that my team of experts can work most efficiently. Our task is to monitor and evaluate coastal water quality and compliance with EU directives and regional conventions for the protection of the marine environment. To do this, we carry out water and sediment sampling, seafloor mapping, measurements of environmental parameters and provide evaluations to the ministries for strategic decision making. The individual experts work very independently, my work as team leader is to report on findings, collate and communicate with the ministry. We are, basically, the scientific arm of the state agency.

### What is it that you particularly like or perhaps dislike about your work?

Communicating with people – colleagues, scientists and other stakeholders is definitely something that I really enjoy. What I appreciate, is that within a modern state agency there are clear, written, rules that make for a good working environment. Things like personnel leadership, employee health, overtime, stress management are explicitly addressed; this certainly helps with a good work-life balance. It's also rewarding to be able to work with experts and continually learn something new and relevant.

More challenging is the slow pace of change and processes that makes planning very long-term and rather inflexible. But this is something I have learned to work with. I would also like to be in the field more than is possible in my current job!

### Can you think of any major successes or failures you have experienced?

Well, having this job, at a high level, with job satisfaction and also job security, is certainly a success for me. When I look back, I did aim to build a career in science that ultimately I did not achieve since at that time I missed a clear career perspective. I don't see this as a failure, though, and in retrospect I think I would

do it the same way again!

**Which skills do you use most in your current job, and how do these relate to skills you acquired during your doctorate?**

A lot of the transferrable skills I acquired during the doctorate are really helpful. Primarily, the ability to write clearly and precisely, publish in scientific language, the process of reviewing and editing documents is something I use all the time. Something we take for granted in science is the ability to communicate fluently in English, that is not so obvious in the state agency! Another primary scientific skill I took with me from the doctorate is to research a complex theme, find and evaluate information and form valid arguments.

From my time as a science project manager, I got familiar with financial and budget planning as well.

The doctorate, however, was mostly about deep knowledge in a particular topic, in my case water chemistry, and that is something that I have not really used much since.

**How was the transition from academia to your present job?**

Quite smooth; I had a combination of academic background and work experience in environmental consultancy between my Master and Doctorate. I think both helped to demonstrate the skills they were looking for, and also showed some leadership experience for the job.

**Any messages to researchers currently doing their doctorate?**

There are many opportunities in my area. At our state agency, but also others in Germany and Europe, there are a lot of scientists from all academic fields, so jobs are available that are attractive and contribute to society. One thing I learned is that it helps to have demonstrable technical skills such as GIS, Data Skills, Writing and Language skills. Aside from acquiring them, try to get certificates to add to your portfolio, e.g. an ESRI certificate for GIS applications or Cambridge Certificate for English. Have a strategy to build your profile, and include communication, presentation and leadership skills. Particularly leadership is something that is neglected in academia, but is crucial in an agency or company.

My main message is to hang in – there is always light at the end of the tunnel; open your mind to alternatives to academia!

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Evangelia Louropoulou

## Using knowledge and skills to contribute to sustainable development

**Evangelia Louropoulou completed her doctorate in Marine Chemistry in Kiel, Germany in 2019. Quickly realising she didn't want to stay in academia, she returned to her home country in Greece and started looking for opportunities in the private sector. In January 2020, she took up her current position with a small consulting firm in Athens, where she has been working ever since.**

### What is your job profile in our current position?

Our firm specializes in the optimization and automation of business processes by the provision of IT solutions and services/consulting. One of the fields we are active in is the sustainability market. Currently Environmental, Social and Governance (a.k.a. ESG) issues along with Climate Change-related information are key elements of financial stability and sustainability for companies. Companies are nowadays required to disclose both their metrics and their policies on issues such as carbon emissions, energy use, waste management, effluents quality, use of chemicals etc. Our role is streamlining the processes of data acquisition, management and reporting on ESG and Climate Change-related indices, metrics and risks. We have clients in Greece and Germany.

Personally, I lead the Sustainability, ESG and Climate Change services and I am responsible for the conceptual design and development of our IT solutions. As environmental and climate-related data can be quite complex, I provide the technical expertise for our clients. I am in close contact with our clients, and customize these tools and reporting processes for them according to their business sector. Part of my job is also the monitoring of frameworks, directives, legislation and sustainability reporting standards at the international and national levels, to ensure that our services are up to date.

Finally, an aspect that I enjoy about my job is that I use my academic background to develop and apply for research projects as part of innovation and collaboration of our company with research institutions and universities; at present we have applied for two such projects. In this sense, I am a hybrid between the academic and private sectors!

### What made you choose this job?

My main motivation was that I wanted to use my knowledge and technical expertise to assist others in organizing and improving environmental reporting, management and, hence, their sustainability. Regarding the work environment, I already knew the company I work in, and the people there, so knew what I was in for. The company is small and privately owned, which I really like as it provides greater involvement, more flexibility and more opportunities for innovation.

### What do you particularly like or perhaps dislike about your current job or career path?

In general, I am very satisfied with my job. The most rewarding part is getting client appreciation and knowing that I am using my knowledge and skills to contribute to sustainable development and to the improvement of business processes. It's also gratifying to see the direct applicability of what I do when it is implemented within the companies.

A challenge is certainly in client acquisition, but that is common to any private business and to any project regardless of being in the private or academic sector.

### **Which skills do you use most in your job?**

One key skill I am using in my job is communication, written or verbal, to a range of people both on a technical and a more general level. I would say that I spend about 60% of my time writing reports and other documents, doing technical or general presentations, and externalizing our work. Time management and project organization are also highly important. Regarding the technical skills, I can draw on my academic expertise to understand technical terms, analyze data, read the scientific literature and translate knowledge to business applications. Often, I need to acquire expertise in new fields which is a challenge but also rewarding, so learning did not stop with my doctorate.

Coming from a doctorate, I felt well prepared with these skills, but also had to acquire new skills on the job – I needed to understand how a business works, and was well guided in this by my colleagues.

*In retrospect, I would say it was definitely worth the effort to do a doctorate in terms of scientific and technical expertise but also life-learning; the doctorate definitely shaped my character, the way I work and the way I view and manage projects.*

*I would tell young researchers that there are several options after the doctorate that they should investigate. Whatever one chooses, it should fit one's character and be in line with one's ambitions!*

### **How was the transition from academia to your present job?**

The transition from the doctorate and pure academia to a company was a bit scary at first, mostly because of the direct contact with the clients and for meeting the clients' expectations. I needed to adjust to a new way of working that is much more collaborative and team-driven. Although I always liked to work collaboratively, I find the environment here more conducive to this than that I experienced during the doctorate.

Ultimately, the transition was smooth for me because I had established contact with the company during my doctorate, so we knew each other. Prior to the doctorate I had done an internship in the Environmental & Sustainability Department of an aluminum-producing factory, so I had some experience in working in a non-academic/industry environment. That certainly helped as well.

### **Any messages to researchers currently doing their doctorate?**

In retrospect, I would say it was definitely worth the effort to do a doctorate in terms of scientific and technical expertise but also life-learning; the doctorate definitely shaped my character, the way I work and the way I view and manage projects.

I would tell young researchers that there are several options after the doctorate that they should investigate. Whatever one chooses, it should fit one's character and be in line with one's ambitions!





**University of Split**





Marijana Sumpor

## **We can be smart, but we also need to be wise!**

**Marijana Sumpor, PhD, a Croatian national currently residing in Croatia. She was awarded a doctoral degree in the discipline of Economy from the Doctoral School of Economy, Business and Tourism within the University of Split in 2005. Her doctoral thesis, entitled Coordination of development policies towards an integrative regional development policy, was completed under the supervision of prof. dr. sc. Pero Filipić.**

### **What is your current place of employment, your position and professional duties?**

I am the director of Euro ekspertiza, a micro firm providing consultancy services in strategic planning and evaluation for the public sector.

### **Have you worked at another institution or company before?**

Yes, I have worked in the Department for Regional Development at the Institute of Economics, Zagreb in the period 2001–2018. Before, I have worked in the Risk management department at BNP-Dresdner bank Croatia (1998–2000). And my first position was in the Department for macroeconomic analysis and forecasts of the Ministry of finance, Republic of Croatia.

### **Why did you decide to work at that institution/company? Is this the best place for you?**

I have decided to start my own company after accomplishing certain goals that I have set for myself in research. An additional and important factor for changing to the private sector was the benefit of having a wide network of partners and clients.

### **What brings you the most satisfaction in your current job?**

Visible results and high satisfaction of returning clients.

### **Would you be willing to share with us your professional victories and failures?**

Yes.

As a victory, I can mention the task to be the project team leader for the elaboration of the National regional development Strategy for Croatia 2016–2020. In this project I had the opportunity to practically test the coordination model from my doctoral dissertation and gain practical experience in implementing a theoretical concept in reality. It was my personal success.

When thinking about failures, I was engaged in a project where my international partners did not share the details of an analysis as I was only responsible for gathering the data, but not for the conceptualization and results. I had the feeling of not understanding my job entirely. A few years later, I was engaged to update the analysis and had the opportunity to understand what was done years before and to improve the methodology, clearly include all formulas, as well as the output in the way that anyone could continue with the updates in the future. I have contributed to the transparency of the work done. In the end, it was paid by public money.

### **In which areas does your current job correlate with your PhD studies?**

Almost all projects I am involved in are related to my PhD studies, as I am

a specialist in regional development and public sector strategic planning and consultant for Croatian Presidential office, the Government, line ministries, cities, regions. Also, I do have consultancy contracts for the European Commission, World Bank, GIZ and others.

**In your opinion, does completing doctoral studies provide more job opportunities?**

Completing doctoral studies first of all have a great impact on our own self-esteem. It provides us with confirmation of personal success. In my case, my doctoral studies were directly related to the work I am doing, so it had a great impact on all aspects of my job and projects I have been working on continuously since 2006.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

Most useful skills are analytic skills and research skills. Least useful I found theoretical discussions detached from reality.

**Did your employment after PhD studies go smoothly or did it present any challenges?**

During my PhD studies I already worked at a research institution and just continued to do scientific research for the next 14 years. Then I decided to start my own consultancy business, which is still highly research based and requires higher levels of knowledge and experience.

***Completing doctoral studies first of all have a great impact on our own self-esteem. It provides us with confirmation of personal success.***

**What message would you give to PhD students who dream of finding a satisfying job?**

It is a hard decision to continue studying and complete PhD studies. The motivation has to be very strong and the benefits of having a doctoral degree are very high, if your work is later related to it. By having this degree, it will give you an initial advantage in your job and society. However, it is important to treat colleagues, partners and friends respectfully, even if they do not have such a high level of education. It happens very often that we do have a wider understanding of issues we are dealing with than many other people that did not have the time and opportunity to read and do expensive research on specific issues.

An important message is that we can be smart, but we also need to be wise!



Igor Glavičić

## The most satisfaction comes from seeing how people progress during training

Igor Glavičić, PhD, a Croatian national currently living in Croatia. He was awarded a doctoral degree in the discipline Agriculture from the Doctoral School of the Department of Maritime Studies within the University of Split in 2021. His doctoral thesis, entitled "Structure of fish communities on vertical coralligenous habitats in the Hvar channel", was completed under the supervision of the prof. dr. sc. Alen Soldo.

### What is your current place of employment, your position and professional duties?

I work as a diving instructor, actually as a head of the diving center. I have been teaching people how to dive for almost 20 years and while it does include education of course, 90% of my job is in the sector of tourism.

### Have you worked at another institution or company before?

Yes, even though I have been doing the same job for a long time, I used to be a trainer at the Sea Club.

### Why did you decide to work at that institution/company? Is this the best place for you?

For 10 years already, I run my own scuba diving center. It is much easier not to be dependent on anyone, or not to have a boss. I am doing what I like and I also enjoy working with people who I find honest and fair.

### What brings you the most satisfaction in your current job?

The most satisfaction brings me when I see how much of a progress people I train are making. It brings me joy when they really learn something during the time we spend together.

### Would you be willing to share with us your professional victories and failures?

Few years ago, my colleagues and I had a very interesting and specific assignment which I found very interesting due to several aspects. Together with the Organization for Security and Co-operation in Europe (OESC), we were in Turkmenistan at the Caspian Sea where we trained local border security how to control the sea border. It is a country with virtually no tourism, so since we were a part of the internationally sponsored peace mission, we were granted visas without any issues and relatively fast.

### In which areas does your current job correlate with your PhD studies?

It overlaps to a rather small degree, maybe 20% of my current work correlates with my field of studies. I am trying to take part in research as much as possible, but usually it is 2 or 3 weeks per year, mostly at the beginning and at the end of summer season. So, during that time, I collect samples from different fish stock on the depths up to sixty meters.

### In your opinion, does completing doctoral studies provide more job opportunities?

I absolutely believe so. I think that it is easier to apply for a job when you

have something to "bargain" with, it simply makes one more competitive in the job market. If I was thinking the opposite, it would make me a pessimist. To conclude, I believe it is important to have higher qualifications.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

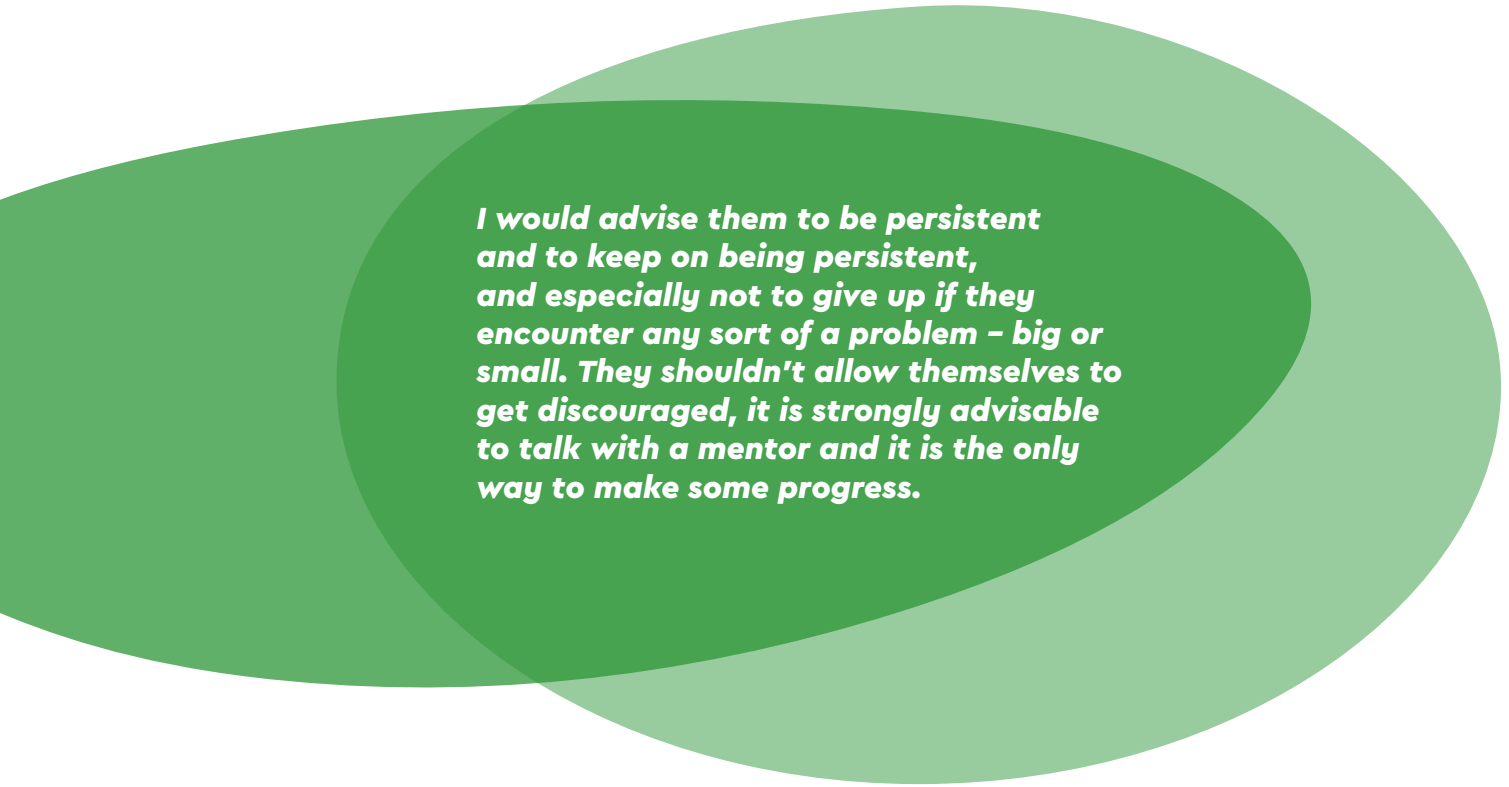
The most useful skills I have developed during my PhD studies are writing skills and how to produce scientific papers. Also, I have developed the ability of scientific thinking, experimental design, and how to conceptualize a scientific paper so reviewers accept it for publishing. Those are the skills I didn't have before and I have really sharpened those during the PhD studies. In addition, due to various factors, I did my PhD based on the Scandinavian model, which means it wasn't a traditional monograph text but it consisted of a collection of articles (aka multi-paper PhD model).

**Did your employment after PhD studies go smoothly or did it present any challenges?**

To be honest, nothing significantly changed in the business aspect. I am doing the same job as I was doing before obtaining the PhD title. There were some rather small changes of course, but nothing serious.

**What message would you give to PhD students who dream of finding a satisfying job?**

I would advise them to be persistent and to keep on being persistent, and especially not to give up if they encounter any sort of a problem – big or small. They shouldn't allow themselves to get discouraged, it is strongly advisable to talk with a mentor and it is the only way to make some progress.



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Božena Bulum

## Maritime lawyer – scientific advisor in Adriatic Institute

**Božena Bulum, PhD, a Croatian national currently living in Croatia. She was awarded a doctoral degree in the discipline of Maritime and Transport Law from the Doctoral School of the Faculty of Law at the University of Split in 2008. Her doctoral thesis, entitled "Regulation of maritime transport services and access to port services market in the competition law of the European Union", was completed under the supervision of prof. dr. sc. Dragan Bolanča.**

### What is your current place of employment, your position and professional duties?

Currently, I am employed at the Croatian Science Academy as a Scientific advisor. I have worked here since 2006 and I am confident to say that I am extremely satisfied with working in science. It is a type of profession which I find truly fulfilling.

### Have you worked at another institution or company before?

As of earlier employment, I worked as an apprentice at the Commercial Court in Split where I acquired all the necessary preconditions to sit for the bar examination, which I successfully passed in 2003. At the same time, I enrolled in post-graduate studies in the field of Maritime Law and Law of the Seas. Since there were no open positions or employment possibilities at the aforementioned Court at the time, I have decided to relocate to Zagreb. For a brief period of time after the relocation, I have worked at the Notary office, and later on, I have started to work at the Ministry of Justice, at the Department of International Legal Aid. While working at the Ministry, I have decided it was about time to finalize post-graduate studies (which I started already in 2001.), which I eventually did, while working at the Ministry.

### Why did you decide to work at that institution/company? Is this the best place for you?

I was attending a seminar organized by the Croatian Maritime Law Association and it was there that I met my current boss. She has told me that they are looking for an assistant in the field of Maritime Law. After a while, I decided to take a job at the Adriatic Institute since they were offering benefits such as paid PhD, time dedicated to work on PhD thesis and higher remuneration. At the end of the day, it was not difficult to make such a decision and I am confident to say that my job brings me joy.

### What brings you the most satisfaction in your current job?

I would say that I find writing scientific papers the most satisfying. I don't find it difficult but on the contrary – it fills me with joy. Also, I enjoy attending conferences where I get a chance to connect with colleagues from the same field. Before Covid, such conferences were much more frequent, especially in Italy since they have a really strong tradition of Maritime Law. As a matter of fact, we have a very good cooperation with Italian colleagues through the Croatian Maritime Law Association.

### Would you be willing to share with us your professional victories and failures?

As my greatest professional achievements, I would like to single out my book, the monograph from 2010, which was actually the first book dealing with



European Union law in the field of maritime affairs. Then, I participated in writing 2 chapters in books published by colleagues from Bologna and published scientific articles in foreign journals that are indexed in Scopus. Also, I have published in the proceedings of law schools and in the journal of the Institute of Comparative Maritime Law – which was established in 1958. and is indexed in the HeinOnline database.

**In which areas does your current job correlate with your PhD studies?**

As a matter of fact, my current workplace is completely compatible with the research field I am dealing with. Also, in order to work at the Research institute, one is obliged to obtain a PhD degree within six years from the moment of an employment. It effectively meant that finishing my PhD was a requirement to hold my current work position.

**In your opinion, does completing doctoral studies provide more job opportunities?**

In my case, finishing PhD was a precondition to having a job which I am having today so it really did provide me with job prospects.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

I got acquainted with the so-called Split School of Maritime Law and the Law of the Sea, and I ought to point out Professors Grabovac and Pavić, who were on my doctoral committee, and during my studies I met with their work. Then Professor Lukšić and Professor Jakaša, who used to be a head of the in the Institute where I work today, professor Bolanča who was my doctoral mentor, but also professor Vesna Barić Punda who taught us the international law of the sea which has always been very accessible and open to students. In principle, I came across their entire opus. Given that we had to write seminar papers, I have gained a solid basis of how to conduct a scientific research, collect literature, process it, and ultimately create a skeleton of research.

**Did your employment after PhD studies go smoothly or did it present any challenges?**

It went without any complications because having PhD was necessary work as a Scientific advisor and my boss at the time gave me very good advice to direct myself in the sphere of European Law and Maritime Law so it all came to its place.

**What message would you give to PhD students who dream of finding a satisfying job?**

There is no perfect job, every job has its good and bad sides. On the other hand, it is already a great accomplishment when a person goes to work with a smile on her/his face and comes back home with the same smile. Of course, there are always problems, but I would like to tell young people not to give up and to keep trying. Young people should be persistent and when they detect their potential, they should nurture and further develop it. All of us are born with certain talents and if we continuously work on them, develop them, the results will be there.

***Young people should be persistent and when they detect their potential, they should nurture and further develop it. All of us are born with certain talents and if we continuously work on them, develop them, the results will be there.***



Irena Đokić

## **Economist – head of the business development at private company Euro Ekspertiza**

**Irena Đokić, PhD, a Croatian national currently living in Croatia. She was awarded a doctoral degree in the discipline of Economy from the Doctoral School of the Faculty of Economy, Business and Tourism within the University of Split 2010. Her doctoral thesis, entitled "Impact of key stakeholders' participation on successfulness of brownfields' redevelopment", was completed under the supervision of prof. dr. sc. Branko Grčić.**

### **What is your current place of employment, your position and professional duties?**

My current position is the Head of the business development at Euro Ekspertiza company. I would classify my current work position as a senior position since I have 21 years of work experience.

### **Have you worked at another institution or company before?**

Just after finishing high school, I have worked at the Croatian Health Insurance Fund for 6 months. After finishing my postgraduate studies, I got a job at the Institute of Economics in Zagreb.

### **Why did you decide to work at that institution/company? Is this the best place for you?**

I was thinking of switching to the private sector for a while because I simply didn't find the scientific and research environment appealing anymore. Certain limitations which showed up and lack of freedom for the type of a job I was doing, started to bother me. Also, I didn't like the fact that for any sort of longer work engagement, if I needed more people to work on it, I had to ask for permission if they could join me, while I could have spent that time actually finishing work. In addition, it required a lot of bureaucracy. Those situations kind of pushed me to seriously consider leaving the scientific community. Eventually, I got a chance to work on an urban regeneration project, which is a topic of my PhD thesis, so I wanted to use my PhD for the improvement of the society and economy. I wanted to see if things which I was doing during my doctoral studies withstand the challenge of practical application. My idea was to test to which extent science can really keep up with the nowadays societal challenges and needs. So, when this opportunity arose, my friend and I realized that we are capable and knowledgeable enough to write and implement a project and to find necessary funds all by ourselves. I think that starting my own company is the best choice for me, at least at this life phase. Knowing how many opportunities are out there, how many different jobs are being offered, I can't picture myself going back to traditional science.

### **What brings you the most satisfaction in your current job?**

Freedom in the first place, especially having more flexibility and freedom while creating my business and private schedule. Of course, there are always limitations, but not being obliged to come to work and leave it at a strictly set time – brings me the most satisfaction. Also, if I want to spend 1 or 2 hours in nature because I find it important on that given day, of course if I can fit it into my business schedule, I will do it without being obliged to inform somebody

of it or ask for a permission. Type of the job I am doing can be done virtually from anywhere in the world as long as I have a laptop and Wi-Fi. I believe that one should be working wherever atmosphere and circumstance are making that person the most productive. Also, I have a very harmonious relationship with my business partner and we always consult on things which are best for the company and the two of us.

**Would you be willing to share with us your professional victories and failures?**

As professional victories I consider finding solutions for some of, more than usually, complicated projects and successfully finishing such projects.

As for failures, but not strictly as a failure – it would have been beneficial if I have participated in more extra-curricular education, or if I have chosen a master which is more related to my current field of work, or something more related to the economy of spatial or regional development. When it comes to job failures, there have been a few times that I felt I could have done an assignment in a better way, or I didn't do it in a way it was expected from me to be done. But in general, I think twice before accepting a project to make sure that they are interesting enough, but also that they are sort of a challenge, something that I can learn from.

**In which areas does your current job correlate with your PhD studies?**

At the moment, I am working for my own company but besides that I am also working on the European Bank for Reconstruction and Development project which is focused on urban regeneration. To be precise, it is my area of research.

***I would say that one of the most useful and most interesting skills were research workshops during which we were required to present progress of our research. These workshops help you to develop self-confidence and to realize if you are on a good track or not.***

**In your opinion, does completing doctoral studies provide more job opportunities?**

Not necessarily, it always depends on a person's ability to capitalize his or her PhD diploma, in other words, it is up to a person to which extent he or she will manage to connect work with PhD studies. If a person is taking jobs which completely differ from the field in which PhD was done, then in that case, PhD wouldn't be of too much use. But I don't consider the second option necessarily bad – anyway the world is constantly changing and some things which used to be interesting for research 30 years ago aren't relevant anymore.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

I would say that one of the most useful and most interesting skills were research workshops during which we were required to present progress of our research. These workshops help you to develop self-confidence and to realize if you are on a good track or not. In addition, they enhance a person's ability to present, but also to realize how to defend a theory you might have come up with, but also how to accept a constructive critic or a guideline. Since I was already working at the Institute of Economics, I had a certain set of skills so I would say that I have sharpened my existing skills. Those skills would be literature review, presenting different phases of a research work and analytical skills. Also, it was sort of a test to see which of the existing skills I can further improve.

**Did your employment after PhD studies go smoothly or did it present any challenges?**

I have found a job right away after finishing my post-graduate studies and I was employed at the Institute of Economics while being a doctoral student.

**What message would you give to PhD students who dream of finding a satisfying job?**

I don't want to shatter somebody's dreams by saying that there is no ideal job, but to a great extent it depends on the individual to create an ideal job. Of course, circumstances play a significant role as well. My point is that PhD students can't expect that they will find an ideal job situation but to create the ideal situation out of one they find.





Ivana Miletić

## **Agriculturist – Counsellor for Fisheries at Permanent representation of the Republic of Croatia in the EU**

**Ivana Miletić, PhD, a Croatian national currently living in Belgium, Brussels. She was awarded a doctoral degree in the discipline of Agriculture from the Doctoral School of the Faculty of Agriculture within the University of Zagreb. Her doctoral thesis, entitled The influence of feed structure on production performance of bluefin tuna (*Thunnus thynnus*, L. 1768) in coastal waters of the island of Brač was awarded in 2011.**

### **What is your current place of employment, your position and professional duties?**

At the moment I am employed at the Permanent representation of the Republic of Croatia in the EU as the counselor for fisheries. I am participating in a work group for fishery policy on the level of the Council of the European Union, where I represent national standpoints. My professional duties also include taking part in the technical meetings, boards and expert groups for the fisheries and aquaculture. I participate in the legislative procedure when adopting regulations and implementation acts on the level of the Council of the European Union and European Parliament. I am preparing documents and notes for the international meetings in the field of fisheries, and analyzing the data. During the Croatian Presidency of the Council of the European Union, I chaired the working group of the Council for Fisheries Policy.

### **Have you worked at another institution or company before?**

So far, I have worked on the following jobs: in the fish processing factory "Bračanka d.o.o.", as production director, at the tuna farm "Sardina" d.d. as the chief technologist, in the Ministry of Agriculture as a fisheries inspector and after that, as the head of the Fisheries Inspection Service. While working in the Ministry of Agriculture, I have spent some time as a seconded national expert at the European Fisheries Control Agency (EFCA) in Vigo.

### **Why did you decide to work at that institution/company? Is this the best place for you?**

After having spent 18 years in the private sector and state administration, moving to the Permanent representation of the Republic of Croatia at the EU was a new challenge for me where I could use the accumulated knowledge and experience to promote Croatia's interests in the field of fisheries on the level of the European Union.

### **What brings you the most satisfaction in your current job?**

Participation in the creation of policies in the field of fisheries and aquaculture, and monitoring of the Common Fisheries Policy, especially in the part that includes financial instruments, and technical and control measures.

### **Would you be willing to share with us your professional victories and failures?**

As a professional success I consider chairing the working group of the Council of EU for fisheries policy during the Croatian first presidency of the Council of European Union. Despite the challenging conditions in which we were working and the ongoing pandemics, we have achieved excellent results and significant progress on work documents which, at the time, were in the preparation and

negotiation phase with the European Parliament. The whole process was very important for my personal development because I gained valuable knowledge and experience in inter-institutional relations, as well as decision-making process between co-legislators.

**In which areas does your current job correlate with your PhD studies?**

The job I am currently doing does not require the academic title of Doctor of Science. However, fisheries policy is a specific area that requires a deeper knowledge of the issue and the academic title of Doctor of Science has helped me to better understand the global issue of fisheries.

**In your opinion, does completing doctoral studies provide more job opportunities?**

I believe that a higher level of education always offers greater opportunities in the labor market.

**What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

After graduating from the University of Split at the Faculty of Maritime Studies, Department of Maritime Fisheries Technology and the study of maritime transport at the Nautical Department, I have decided to pursue postgraduate studies at the Department of Fisheries at the Faculty of Agriculture in Zagreb. The postgraduate study in Split did not offer a significant upgrade after completing the undergraduate study, because the courses, lecturers and program were identical for both studies. Therefore, the decision to study at the Faculty of Agriculture in Zagreb was the right one because they offered extended courses in marine fisheries, aquaculture, fish diseases and fish genetics, and it was important for me to expand the knowledge of freshwater fisheries and freshwater aquaculture.

***It is important to have a vision, a goal and to know exactly what you want to achieve. Some jobs require knowledge and skills that have yet to be developed after graduation. Therefore, the path to the "ideal job" can take some time, and I would advise patience, perseverance and constant work to improve your talents and skills required by the chosen field.***

**Did your employment after PhD studies go smoothly or did it present any challenges?**

At the time of graduation, I was working in the Ministry of Agriculture, and I continued to work in the same job.

**What message would you give to PhD students who dream of finding a satisfying job?**

I don't want to shatter somebody's dreams by saying that there is no ideal. It is important to have a vision, a goal and to know exactly what you want to achieve. Some jobs require knowledge and skills that have yet to be developed after graduation. Therefore, the path to the "ideal job" can take some time, and I would advise patience, perseverance and constant work to improve your talents and skills required by the chosen field.



Sara Roje

## Behavioural scientist – Assistant Editor in journal Water

**Sara Roje, PhD, a Croatian national currently living in Poland. She was awarded a doctoral degree in the discipline of Behavioural Science from the Faculty of Fisheries and Protection of Waters, Research Institute of Fish Culture and Hydrobiology within the University of South Bohemia in Ceske Budejovice in 2021. Her doctoral thesis, entitled "Cocktail of invaders in European inland waters: ecological characteristics, interactions and consequences", was completed under the supervision of the Assoc. Prof. Miloš Buřič.**

### What is your current place of employment, your position and professional duties?

In January 2022 I joined the Multidisciplinary Digital Publishing Institute (MDPI) company. It is the largest publisher of peer-reviewed, open-access scientific journals in the world, and the fifth-largest publisher overall in terms of journal paper output. The company is Chinese with an office based in Switzerland and editorial offices in 11 more countries, of which one is in Poland, where I am currently living.

I work as Assistant Editor in the journal: Water (<https://www.mdpi.com/journal/water>). Water is a journal on water science and technology, including the ecology and management of water resources, and is published semi-monthly online. Impact Factor of the journal is 3.103 and it is listed in Q2 (Water Resources) / CiteScore – Q1 (Geography, Planning and Development).

I joined MDPI, mainly because I wanted to try something new and working as an Editor looked like an interesting way of keeping in touch at least somehow still with the research community. My main work is based on supporting the editorial process for academic research journals in the domain of expertise. Organize peer review for submitted manuscripts and coordinate editorial decisions. Coordinating fully the editorial process and processing manuscripts from submission until publication, handling email communication between the parties involved in the publication process, working closely with authors and editors, supporting the editors with help, and cooperating with other departments such as the Production Department and Managing Editor.

Editorial duties also include layout edits of submitted manuscripts, like reorganizing the structure of the manuscript by the rules of the journal. Also, duties include copy write and proofreading of the manuscripts, working with the authors to make sure that any comments or corrections are passed from them to the production team, and making sure that any changes are reflected in the revised proofs. Ends with publications being online and available for everyone for free to keep in touch with the newest research.

### Have you worked at another institution or company before?

Well, I got my PhD degree at the doctoral study "Fisheries" (PhD thesis topic: Cocktail of invaders in the European inland waters: ecological characteristics, interactions and consequences) within the University of South Bohemia in Ceske Budejovice (Faculty of Fisheries and Protection of Waters, Research Institute of Fish Culture and Hydrobiology) in the Czech Republic. During my PhD study, I was also part of the Czech-German monitoring project "MoBi-aqua" – Cross-border monitoring of biological invasions for the conservation of native aquatic biota. I was also a member of European Aquaculture Society -EAS -Student

Group – and National coordinator for Czech Republic (2019–2021), but that work was voluntary.

Shortly after finishing PhD, I was working as a technician at Tanganyika a Malawi Aquarium. It is the biggest fish breeder and wholesaler company in the Czech Republic with around 130 kinds of tank-bred cichlids and more than 200 kinds of cichlids imported from Tanganyika and Malawi lakes, I was cleaning aquariums, feeding, breeding, and taking care of the fish, also sorting species, preparing and packing them for transport to other EU Countries and customers.

But to work for the corporation, it is just my first time.

**Why did you decide to work at that institution/company?  
Is this the best place for you?**

I saw it as something exciting. Even it took sacrifice to again move to another country and start completely over. After some years of doing research I decided to try something else. I joined MDPI, mainly because working as an editor looked like an interesting way of keeping in touch with the research community. Also, there are many possible carrier paths within the company, so that they are able to set individual professional objectives towards the desired directions.

**What brings you the most satisfaction in your current job?**

Constantly there are many useful trainings and presentations from colleagues from all over the world that try to help each other to be more successful in work and they share tricks and tips to represent journals in their best light. I like the feeling after the whole process for one manuscript is finished, and paper is published online, both Editors and Author are satisfied and the article is online available for anybody.

**Would you be willing to share with us your professional victories and failures?**

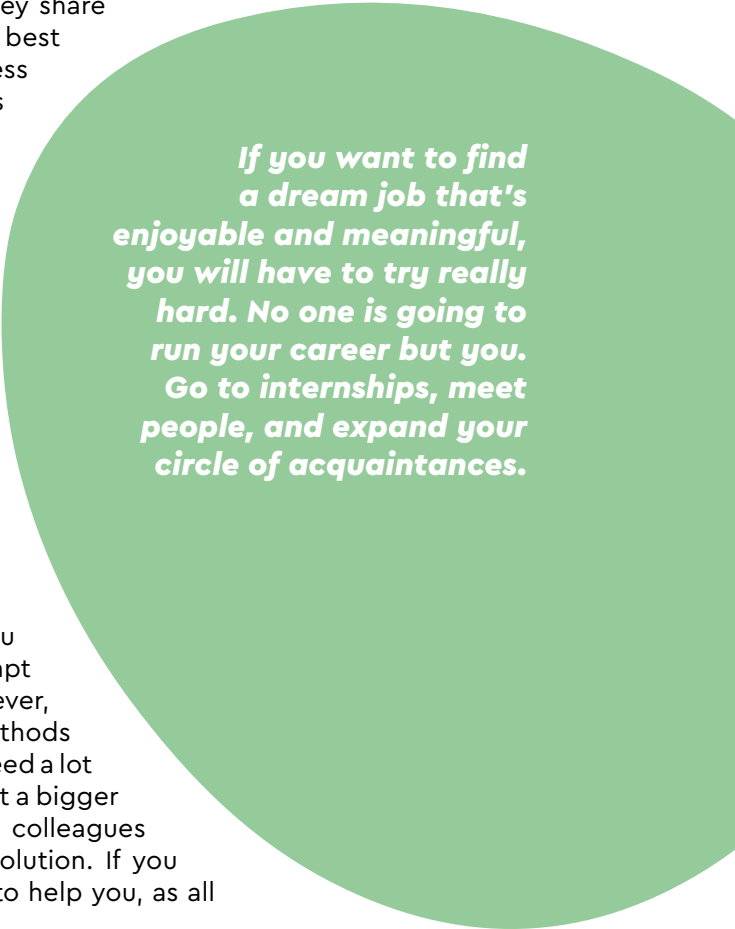
It is really important to find a perfect ratio between the professional and personal aspects of life.

Of course, there will be always good and bad days, nothing in life goes smoothly.

The key to being a successful Editor is good organization and communication, the ability to multi-task, and attention to detail. Each morning to prepare to-do list. There are constant changes in work, and you need to be prepared, reasonable, and adapt quickly, and I relish this challenge. However, sometimes it takes time to adjust to new methods of conducting day-to-day work, hence you need a lot of insights, information and knowledge to get a bigger picture. The good thing is there is always colleagues who can help you and point out some resolution. If you don't know, always ask, everybody is keen to help you, as all of us in some point are just beginners.

**In which areas does your current job correlate with your PhD studies?**

I work in the journal of my expertise, it is about water science and technology, including the ecology and management of water, there are also many Special



*If you want to find a dream job that's enjoyable and meaningful, you will have to try really hard. No one is going to run your career but you. Go to internships, meet people, and expand your circle of acquaintances.*



Issues open within the journal that have more connection to my PhD studies, like aquatic animal behavior, invasive species. Also, how the occurring pharmaceuticals (various types of antidepressants and methamphetamine) in waters affect the local community of organisms. I like to read fresh news.

### **In your opinion, does completing doctoral studies provide more job opportunities?**

Completing doctoral studies provides you with more job opportunities, yes, but everything is needed experience. After finishing PhD in science, you are basically just at the beginning of your carrier, and you need to make the decision whether will you continue to do science or teach in a school or go some third way. Doing science is also a sacrifice and takes a lot of time and patience.

Some companies will not even employ you because you have the highest degree.

### **What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

I learned a lot during my study. I was the responsible person to update all data from the monitoring to the big database. I gained experience in project writing because we had to submit at least two projects while studying. I gained a lot of experience in presenting the results of experiments and presentations at local and European conferences. Every day I learned something new. I learned to program scientific data in R studio, Ethovision program – monitoring animal behavior. I also completed a fish tagging course. During my study also I supervised one master thesis and two bachelor theses.

I would say Czech University had a really good program, as you had no classes to attend, you knew what you need so you apply or go to consultations with some professors to help you. In third year there was State Exam, that every doctoral student need to pass.

Least useful, I don't know what to say, maybe attending seminars that were obligatory to attend and that were not closely related to my field when I had some experiments or work to do. I saw it as a waste of precious time.

### **Did your employment after PhD studies go smoothly or did it present any challenges?**

I will not lie. My experience was extremely though. After completing PhD I applied to numerous positions, for Postdoctoral studies, and for technician work at many companies and Universities. I was mostly focused to find a job in Croatia, as many years I spent abroad I wanted just to go home. I got many declines and no answer or rarely just politely answer that my background is awesome but currently they do not employ. Most of this was also based on non-enough findings as during COVID times was not enough to support to Academia. After finishing study I sent more than 130 applications for work, and nothing. I was on the edge. But then in one moment, I got three offers in the same time, and I decided to go a new path, leave science and try to build a carrier.

### **What message would you give to PhD students who dream of finding a satisfying job?**

If you want to find a dream job that's enjoyable and meaningful, you will have to try really hard. No one is going to run your career but you. Go to internships, meet people, and expand your circle of acquaintances. Ask things, propose projects. Do everything you can. Somebody has it easy and somebody not, sometimes everything is also about luck and it can happen that life leads you on a completely different path.



Veni Marinković

## **Geographer – expert for strategic planning, preparation and project implementation in the Cluster organization for eco-social innovations and development CEDRA**

**Veni Marinković, PhD, a Croatian national currently living in Croatia. She was awarded a doctoral degree in the discipline of Geography from the Doctoral School of Geography Department within the Faculty of Science of the University of Zagreb. Her doctoral thesis, entitled "Social Geographic classification of the Croatian insular area", was completed under the supervision of the prof. dr. sc. Nenad Starc.**

### **What is your current place of employment, your position and professional duties?**

I work as an expert for strategic planning, preparation and project implementation in the Cluster organization for eco-social innovations and development CEDRA Split.

My duties largely depend on the type of a project I am working on or the stage the project is at. In general, the tasks for which I am responsible are: preparation of strategic planning documents, preparation of various analytical backgrounds and data analysis, monitoring the legislative basis of strategic planning, regional development, local development and rural development at national and EU level, monitoring tenders for external project financing, preparation of project proposals for various public, economic and civil organizations and entities and reporting, while daily work tasks include activities such as communication with clients and contracting authorities and the organization of work teams

### **Have you worked at another institution or company before?**

Yes, at the University of Zagreb as an expert associate for the implementation of projects financed from pre-accession funds and in the Local Action Group Škoji as a project planner.

### **Why did you decide to work at that institution/company? Is this the best place for you?**

I have decided to work for this organization because of the type of work and the type of projects which the organization prepares and implements, and also because of the freedom in proposing and creating projects and activities it allows one to do as an employee. In addition to the above, the work I am currently doing is very dynamic and provides me with opportunities to learn something new on a daily basis.

### **What brings you the most satisfaction in your current job?**

Being able to contribute to the wellbeing of the local community, organizations and individuals as a direct or immediate result of activities and projects we prepare and implement.

### **Would you be willing to share with us your professional victories and failures?**

As biggest victories I consider successfully preparing and implementing projects worth several millions of euros, and the positive impact prepared and implemented projects and activities had on target groups such as farmers and fishermen, children, youth, students, entrepreneurs, and entire local

communities. Also, as a professional success I consider the fact that I have successfully conducted my PhD research while, at the same time, I was doing my job on strategic planning, preparing a project implementing.

As failures, I don't consider project preparations in which I have participated, but haven't been approved for financing, because I perceive those situations as professional and life lessons.

### **In which areas does your current job correlate with your PhD studies?**

I would say that my current job and PhD studies correlate in rather high degree because, as a part of my daily assignments, I am applying methods, technics and tools which I have used as a part of my PhD research, while I am also using knowledge and skills acquired during PhD studies and research. Apart of that, certain results from PhD research, such as analytical backgrounds, are very much applicable in development projects which I prepare and implement as part of my daily assignments.

### **In your opinion, does completing doctoral studies provide more job opportunities?**

I do believe that having a PhD degree provides you with additional opportunities in the labor market for the type of a job I am currently doing and in the business environment I am working in, while additional opportunities in terms of advancement largely are depending on how capable person is and if she or he wants to apply and valorize knowledge, competencies and abilities acquired during PhD studies.

*I believe that, while conducting a PhD research and writing my PhD thesis, I have developed a detail analytical thinking, precise cause-and-effect reasoning, learnt how to use and browse through various sources and databases, how to process and interpret spatial data, systemize and review legislative acts and strategic documentation, as well as finding, searching for and analyzing technical and scientific literature.*

### **What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

I believe that, while conducting a PhD research and writing my PhD thesis, I have developed a detail analytical thinking, precise cause-and-effect reasoning, learnt how to use and browse through various sources and databases, how to process and interpret spatial data, systemize and review legislative acts and strategic documentation, as well as finding, searching for and analyzing technical and scientific literature. In addition, I have developed the skills of writing scientific papers and presenting the obtained results.

### **Did your employment after PhD studies go smoothly or did it present any challenges?**

Upon finishing my PhD studies, I was promoted to the position in which I work at the moment, although this position is not strictly related to science and does not require a doctorate of science. Since a PhD isn't a requirement for my current job position, I have a feeling that I had to invest additional effort to be promoted.



Igor Ljubenkov

## **The greatest satisfaction is the "freedom" you have, that is, the opportunity to manage your own time and professional engagement**

**Igor Ljubenkov, PhD, a Croatian national currently living in Croatia. He was awarded a doctoral degree in the discipline of Engineering, field of Hydraulics, from the Doctoral school of the Faculty of Civil Engineering, Architecture and Geodesy within the University of Split in 2012. His doctoral thesis, entitled "Sustainable water resources management on the island of Korčula with emphasis on agriculture", was completed under the supervision of the prof. dr. sc. Ognjen Bonacci.**

### **What is your current place of employment, your position and professional duties?**

I currently work in my own company, Water development, which deals with design in construction, as director and designer.

### **Have you worked at another institution or company before?**

I worked in a state-owned company and after that in the private sector (not in my own company; but for another employer).

### **Why did you decide to work at that institution/company? Is this the best place for you?**

Six or seven years ago, my own company seemed like the best solution at the time to me. It is a good choice even today, but (a small company) has both advantages and disadvantages.

### **What brings you the most satisfaction in your current job?**

Perhaps the greatest satisfaction is the "freedom" you have, that is, the opportunity to manage your own time and professional engagement.

### **Would you be willing to share with us your professional victories and failures?**

Overall, it is a great success to build your own company from scratch.

### **In which areas does your current job correlate with your PhD studies?**

The company is mainly engaged in professional work, although sometimes there is a need and opportunity to participate in some professional/scientific projects (especially with foreign institutions). There is very rarely a "match" with the field of research in postgraduate studies (M.Sc., etc.).

### **In your opinion, does completing doctoral studies provide more job opportunities?**

Not in Croatia and not in my sector. I think that this is marginalized in our market and that M.Sc./PhD degrees do not provide any additional opportunities. In small companies in particular, and large companies are not really looking for people of such profile.

### **What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

The most useful was general knowledge which I have acquired through different

***The most useful was general knowledge which I have acquired through different trainings. I would say it indirectly applies to market related problem solving.***

trainings. I would say it indirectly applies to market related problem solving. During my postgraduate studies (first M.Sc. and then Dr.) I was employed. So after graduating, I worked in those companies for a while.

**Did your employment after PhD studies go smoothly or did it present any challenges?**

During my postgraduate studies (first M.Sc. and then Dr.) I was employed. So after graduating, I worked in those companies for a while.

**What message would you give to PhD students who dream of finding a satisfying job?**

I think that the vast majority remain to work at universities after graduation - focused on teaching students and mostly theorizing, which has certain shortcomings / limitations. Working in the market (in practice) has its difficulties and also limitations. So the "ideal job" is probably an individual thing and it's hard to recommend to someone what would be the best choice for him/her.



Slavica Čolak

## **Agronomist – head of the Nutrition Department in Cromaris company**

**Slavica Čolak, PhD, a Croatian national currently living in Croatia. She was awarded a doctoral degree in the discipline of Agronomy from the Doctoral School of the Department of Ecology, Agronomy and Aquaculture within the University of Zadar. Her doctoral thesis, entitled "Health protection of fish in intensive farming", was completed in 2021.**

### **What is your current place of employment, your position and professional duties?**

Currently I work as the head of the Nutrition Department, which is in charge of fish growth and consists of two units: feeding technology and fish health protection.

### **Have you worked at another institution or company before?**

My first job was as a veterinarian at the Cenmar d.d. farm, after that I was the head of the Cenmar d.d. Veterinary Service, representative and business support for the French hatcheries Ferme Marine de Douhet (FMD), Les Poissons du Soleil (LPDS) and EMG.

### **Why did you decide to work at that institution/company? Is this the best place for you?**

Cromaris d.d. is a company that is the leader in mariculture in Croatia and provides excellent conditions for my further progress.

### **What brings you the most satisfaction in your current job?**

Nutrition and health protection are dynamic areas that require continuous adaptation to the conditions of cultivation and the market, and it is a great pleasure for me to participate in this process.

### **Would you be willing to share with us your professional victories and failures?**

Successful establishment of disease prevention without the use of antibiotics in the entire fish breeding cycle.

### **In which areas does your current job correlate with your PhD studies?**

It overlaps with the part related to the protection of fish health.

### **In your opinion, does completing doctoral studies provide more job opportunities?**

I think it provides one with a knowledge for further possibilities.

### **What sort of skills did you develop in your PhD studies and which one of them would you rate as the most and the least useful?**

In my sphere of work, we very often do production experiments. When planning and analyzing I use the skills I acquired during my postgraduate studies.

### **Did your employment after PhD studies go smoothly or did it present any challenges?**

I was already employed while attending postgraduate studies.

**What message would you give to PhD students who dream of finding a satisfying job?**

It is recommended that they set themselves goals and secure a job, because only when they start working they will know if it is the ideal job for them.

*It is recommended that they set themselves goals and secure a job, because only when they start working they will know if it is the ideal job for them*

**University of Malta**







Adrian Attard

## Taking the plunge towards personal growth

**Adrian Attard is a Partner in the Marine Litigation department at Fenech & Fenech Advocates. He has an LL.D. from the University of Malta, an LL.M. from the IMO International Maritime Law Institute and a PhD from Queen Mary University of London. At Fenech & Fenech Advocates, his main areas of expertise are maritime law and dispute resolution, where he advises financiers on ship arrests, mortgage enforcement and judicial sales. He also sits on the Executive Committee of the Malta Maritime Law Association, is a member of the Maltese Chamber of Advocates and lectures at the University of Malta.**

### **What is your current place of employment, your position and your professional duties?**

I work at Fenech and Fenech Advocates in Valletta, Malta. It is one of the island's largest and oldest multi-disciplinary law firms.

As a partner working within the firm's marine litigation department, my primary responsibilities are managing and handling clients' litigious and non-contentious briefs. My main areas of practice are maritime law and dispute resolution. In particular, my work focuses on wet and dry shipping disputes ranging from collisions to salvage claims and from charter party disputes to marine insurance claims. I also regularly advise banks and other financiers on ship arrests and mortgage enforcement. In addition, as part of my role, I would say that I am also expected to manage client relationships, focus on business development, and generally oversee the work of the team of associates within our department.

I have been at the firm for twelve years. After attaining my Master's degree in international maritime law conferred by the IMO International Maritime Law Institute, I joined Fenech and Fenech Advocates in 2010 as an associate. I worked my way up and eventually made partner at the firm in 2019, the same year I was awarded my doctoral degree from Queen Mary University of London.

### **Have you worked at any other institution or company before? If yes, describe your work responsibilities at such previous places of work.**

My previous employment was unrelated to my current profession or the legal field. I worked several part-time jobs in the education sector while pursuing my studies.

### **How does your current employment meet your professional expectations?**

Fenech and Fenech Advocates is one of Malta's top-tier law firms and is the only firm in our jurisdiction with four distinct shipping departments: ship registration, ship finance, yachting, and marine litigation. The firm enjoys a special affinity with the maritime industry and boasts a wide and varied portfolio of local and international clientele within the shipping sector. I was headhunted following my postgraduate studies and was invited for an interview. After learning about the firm's extensive shipping practice, I was confident that working in the firm's marine litigation department would allow me to apply the knowledge gained throughout my graduate and postgraduate studies in maritime law.

As a maritime lawyer, my work is varied, but I often rely on the wealth of knowledge I acquired through my doctoral studies.

My doctoral research comprehensively analyses the legal regimes regulating classification societies and their liability under international law. The study addresses a wide range of issues that certainly touch upon the interests of

***I undertook my doctoral research part-time while maintaining my employment at the firm. In my case, I believe that the most challenging transition came at the commencement of my doctoral studies as I had to amend and refine my time-management skills. This was not always an easy task, and I have had to make considerable sacrifices along the way. That said, I would wholeheartedly encourage people interested in pursuing a PhD to take the plunge as the process and personal growth is invaluable and most definitely worth the difficulties one might encounter.***

classification organisations, shipowners, charterers, financiers, as well as flag state administrators. These stakeholders in the maritime sector represent the spectrum of clients serviced by our firm.

The knowledge gained during my doctoral studies has broadened my understanding of several pertinent legal issues that key players in shipping regularly face. Knowing our clients' sector better allows me to provide them with a better service.

**What brings you most satisfaction in your current job?**

It is generally always rewarding when the outcome of a particular brief exceeds the client's expectations. I must say that being able to use my expertise in my career provides me with a sense of fulfilment. I find my contentious work especially rewarding as it allows me to use my expertise and research skills. I am always satisfied when an award or court decision follows (or mirrors) the arguments I would have submitted, particularly when dealing with issues that would have been previously untested by our domestic courts or tribunals. So, overall I would say that I am generally quite fulfilled with my career choices. I believe that pursuing my doctoral studies has allowed me to further enhance my knowledge in the field where I work. My profession allows me the chance to apply that knowledge in practical terms. Nevertheless, I do aspire to get more involved in the world of academia. I want to pass on my knowledge and inspire young people to pursue a career in maritime law.

**Would you be willing to share with us your professional victories and failures?**

I believe that when working at a firm, you are part of a team and accordingly, most successes or failures are generally shared with your colleagues. That said, and on a personal level, I would say that I was honoured to have recently been elected to the Executive Committee of Malta Maritime Law Association. I was also extremely pleased when a couple of years ago, I was appointed as a maritime law expert to advise a court on shipping-related issues in a high-profile case in Malta.

**To what extent does your professional career correlates with your PhD studies?**

I pursued my doctoral studies part-time while gaining work experience in the maritime sector. By doing so, I believe I could apply my practical knowledge to better formulate my hypothesis. During my PhD studies, I attained fundamental knowledge on the workings of classification societies and the maritime sector in general. Additionally, I would say that I have developed or enhanced the following skill sets:

1. The ability to identify and review academic literature
2. Identifying and implementing appropriate methodologies for legal research
3. Developing skills required to write in accordance with scholarly requirements.

**Does obtaining a PhD provide more job opportunities or broaden professional horizons?**

I think that this question is not entirely applicable to my particular case since I was already in gainful employment when I began my doctoral studies. Nevertheless, having a PhD has given me added value as I have attained a deeper understanding of the field in which I work. Generally speaking, I believe that the opportunities available will vary considerably depending on the research subject. The more topical the subject, the more likely it would be to find career opportunities outside the university conferring the doctoral degree, particularly in private practice.

**What sort of skills did you develop in your PhD studies, and which one of them would you rate as the most and the least useful?**

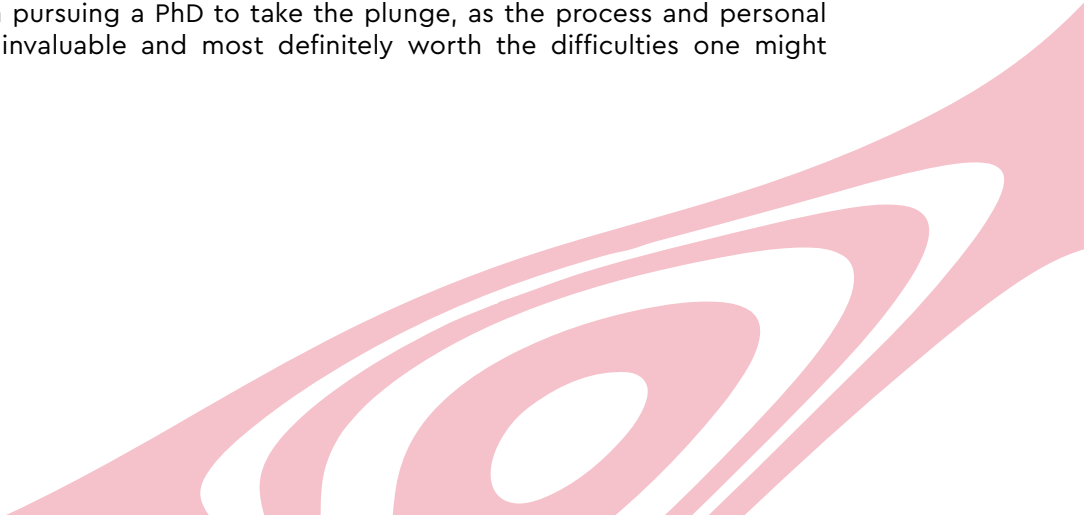
My doctoral studies have certainly helped me develop a more objective and inquisitive approach to problem-solving, something which helps me daily in my work life. As part of my job, I am regularly confronted with clients who need specific guidance and understand their position objectively. Giving my clients the pros and cons of each possible scenario allows them to appreciate their situation better and predict the possible outcomes.

Within the realm of litigation, it is also imperative that I put forward my client's position clearly and concisely and back up my arguments with legal texts and supporting case law. These requirements are highly comparable to the research and writing skills required to pursue a PhD.

The most valuable skill I acquired during my PhD studies is thinking outside the box. It has helped me develop a more analytical approach to problem-solving. I have learnt to address problems from a broader perspective, dissect the issues thoroughly, and try to be more innovative when considering possible solutions. I tend to apply this skill set in my approach to work and personal life.

**Would you like to share a message with current doctoral students about the challenges of completing both a doctoral thesis and a dissertation defence?**

I undertook my doctoral research part-time while maintaining my employment at the firm. In my case, I believe that the most challenging transition came at the commencement of my doctoral studies, as I had to amend and refine my time-management skills. This was not always easy, and I have had to make considerable sacrifices along the way. That said, I would wholeheartedly encourage people interested in pursuing a PhD to take the plunge, as the process and personal growth are invaluable and most definitely worth the difficulties one might encounter.





Michael Borg

## Applying research in a real-world project

**Michael Borg, PhD, is a Maltese national residing in Malta. He completed his PhD in Offshore Floating Wind Turbine Dynamics at Cranfield University in 2014 under the supervision of Professor Maurizio Collu. He was awarded the Lord Kings Norton medal for best PhD thesis at Cranfield. He spent four years carrying out postdoctoral research in the Department of Wind Energy at the Technical University of Denmark before moving to the industry to apply his experience in industrial applications.**

### **What is your current place of employment, your position and your professional duties?**

I am self-employed, working remotely for one main client, a Danish company called Stiesdal Offshore Technologies. I have a mix of locations where I work: at home, an office in another area in Malta and two office locations in Denmark. I am responsible for developing ideas and designs in relation to floating wind turbines and other novel offshore structures. I am the chief specialist in the company regarding numerical load modelling and physical testing of our floating wind turbine structures.

I have been working with the company for three years.

My role has been very dynamic in the company. In the beginning, we were only three employees, and now we are 60. So I have worked as an engineer, specialist, project manager, interface manager, etc. Currently, my role revolves around developing new ideas and competencies within the company and ensuring the rapidly expanding team maintains sufficient quality in our work/output. We aim to be the best in the world at what we do.

I chose to work with this company after a number of years in academia. This company finally had the right ideas about making floating wind turbines a successful business enterprise. The founder is also very inspirational and provides an enriching work environment.

### **Have you worked at any other institution or company before? If yes, describe your work responsibilities at such previous places of work.**

I have previously worked at two universities.

The first was Cranfield University, UK, as a PhD researcher, where I worked as an engineer in an EU FP7 project closely aligned with my PhD topic. My responsibilities were mainly on software development for simulating a combined floating wind-wave energy converter, data analysis and dissemination. I was also involved in delivering lectures and supervising MSc students in related courses. The second was the Technical University of Denmark, where I was a postdoctoral researcher in wind energy. My responsibilities covered a wide range of tasks: carrying out focused research on further developing state-of-the-art numerical models for floating structures and advanced hydrodynamics, project management for an EU Horizon 2020 project, liaising with clients and third parties in industrial consultancy, supervision of group and individual thesis projects across BSc, MSc and PhD levels, responsible for the development of a PhD summer school, responsible for part of an MSc course, preparation and submission of successful significant project grant proposals to national and EU funding bodies.

**How does your current employment meet your professional expectations?**

My current job meets my professional expectations primarily as it allows me to work at the forefront of the industry that I am in. The company actively fosters innovation and the development of new ideas while also challenging the status quo in the pursuit of doing things in the best way and being the best in the world at what we do. It allows me to work on real structures that will be deployed in the world's oceans rather than still being consigned to academic/theoretical studies that lacked in providing job satisfaction. It also closely aligns with my values of contributing to addressing climate change. The flexibility the job offers in terms of working hours and locations has also been supplementary to job satisfaction and productivity.

**What brings you most satisfaction in your current job?**

I have the most satisfaction when I work on something theoretical or develop a new idea/hypothesis that turns out to be the correct approach to go, and it eventually becomes a reality when the structure is built. Working as a team where we challenge each other is also a very satisfying part of the job.

*I would say my PhD and postdoctoral research work align fully with my current job, as well as my long term professional career ambitions. The seven years I spent in academia provided me with and allowed me to develop the necessary skills to apply the research in a real-world project. My current job feels like a fitting culmination of all that work.*

**Would you be willing to share with us your professional victories and failures?**

Success:

- a. Finishing PhD early and receiving the best PhD award at Cranfield University.
- b. Having a leading role in developing the world's first industrialised floating wind turbine, taking it from an idea on paper to a full-scale prototype installed in the Norwegian Sea.

Failures:

- a. Burnout: going through burnout a few times, which in some ways is both a failure to acknowledge the limits of what one person can do, but also a learning experience of how to cope with a high-demanding job and stress, as well as strike a careful balance between work life and personal life.
  - b. The drop in work quality when taking on too many tasks simultaneously, as well as not communicating clearly to management that more employees are needed to handle the workload and deliver the quality we expect of ourselves.
- I am quite fulfilled with my career, where now it is a matter of fine-tuning what exact roles I enjoy the most as part of developing future offshore structures.

**To what extent does your professional career correlate with your PhD studies?**

I would say my PhD and postdoctoral research work align fully with my current job, as well as my long-term professional career ambitions. The seven years I spent in academia provided me with and allowed me to develop the necessary skills to apply the research in a real-world project. My current job feels like a fitting culmination of all that work.

### **Does obtaining a PhD provide more job opportunities or broaden professional horizons?**

I would say this is entirely dependent on the ambitions of the PhD student. If the student is interested in an academic career, then the PhD is a prerequisite but may find very few job opportunities that align well with professional and personal life objectives.

In industry, it is quite a sector dependent on whether a PhD provides a distinct edge or more opportunities. In my industry of wind energy and offshore engineering, whilst there are many PhDs working in the industry, there are many senior employees with MSc's as experience working on real-life projects tends to have the highest priority in the recruitment process. A PhD can provide different job opportunities and not necessarily offer more job opportunities. Also, in terms of remuneration, companies will typically pay more if your PhD is closely related to the vacancy they are trying to fill. Otherwise, you may be offered a salary closer to that of a person with an MSc.

### **What sort of skills did you develop in your PhD studies, and which one of them would you rate as the most and the least useful?**

Open-mindedness to ideas and views. Benign suspicion of results, analysis in the pursuit of better quality, developing/ingraining the scientific method in approaching engineering problems. Resilience to continue working on solving a problem that proves complex/persistent to resolve.

Many of the skills I obtained in my doctoral education align with my current work requirements. However, this can be quite circumstantial – I am lucky enough to still work in the same field I did my PhD in, even seven years after completing my PhD.

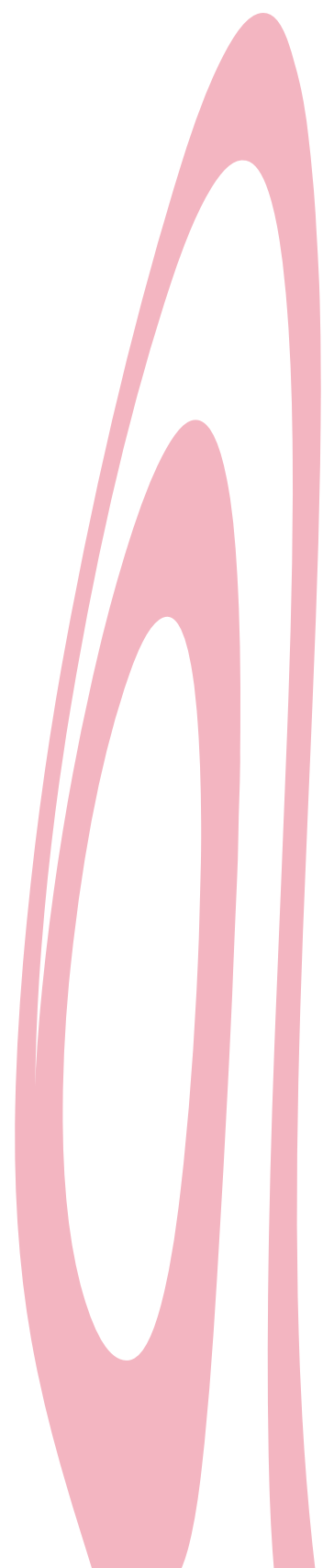
The skills I acquired during the doctoral studies that I value most include applying the scientific method to solving engineering problems and giving constructive criticism and challenges to my work in good faith.

My transition from doctoral studies to employment was relatively seamless. Moving from a very small research group in my PhD to the largest research department in the world in my field for my postdoctoral research, was a great learning experience. It provided a great transition from academic research to industrial research, a hybrid between educational and industrial/commercial work environments. The last transition to date from industrial research to commercial technology development was also relatively seamless. My career to date has had a gradual change over several years, which works well.

### **Would you like to share a message with current doctoral students about the challenges of completing both a doctoral thesis and a dissertation defence?**

Possibly a lot of focused work on your own to carry out your PhD thesis can be easier for some personalities than others. Keep in mind the long-term objective, and be sure you are aligned with that objective. In some countries, a PhD is seen as just another job (at least in engineering). Still, it is also a personal achievement you are attempting to attain, and it does have a closer connection to you than a typical job, so little extra effort can go a long way.

On the dissertation defence, I believe that if you carry out all your PhD work to the best of your ability and know your work deeply, there is nothing to worry about, as you will be able to answer any questions concerning your work. Typically examiners are just another curious human being that wants to know what you did in detail and the thought process behind some of the work you carried out rather than trying to shoot down your work intentionally.





George Buhagiar

## **Integrating values with knowledge in research**

I graduated as an architect and civil engineer in 1989 from the University of Malta and started working as a design architect. I completed a Masters in Regional and Resource Planning from the University of Otago in 1994 and began working as a planner with the then Ministry for the Environment. I read for a PhD in capacity building for Integrated Environmental Management (IEM) at the University of Lincoln and, after completion in 2004, resumed planning work on significant projects and initiatives in the public service in Malta. For the last four to five years, I have been addressing coastal erosion risks to public safety in Malta and developing a strategic response to coastal vulnerability at a more general level.

### **What is your current place of employment, your position and your professional duties?**

I currently work as coordinator of the Research and Planning Unit (RPU) of the Public Works Department (PWD) in the Ministry for Transport, Infrastructure and Capital Projects. The RPU is a recently set-up unit, but I have worked in the PWD for most of my professional career since 1981 as a student, moving out for some years and returning to the same Ministry. We are now responsible for matters related to strategic planning and research to provide an evidence-based basis for the work of the Department. Over the last four years the unit's work integrated coastal management to address coastal erosion risks more strategically. More specifically, the scope has widened since we are currently driving reform of the whole PWD organisation for a greening transformation towards SDGs and climate action in five critical areas of coastal-climate risk protection, energy performance in buildings, integrated stormwater management infrastructure, sustainable urban environments and mobility, and, use of nature-based solutions in all of the above areas.

Nonetheless, one of the significant work areas remains that of coastal-climate risk protection. My duties and position have changed, depending on the needs of the times, which is why I have moved through different areas of work relating to environmental management in general, hence my research interests in IEM. This organisation was my first workplace after graduation. After seeing that the organisation met my career development and specialisation well and that I was able to make a difference in different areas, I decided to stay in the public service.

### **Have you worked at any other institution or company before? If yes, describe your work responsibilities at such previous places of work.**

I had also worked for several years in the Ministry for Resources and Rural Affairs, where I was responsible for afforestation projects and the development/management of national parks. I have worked in different fields, including multiple architectural and landscape design projects, countryside management and conservation, waste management, flood relief and water conservation, integrated valley management, and a national park development strategy.

### **How does your current employment meet your professional expectations?**

Things are not always up to my professional expectations. In practice, and most commonly in the public sector, projects and initiatives are seldom shaped only by knowledge and academic research due to the need to accommodate diverse interests. This is justified insofar as diverse action is involved, but outcomes may be more welcome from an IEM and sustainability point of view.



**What brings you most satisfaction in your current job?**

It is working with different stakeholders on an environmental agenda in any area of our work, and being able to integrate these values with knowledge based on research and evidence, rationalised through scientific approaches, to arrive at integrated solutions with concrete actions that have a positive impact on the outcomes (hence, integrated environmental management).

**Would you be willing to share with us your professional victories and failures?**

One of the earlier achievements in my career was having been behind the establishment of the PARK Department, which originated from a small section that evolved and grew, and I was able to contribute to its vision and development into a public entity as a government department. I am satisfied that this has been taken over and sustained even after I left the Ministry to return to my present organisation. It continues to function and has grown further and spawned into two different organisations with similar functions (PARKS Malta and Ambjent Malta). Other achievements have been involved in the conceptualisation of key national projects and their submission for funding, with eventual success in acceding to multi-million investments in the country's public infrastructure and environmental resource management. Examples of this in coastal management include two projects: one for Coastal Satellite Assistance for Governance of Erosion (Coastal SAGE) which is researching and developing AI tools for the use of satellite imagery for coastal monitoring. The other is a recently approved project for a national coastal protection strategy, Coastal-COVER (Coastal-Climate Overall Vulnerability and Exposure Risk) Protection Strategy for the Maltese Islands. Satisfaction is derived from having obtained 100% funding for both projects and having done so through collaboration and partnership with other entities.

Disappointments have also been experienced, especially when such proposals are not well-met or meet significant barriers to achieving sustainable goals or insufficient support for more proactive approaches, and there is fall back on quick-fix solutions that foreclose future benefits. Examples of this were when the national flood relief project precluded elements that could have tapped into more significant opportunities for water conservation or where regeneration projects in urban areas underestimated the benefits of nature-based solutions. Areas of my career that could provide more fulfilment include a reduction in the overburden of administrative work and the relative lack of resources for more research to shape the agenda of the Department.

**To what extent does your professional career correlate with your PhD studies?**

At the PhD level, you do not always work consistently to draw upon what knowledge and research skills are gathered over many years of work and study. So this is more a situation where you dip and resource from the PhD approach, in as much as from the knowledge of the specialist area itself. However, in retrospect, the subject of study itself refocuses on how we look at problems and assess the solutions we seek to address them. Ultimately, much depends on the individual's ability and innovation to draw upon the personal insights gained thus (through a PhD, other studies, and the work-experience-tempered knowledge) to leverage new linkages with the career path at hand, shaping their direction in the process, as well as that of the organisation. For instance, in recent years, I applied my PhD research to coastal management and coastal erosion risks to develop (together with the team at the RPU) a Scientific and Integrative Framework for Coastal Erosion Risk Assessment. We used this on a pilot site in Malta, and the approach formed the basis for developing the project proposal for the C-COVER national strategy, which we eventually obtained funding from DG REFORM under TSI 2021, with the project starting in October 2021.

**Does obtaining a PhD provide more job opportunities or broaden professional horizons?**

To some extent, in my field, because IEM is not tied to any particular specialised area, and thus it is not seen as 'expertise' in any field, unfortunately. Probably more in the private sector, but it depends on the political climate, as well. Most opportunities are in the public sector or public entities. Options in the private sector could be somewhat limited to what such entities require in terms of expertise from consultants.

**What sort of skills did you develop in your PhD studies, and which one of them would you rate as the most and the least useful?**

Essential skills/knowledge include substantive knowledge in different areas of integrated environmental management and research skills, and problem-solving insights mainly found to help conceptualise new ideas in order to create projects driven by specific needs.

**Would you like to share a message with current doctoral students about the challenges of completing both a doctoral thesis and a dissertation defence?**

A most helpful element to pursue in your research is becoming immersed in the real world. Try not to remain distanced or isolated by scientific approaches that lose sight of the significance of such study to people 'out there'. Communicability of findings to decision-makers and the broader set of stakeholders in your field are critical. This makes research valuable to well-being, assuming that there is the willingness for it to be purposed towards positive outcomes to society and thus to seek such a focus in the objectives thus seeking.

*It is working with different stakeholders on an environmental agenda, in any area of our work, and being able to integrate these values with knowledge based on research and evidence, rationalised through scientific approaches, to arrive at integrated solutions with concrete actions that have a positive impact on the outcomes (hence, integrated environmental management).*



Josef Camilleri

## Acquiring skills that are desirable to hiring managers

**Josef Camilleri, PhD, a Maltese national currently living in London. He was awarded a doctoral degree in Maritime Engineering from the University of Southampton in 2018. His doctoral dissertation entitled 'Experimental and numerical investigation of slamming loads on high-speed craft, including hydroelastic effects', was completed under the supervision of Prof. Pandeli Temarel, PhD.**

### What is your current place of employment, your position and your professional duties?

I work at Silverstream Technologies, a leading maritime clean technology company based in London. Silverstream developed an air lubrication system that can be fitted to existing ships to improve efficiency, energy consumption and reduce emissions.

I joined Silverstream in November 2020 as a KTP Associate on a 2-year project. The Knowledge Transfer Partnership (KTP) scheme helps businesses in the UK to innovate and grow by linking them with an academic or research organisation. It is a three-way partnership between the University of Southampton, Silverstream, and the KTP Associate, who manages and delivers the project.

The project aims to embed artificial intelligence into the air lubrication system's control module and develop ship performance data analytics tools. This initiative will ultimately improve system performance by increasing ship fuel savings, reducing emissions and increasing business for Silverstream Technologies.

### Have you worked at any other institution or company before? If yes, describe your work responsibilities at such previous places of work.

I obtained a first-class degree in Mechanical Engineering from the University of Malta in 2013. The following year, I moved to the UK to read for a PhD in maritime engineering at the University of Southampton. For my PhD studies, I researched slamming loads on high-speed marine craft using numerical and experimental methods. I was awarded a PhD in 2018.

Before joining Silverstream Technologies, I worked at KBR as a Naval Architect specialising in hydrodynamic, Computational Fluid Dynamic (CFD) and experimental analysis of floating marine structures and related fluid dynamics problems.

At KBR, I was involved in various projects, including the Concept Definition and pre-FEED of two newly built ship-shaped FPSOs for the Browse fields in Western Australia. My responsibilities included hydrodynamic and CFD analysis of FPSO in waves, wind and current to investigate motions and accelerations and to evaluate the risk of green water on deck and emergence of the keel and bottom slamming; CFD modelling of gas turbines exhaust dispersion; and wind tunnel and wave basin testing – preparation of test specifications, supervision of model tests and analysis of test data.

### How does your current employment meet your professional expectations?

I thoroughly enjoyed my time as a PhD student conducting research. However, I always felt that academia was not the path for me, and I wanted to move into industry after my PhD. At the same time, I did not want to stop doing what I liked the most about my PhD – doing research – and I also wanted a role that could have a positive impact. I feel that my current position at Silverstream delivers on all three fronts – I work on a challenging but exciting practical problem

that looks to reduce the negative impact on the environment, including a vital element of research.

**What brings you most satisfaction in your current job?**

At Silverstream, when we install a new system, we conduct tests and collect data to understand how the system is performing. The most satisfying moment is when the data shows that the system is delivering positive savings. As a company, we feel we're doing our part to help the shipping industry reach the IMO's decarbonisation goals. Embedding artificial intelligence into the system should further improve the performance making my job even more rewarding.

**Would you be willing to share with us your professional victories and failures?**

The main highlight at KBR has been attending the wind tunnel tests at FORCE in Denmark and the wave basin tests at MARIN in the Netherlands. Up to that point, the design of the FPSO had only existed in the form of a CAD model on our computers, and even though we had run many numerical simulations to ensure that the model could withstand the design conditions, there was always that tiny doubt that it might not perform as expected. However, even to our surprise, the design performed better than expected, which was an excellent achievement for the whole team. As for professional failures, I cannot think of any significant shortcomings so far. I am in the early stages of my professional career. The learning curve is steep, especially with my new role, which requires extensive artificial intelligence/machine learning knowledge, something I only brushed upon in the past. However, I enjoy a challenge, and this is an exciting one.

*I do not think there is a "one-size-fits-all" answer to this question as it depends on many factors, including the field of study, industry and region. However, I firmly believe that obtaining a PhD gives you knowledge and expertise and teaches valuable skills that are desirable to hiring managers.*

*For PhD graduates looking to move into the industry, this can be a big step. Having experienced this and the KTP setup, I would highly recommend considering doing a KTP project to anyone who wants to transition from academia to industry slowly.*

**To what extent does your professional career correlate with your PhD studies?**

There is a considerable element of research in my work: the nature of KTP projects by design. The hydrodynamic problem central to this project – air lubrication of ship hulls to reduce frictional resistance – hasn't been studied extensively in the past. The use of artificial intelligence in the maritime industry is still in its infancy. Some research is required to develop a solution which isn't

unlike doing a PhD. Managing the project and communicating ideas and results verbally and in writing are also areas in my professional career that correlate strongly with my PhD studies.

**Does obtaining a PhD provide more job opportunities or broaden professional horizons?**

I do not think there is a "one-size-fits-all" answer to this question, as it depends on many factors, including the field of study, industry and region. However, I firmly believe that obtaining a PhD gives you knowledge and expertise and teaches valuable skills that are desirable to hiring managers.

For PhD graduates looking to move into the industry, this can be a big step. Having experienced this and the KTP setup, I would highly recommend considering doing a KTP project to anyone who wants to transition from academia to industry slowly.

**What sort of skills did you develop in your PhD studies, and which one of them would you rate as the most and the least useful?**

The PhD has taught me various skills. The one I find most useful at work and in my personal life is problem-solving and thinking creatively to come up with solutions.

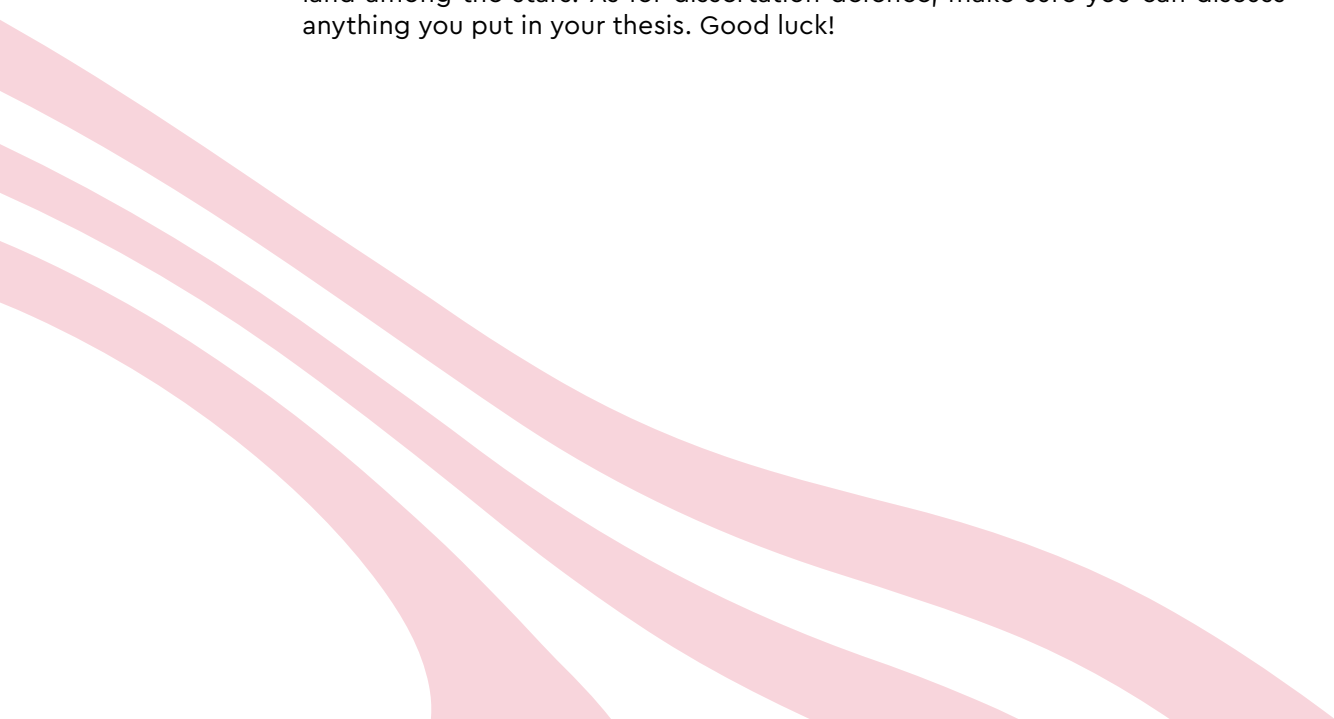
It also taught me how to manage and deliver a project effectively, not just the PhD project itself but also the full-scale testing campaign that formed a large part of my PhD work. I was responsible for managing all aspects of the project, including writing the test specification, managing time and budget, specifying and purchasing equipment and liaising with the stakeholders (PhD supervisors, boat operator, and project sponsor).

The PhD also helped me develop my communication skills. I produced regular reports for my degree and research sponsor; wrote a successful doctoral thesis and several conference and journal papers; presented papers and gave talks at various conferences and events to a wide range of audiences.

These are the three most valuable skills I acquired from my doctoral studies, which are very important in my current role. I do not think any skills that I learned in my PhD studies are not helpful.

**Would you like to share a message with current doctoral students about the challenges of completing both a doctoral thesis and a dissertation defence?**

Have a clear plan and spend time defining the question you want to answer rather than jumping straight into answering the question. I find that this helps me a lot, particularly when I get stuck. Also, be ambitious with the research questions – as the saying goes: shoot for the moon. Even if you miss, you will land among the stars. As for dissertation defence, make sure you can discuss anything you put in your thesis. Good luck!





Christopher Cousin

## Aligning your professional skills to the market

**Christopher Cousin holds qualifications related to The Environment, Agriculture and Fisheries. These three subjects intertwine at various points. He has read for a Bachelor with Honors in Fisheries and Aquaculture at the University of Plymouth and proceeded to a Master in Integrated Resource Management from the University of Malta. He obtained his doctoral qualification in law from the University of Plymouth with a thesis entitled "The Governance of Mediterranean High Sea Marine Protected Areas from a Maltese Perceptive."**

### What is your current place of employment, your position and your professional duties?

I currently work at the Environment and Resources Authority (ERA), where I hold the Unit Manager (Thematic) position. I have worked here since 2006, and I held different positions, starting from an Environment Protection Officer, and dealt with various topics ranging from marine and terrestrial environmental issues. Today, I deal with problems focusing on air, noise, radiation, light, and waste. These topics include various tasks such as maintaining an operative air monitoring network throughout Malta, respecting EU and National law obligations, and producing multiple plans and programmes. ERA is the national regulator of the environment and has the mission "to safeguard the environment for a sustainable quality of life."

### Have you worked at any other institution or company before? If yes, describe your work responsibilities at such previous places of work.

Before joining ERA, I worked with other entities. Among these is the Fisheries and Aquaculture Department. Here, I held the position of Chief Fisheries Protection Officer. The primary responsibilities were to ensure that fishing operations were conducted in accordance with the law, maintain regular communication with fishers, and participate in international and regional meetings.

Before changing my career path to environmental-related subjects, I had worked for three years at the National Meteorological Office and then for thirteen years with the national airline – Air Malta. Here, I held the position of a Flight Operations Officer. The main tasks were flight planning and flight watch. In short, before each flight left the airfield, I had to ensure that it flew on paper.

### How does your current employment meet your professional expectations?

Before joining the Ambient Quality and Waste Unit, I was at the Biodiversity and Water Unit. In dealing with topics related to marine protected areas (MPAs), I realised, through my participation in regional meetings, that governance, including the establishment of MPAs on the high sea, can be quite a complex task. This has heightened my urge to explore more about this topic to provide my share to this complicated topic rather than just being a receiver. During my studies, I earned a promotion and moved to another unit. While the subject is entirely different, the doctoral studies have induced a modified attitude and approach towards environmental topics. The study gave me technical knowledge and attributes for dealing with problems, attaining deadlines, and working on different areas at any time. While I am currently satisfied with my job, this does not imply that I would not consider changing it to work on the topic I researched during my PhD.

**What brings you most satisfaction in your current job?**

Ambient quality is a topic of concern to most people. It deals with issues for which various people show serious regard, noting that these features may affect the quality of life. This is one factor that makes me delve even deeper into these topics. Apart from the anthropogenic factor, the fact that the issues (air, noise, radiation, light and waste) that I deal with are also highly relevant to ensure that the overall natural environment is also maintained in good status, makes it rewarding so that I can also contribute as much as I can towards a sustainable environment.

**Would you be willing to share with us your professional victories and failures?**

My professional career spanned over different years and was also developed while I was engaged in full-time jobs. This made me aware of the practical issues when one deals with the theory and thematic subjects. But there is also the other side to it. Had I started my professional career at an earlier stage in life, I might have achieved the tertiary qualifications at a younger age and, therefore, gained more experience on a specific number of topics.

*(...) I believe that a person who has reached a PhD level would have more job opportunities as long as one can be flexible enough also to consider jobs that are not necessarily related to the topic. This is because an employer would also consider the externalities gained, such as professional skills. Yet, a PhD graduate can also tackle other areas that, in principle, can be related to one's research topic.*

**To what extent does your professional career correlate with your PhD studies?**

Nowadays, I realise that making progress in high education should not only lead to oneself being highly readable in one topic but allow the self to grow. This implies that I have gained skills through my studies such as time management, working under pressure, and achieving targets, among others. All three are attributes that are also essential in managerial positions. I can say that although today I am not dealing anymore with the research topic (marine environmental management), the PhD gave me enough skills to manage a unit that focuses on ambient quality and waste.

**Does obtaining a PhD provide more job opportunities or broaden professional horizons?**

It depends on how one looks at it since work opportunities depend a lot on the job market. In other words, if the market does not demand the topic that one researches, a PhD will not create an employment opportunity. However, nowadays, I believe that a person who has reached a PhD level would have more job opportunities as long as one can be flexible enough also to consider jobs that are not necessarily related to the topic. An employer would also consider the externalities gained, such as professional skills. Yet, a PhD graduate can also tackle other areas that, in principle, can be related to one's research topic.

**What sort of skills did you develop in your PhD studies, and which one of them would you rate as the most and the least useful?**

As expected, the knowledge gained regarding the topic was immense. But apart from thematic knowledge, a PhD also equips the candidate to discuss the subject from different perspectives and seek possible solutions to identified problems. Yet, apart from thematic aspects, a PhD also broadens one's approach to dealing with issues not necessarily, attributed to the research topic. It also provides the candidate with stamina and the capability to work under pressure when required to do so. Keeping focused, calm, and as much as possible record progress along each year may prove to be essential toward the successful completion of a PhD.

**Would you like to share a message with current doctoral students about the challenges of completing both a doctoral thesis and a dissertation defence?**

The route towards completing a PhD may be extended and, at times, may also embrace difficult times. One should be aware of these possible factors and other factors that may be both external and directly related to the studies so that they do not distract the determination of the PhD candidate. Additionally, allowing oneself to pass through the lows and highs along the course while keeping zealous on the research topic may also be a key to continuing. Excellent knowledge of the research topic and how it can enrich existing studies on the same subject can prove fruitful when defending one's work.







Simeon Deguara

## Experimental design and commercial application

**Simeon Deguara, PhD, obtained his doctorate at the University of Stirling in 1998. He studied the Use of Enzymes in Gilthead Sea Bream Diets, following which he worked as a Project Manager with EWOS. After acting as an Aquaculture Consultant to the Government of Malta, he took the position of Research (now CRO) Director at ABT Innovia. He has also held the position of Quality Assurance Coordinator at MFF Ltd and is a Visiting Lecturer at the University of Malta.**

### **What is your current place of employment, your position and your professional duties?**

I have been involved with the AquaBioTech Group since 2002. I am currently employed as the CRO Director (previously Research Director) at ABT Innovia (based in Malta), the wet-lab research division of the AquaBioTech Group. ABT Innovia is the largest privately owned and independent aquatic research facility (the facility is GMP and GLP certified) in Europe, carrying out contractual industrial research in various aquatic fields, including fish nutrition, hatchery technology, fish health and production techniques. My role at ABT Innovia includes the macro-level management and scientific oversight of the facility and the design, coordination, and reporting of the research conducted. I also provide consultancy advice as part of AquaBioTech Group's international consultancy work on research and feed production-related projects. The position offers a tremendous opportunity to liaise with scientists from all over the world and contribute to the latest R&D being carried out by major international players involved in the aquaculture industry.

### **Have you worked at any other institution or company before? If yes, describe your work responsibilities at such previous places of work.**

As Project Manager with EWOS, an international salmon feed-producing company with activities in the UK, Norway, Canada and Chile, my work included the development, preparation, organisation and running of experiments designed to improve the performance of EWOS's feeds and investigate aspects of fish quality. My main research areas were fish meal and fish oil replacement, with related topics such as amino acid requirements. As an Aquaculture Consultant to the Government of Malta, my duties involved general management of personnel and facilities within the National Aquaculture Centre and the design and running of nutritional experiments and analysis for and in collaboration with the local industry and internationally based companies. During my time at MFF Ltd in Malta, I ran the HACCP plan and set up ISO 9001 and ISO 22000 within the company. My role also encompassed management of all the documentation related to the biology and harvesting of the stock of the farms. I still act as the R&D Coordinator for the Federation of Maltese Aquaculture Producers, which involves, amongst other things, attending ICCAT meetings and carrying out research and data analysis related to farm management, stock management and quality assurance. I am also a Visiting Lecturer at the Department of Biology of the University of Malta.

### **How does your current employment meet your professional expectations?**

In the position I currently hold, I am in continuous contact with scientists worldwide, working on products and projects in many fields of application in the

aquaculture industry. Since I cannot go into details about the products we test due to client confidentiality, it is difficult to describe the details of the type of research we carry out. In other words, whilst very demanding and challenging, it does meet my professional expectations.

**What brings you most satisfaction in your current job?**

As answered in the previous question, this is an excellent opportunity to discuss science with experts in their fields whilst discussing research projects, which can be as long as a few weeks to many years.

**Would you be willing to share with us your professional victories and failures?**

Being involved in many projects with different scientists and clients is in itself a success and rewarding. There is also great satisfaction when the research achieves its objectives and eventually comes onto the market as a commercially viable product. From a scientist's perspective, the disadvantage is that due to the confidential nature of the research, we cannot publish the results of the scientific research we carry out.

**To what extent does your professional career correlate with your PhD studies?**

My job position fits in very well with the scope of my PhD studies which revolved around using supplementary enzymes in commercially applicable fish feeds. Whilst some of the research carried out is very similar, and the variety of research carried out at ABT Innovia is broader in scope than this; the approach to experimental design and implementation with a commercial application has served me well in my interactions with other scientists who are themselves looking to commercialise products and technologies. Since the beginning of my PhD studies, the commercial realities (related to, for example, the scale of production and technical limitations) have been an essential part of the discussions about trial designs and eventual product commercialisation.

*My job position fits in very well with the scope of my PhD studies which revolved around using supplementary enzymes in commercially applicable fish feeds. Whilst some of the research carried out is very similar, and the variety of research carried out at ABT Innovia is broader in scope than this; the approach to experimental design and implementation with a commercial application has served me well in my interactions with other scientists who are themselves looking to commercialise products and technologies.*

**Does obtaining a PhD provide more job opportunities or broaden professional horizons?**

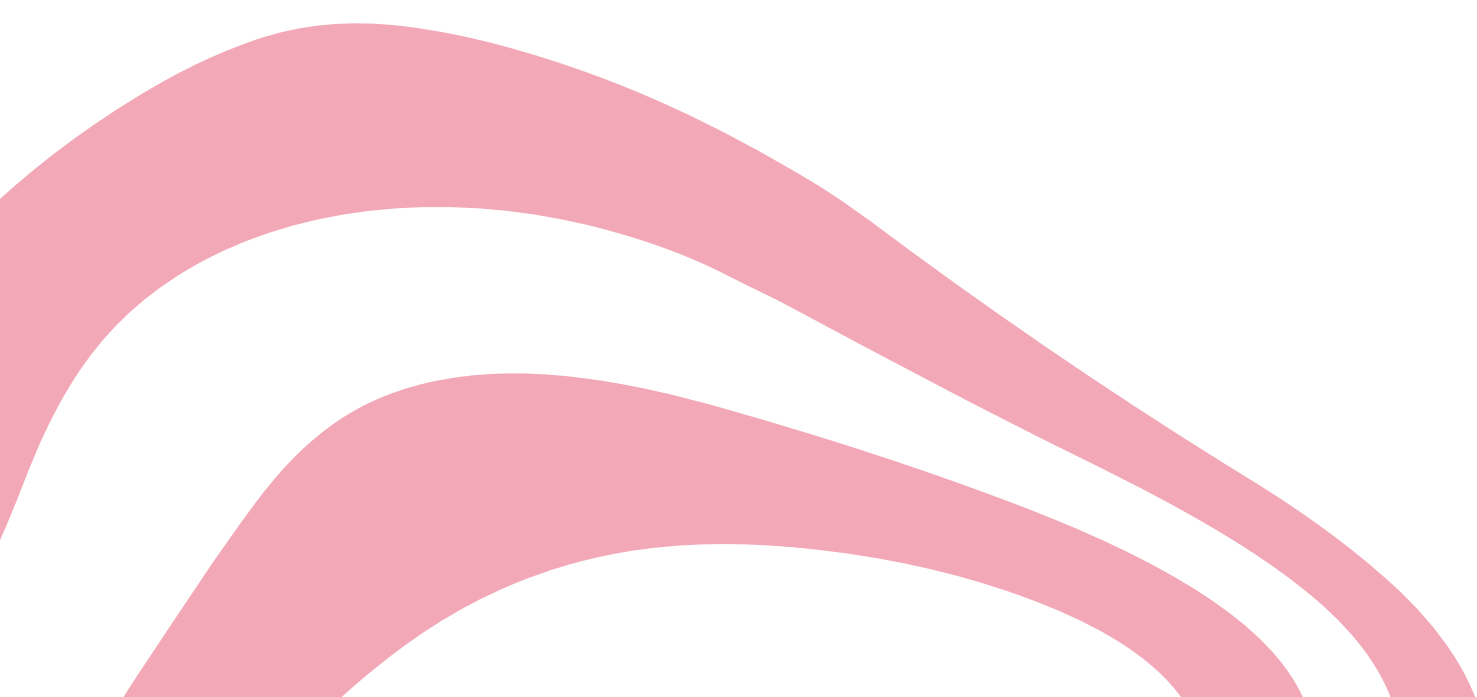
The nature of my PhD studies was commercially oriented from conception since, within my study area, it was possible to go deeper into specific aspects of enzyme use. In my case, my longer-term objectives were always the more comprehensive commercial application in the aquaculture industry at the manufacturing level and practical use on the farm. By taking this approach, I feel that I was (at the time I graduated at least) at an advantage when applying for positions within production-focused companies. However, I was probably disadvantaged should I have been attempting to enter Academia.

**What sort of skills did you develop in your PhD studies, and which one of them would you rate as the most and the least useful?**

Apart from knowing my subject area well, focusing on the practical requirements of experimental design, especially when dealing with live animals, has been an essential skill acquired during my PhD. Needless to say, sound project management skills (e.g. organisational, time management, prioritisation, data acquisition, analysis and interpretation) are needed from the moment a new trial is being discussed to final data analysis, report writing and presentation. Good communication skills are essential from the beginning (i.e. during initial discussions to ensure a clear understanding of the objectives and how best to reach these objectives, trial execution, and eventually reporting in whatever form that may take). Some lab skills I acquired during my PhD are probably redundant now that more automated equipment is available (faster and more accurate). I did not find it difficult settling into my first job just after graduation as it involved Project Management of trials similar to the research I had carried out in my PhD.

**Would you like to share a message with current doctoral students about the challenges of completing both a doctoral thesis and a dissertation defence?**

I would expect anybody choosing to go for a PhD to have made a conscious choice that this is something they really want and not simply do it because 'everybody else is doing it' or 'why not'. Make sure you know the literature inside out and can quote multiple papers off the top of your head. But be critical of the same papers you are quoting if needed, as this should improve your work. If taken seriously, it will probably not be easy (which doesn't mean it won't be fun), but it can be a very rewarding and fulfilling career choice, and with your work, you can make a difference in your field.





Mark Dimech

## Sharing my knowledge and experience with others

**Mark Dimech, PhD, is an independent fisheries consultant with experience as a researcher and supervisor at the University of Malta. Locally, he also worked at the Ministry for Agriculture, Fisheries, Food and Animal Rights. Last year, he finished a two-year implementation project in Turkey related to stock assessment in fisheries activities. He is currently halfway through another project in Mozambique, where he provides technical assistance to develop the aquaculture sector. As he advanced in his career, Dr. Mark Dimech worked as part of the European Commission monitoring/research activities framework. He also provided stock assessment-related studies to the Food and Agriculture Organization.**

### **What is your current place of employment, your position and your professional duties?**

Since 2019, I have worked as an independent fisheries consultant for various entities, including universities, NGOs, Governments, International Organizations and Private Companies. From November 2019 to September 2021, I coordinated the European Project "Implementation of Stock Assessment in Fisheries Activities in Turkey". From November 2020 to December 2023, I am managing the Norwegian-funded project "Technical Assistance for Developing the Aquaculture Sector in Chokwe – Mozambique".

### **Have you worked at any other institution or company before? If yes, describe your work responsibilities at such previous places of work.**

I have worked as a researcher and supervisor at the University of Malta, supervising students in Fisheries, including population dynamics and stock assessment. I have worked for five years as a Fisheries Resources Manager at the Ministry for Agriculture, Fisheries, Food and Animal Rights, coordinating projects related to small scale artisanal fisheries, fisheries statistics and data collection, stock assessment, socio-economic aspects and ecological impacts of fisheries.

I have worked extensively within the European Commission monitoring and research activities framework, the FAO General Fisheries Commission for the Mediterranean (GFCM), and the International Commission for the Conservation of Atlantic Tunas (ICCAT). I have served regularly as an expert at the European Scientific and Technical Economic Committee for Fisheries (STECF), acting as Chairperson for several EU Fisheries Working Groups, including those of the International Council for the Exploration of the Sea (ICES), and was a focal point for several EU funded research projects, where I published several research papers. Within the framework of the STECF and the FAO GFCM, I have conducted several stock assessments and stock assessment-related studies.

From 2010 until 2019, I worked with the Food and Agriculture Organization of the United Nations (FAO), with the Fisheries and Aquaculture Department as a Fisheries officer, where I coordinated several FAO Inter-Regional Projects in Europe, North Africa, the Middle East and Sub-Saharan Africa on Fisheries data collection, Stock Assessment and Fisheries Management. With FAO, I have worked in these specific countries: Bahrain, Egypt, Eritrea, Palestine, Ivory Coast, Lebanon, Oman, Syria, Turkey, Tunisia, South Africa and the United Arab Emirates. I have worked extensively with FOA on developing Fisheries Management Plans according to the FAO Ecosystem Approach to Fisheries Management (EAFM).

### **How does your current employment meet your professional expectations?**

I am an independent consultant, and it serves me well, as I am quite independent with my job and personal life, managing my own time.

### **What brings you most satisfaction in your current job?**

Working with different countries and nationalities. The aid business, where I work with developing countries, also gives me satisfaction.

### **Would you be willing to share with us your professional victories and failures?**

United Nations Officer for nine years. With the Food and Agriculture Organisation of the UN. I achieved the highest grade in my profession, a Senior Fisheries and Aquaculture Office, at a relatively young age, 41. I was promoted to FAO representative for the UAE in my last year, equivalent to an ambassador.

### **To what extent does your professional career correlate with your PhD studies?**

My PhD has served me exceptionally well, as my job was very technical. I could use all the knowledge and experience I gathered during my PhD to develop my skills and then pass it on to the people of the countries I have been working with.

### **Does obtaining a PhD provide more job opportunities or broaden professional horizons?**

Yes. A lot of opportunities in my case since, in the aid business, many developed countries are providing aid to developing countries worldwide. However, one has to have the aptitude for working in such countries, which can be quite tricky if one is used to the living standards in developed countries.

### **What sort of skills did you develop in your PhD studies, and which one of them would you rate as the most and the least useful?**

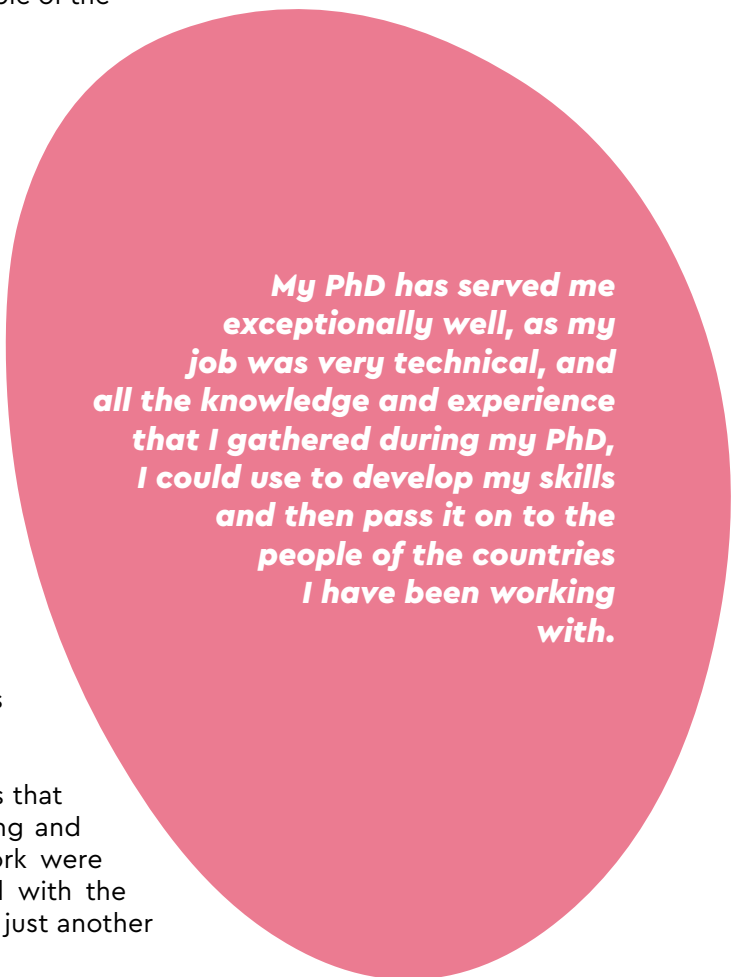
All of these are useful:

- Fundamental scientific knowledge.
- Statistical analysis
- Lecturing and presentation skills
- Writing skills
- Program management
- Socio-economic aspects, which were essential for me coming from a background in natural sciences
- Logical thinking
- Planning

The least useful, I might say, is writing scientific papers that serve academic purposes. The skills related to planning and designing an experiment as part of the scientific work were quite helpful. I did my PhD full-time while employed with the government, so there was no transition. For me, it was just another project that I had to do outside of office hours.

### **Would you like to share a message with current doctoral students about the challenges of completing both a doctoral thesis and a dissertation defence?**

Never give up! Even if it takes years! It is an investment in yourself that no one can take away from you and will provide huge rewards!



*My PhD has served me exceptionally well, as my job was very technical, and all the knowledge and experience that I gathered during my PhD, I could use to develop my skills and then pass it on to the people of the countries I have been working with.*



Edward Sciberras

## How my role aligns nicely with my PhD work

**My interest in marine engineering started when I participated in a summer traineeship at Malta Shipyards during my third year at university. I graduated in Electrical Engineering from the University of Malta in 2009 and then furthered my studies with a Master's degree in marine engineering at Newcastle University. Between 2011 and 2016, I was a researcher at Newcastle University, working on projects concerned with shipboard power systems. This was the topic of my PhD study, which I completed in 2016. Since then, I have been employed as a research engineer at Damen Shipyards in the Netherlands.**

## What is your current place of employment, your position and your professional duties?

I have worked as a Research Engineer at Damen Shipyards for the past five years. I am part of the Electrical & Automation research team. We focus on onboard power systems. My work here involves researching novel concepts for our ships and providing project support for ongoing vessels. This role aligned nicely with my PhD work and felt like a natural fit for my interests where I wanted to focus on marine electrical engineering.

## Have you worked at any other institution or company before? If yes, describe your work responsibilities at such previous places of work.

Before working at Damen, I worked at universities in a research role. Here I have mostly worked on projects concerned with the modelling of electrical systems, and I was able to run my work on a day-to-day basis and liaise with project partners.

## How does your current employment meet your professional expectations?

Working in the industry means that research projects are efficient and closely linked to implementation. Shipping is under swift and constant evolution. Thus, research work in electrification is very much in demand, and the final results are fast-paced. This means that I am involved in state-of-the-art projects. Moreover, I can also be at the heart of the designs and follow throughout the entire implementation process to completion.

## What brings you most satisfaction in your current job?

My work in a shipyard research context involves a lot of applied engineering where keeping a broad picture in mind is required, with the need to focus on complex topics where needed. This means that there are always new things to be discovered, and the multi-disciplinary nature of marine systems implies that collaboration with colleagues to figure out things together makes for a great atmosphere. The projects themselves are also challenging, and being involved from design to trials gives a very satisfying sense of completion.

## To what extent does your professional career correlate with your PhD studies?

My current job correlates quite well with my PhD study. I do not work on my PhD project. However, the topic is very well aligned. My study helped me prepare a lot of the required background knowledge and have a broad industry outlook. I wanted to specialise as a marine electrical engineer, and I see my current role as a good fit in my progression.

**Does obtaining a PhD provide more job opportunities or broaden professional horizons?**

Obtaining a PhD puts you in a research mindset and thus helps you fit into a more senior role in a research environment. The marine industry needs a lot of research and innovation, so opportunities are certainly there. This is both within an industrial context and at research institutes. There is a large degree of collaboration between the two, so one can still maintain a good relationship with either side. Another benefit of doctoral studies is that the networks and contacts established can help find opportunities.

**What sort of skills did you develop in your PhD studies, and which one of them would you rate as the most and the least useful?**

I think one of the most valuable skills has been the dissemination aspect of my studies. This includes presenting, debating, networking and basic reporting. Conferences were crucial, allowing you to submit your work and meet other researchers interested in your field. This proved excellent practice in dissemination and academic socialising – things that are useful daily.

The fundamental scientific knowledge gained during the PhD is probably the least critical aspect of the studies now (seen with hind-sight!). I found the methodology, mindset, and approach to performing research is perhaps more relevant. This also includes a general awareness of the resources available and where to start looking for information on a new topic! The more drastic change from PhD to employment is the broader diversity of tasks required since the focus is no longer on a single project. This can make project management of your work a bit more challenging.

*I have been working as a Research Engineer at Damen Shipyards for the past five years. I am part of the Electrical & Automation research team, and I focus on onboard power systems. My work here involves researching novel concepts for our ships and providing project support for currently ongoing vessels. This role aligned nicely with my PhD work and felt a natural fit to my interests where I wanted to focus on marine electrical engineering.*

**Would you like to share a message with current doctoral students about the challenges of completing both a doctoral thesis and a dissertation defence?**

Say yes to any opportunities that come along as you do not know what they might bring.



Daniel Sultana

## **Aligning your professional skills to the market**

**Daniel Sultana, PhD, started his career overseeing the disposal of materials. Eventually, he started working for an oil and gas company in Scotland. Today, he is employed at Junior College, a further education college in Malta which prepares students for the Matriculation Certificate. He also supports the Environment Resource Authority, where he began as an Assistant Officer and gradually got promoted to a Senior Officer grade. Apart from working on the United Nations Convention to Combat Desertification (UNCCD), he also reviews and provides technical reports on geology, geomorphology, and hydrology.**

### **What is your current place of employment, your position and your professional duties?**

I work full-time at Junior College, where I teach students. Additionally, I work part-time at the Environment Resource Authority — the leading public body that allows competent Officers significant responsibility on interesting environmental dossiers. I started as an Assistant Officer. Eventually, I was promoted to Officer and Senior Officer. For the past eight years, I have focused on the United Nations Convention to Combat Desertification (UNCCD) by developing strategies to achieve land degradation and neutrality. I also review and provide technical reports on geology, geomorphology and hydrology.

### **Have you worked at any other institution or company before? If yes, describe your work responsibilities at such previous places of work.**

I was briefly employed at PT Matic (a company that forms part of Alberta Group), managing hazardous waste. More specifically, I was responsible for overseeing the disposal of materials like batteries and asbestos. I was also employed in an oil and gas company in Scotland. My role was to extend the life of an onshore oil and gas field. As per above, I started teaching students at the Junior College and working on the UNCCD at the Environment Resource Authority.

### **How does your current employment meet your professional expectations?**

Considering that I work on geology, geomorphology and hydrology, I had the opportunity to apply the academic insight I have gained in a practical way. Over time, I also started understanding better national and international policy in various thematic areas. By reviewing technical proposals, I found skills like critical thinking very beneficial. My main focus is to contribute to the countries moving towards higher standards.

### **What brings you most satisfaction in your current job?**

I enjoy finding practical solutions to various current and future environmental issues. It is interesting because we help guide the strategy of the country. The outcomes that we develop take environmental, social and economic considerations. As a result, we work in teams of officers with different expertise. Furthermore, I also enjoy travelling to international meetings and contributing towards various European Union and United Nations obligations. Since we are a member state, we get exposed to large portfolios.

### **Would you be willing to share with us your professional victories and failures?**

I am satisfied with the way my career at the Environment Resource Authority. Since we are a small member state with relatively few technical experts, we



still have to abide by many directives. If an Officer puts in the proper amount of work, one can be assigned significant and interesting tasks (particularly with respect to directives by the European Union). I would also like to take the opportunity to encourage people to work while studying.

**To what extent does your professional career correlate with your PhD studies?**

My PhD studies were about geology and numerical modelling. As highlighted earlier, my work at the Environment Resource Authority is directly related to both fields.

**Does obtaining a PhD provide more job opportunities or broaden professional horizons?**

Yes, if you are willing to work at a rate as if you do not have a PhD. When you have a PhD, you should not dismiss any job. Students should also be aware that having a PhD will not affect their hourly rate since it is difficult to get it. When I hire certain people, I first look at the quality of their work. Of course, one would expect that the higher the qualification, the higher the quality of their work.

**What sort of skills did you develop in your PhD studies, and which one of them would you rate as the most and the least useful?**

It was seamless since I worked with the Environment Resource Authority before starting the PhD and continued the following completion.

During my PhD, I learnt how to improve my:

1. Writing Skills: By being able to write clearly and concisely
2. Research Skills: By knowing how to look further into new things
3. Time Management Skills: By being efficient with the use of my time
4. Partitioning Skills: By learning that you have to switch mind frames
5. Learning Skills: By understanding the benefit of life-long learning.

**Would you like to share a message with current doctoral students about the challenges of completing both a doctoral thesis and a dissertation defence?**

PhDs require a lot of time. Moreover, you will likely continue to work on the same or related subject for the rest of your professional life. Make sure you choose a topic you are passionate about and for which there is or shall be a demand.

*Considering that I work on geology, geomorphology and hydrology, I had the opportunity to apply the academic insight I have gained in a practical way. Over time, I also started getting a better understanding of national and international policy in various thematic areas. By reviewing technical proposals, I found skills like critical thinking very beneficial. My main focus is to contribute to the countries moving towards higher standards.*



Marie Louise Zammit Pace

## **A social perspective through stakeholders**

**Marie Louise Zammit Pace, PhD, a Maltese National currently living in Tarxien. She was awarded a doctoral degree in Geography from the University of Portsmouth in May 2021. Her doctoral dissertation, entitled 'A critical analysis of beach management systems and processes on the Maltese Islands', focusing on public and essential stakeholder perceptions, was completed under Dr Jonathan Potts, PhD and Dr Caroline Day, PhD.**

### **What is your current place of employment, your position and your professional duties?**

For the past three years, I have been working at the Environment and Resources Authority (ERA), the Maltese national environmental regulator. I currently hold the position of an Environment Protection Officer in the Environmental Assessment Unit. My job is to screen and assess significant development projects at the planning stage to determine if they will substantially impact the environment and require an Environmental Impact Assessment (EIA), an Appropriate Assessment (AA), or both. When an EIA or an AA are necessary, I conduct consultations internally within other ERA units and with the relevant stakeholders and the public to collect the required information. Such talks occur during the scoping stage, where the Terms of Reference of that particular project are compiled during the EIA/AA review. Once the EIA/AA process ends, the findings of such studies and ERA's position (if in favour or objection) are presented to the ERA's board, where the final decision on the proposed development is taken.

### **Have you worked at any other institution or company before? If yes, describe your work responsibilities at such previous places of work.**

As soon as I finished my Master in Geographic Information Science degree in 2010 from University College London (UCL), I found a job as a Project Officer with the Department of Fisheries and Aquaculture back in Malta. I managed the technical and financial parts of an EU FP7 project called MESMA (Monitoring and Evaluation of Spatially Managed Area). I also assisted in developing a set of management tools for spatially managed areas, including models, maps, databases and indicators. I was also responsible for the Department's Geographic Information System (GIS) database, where I plotted and managed spatial maps related to fishing activities. After four years, I was promoted to Manager (Research Projects), where I was responsible for various EU-funded projects such as MANTIS (Marine Protected Areas Network: Towards Sustainable fisheries in the Central Mediterranean), LIFE + Bahar for N2K (Benthic habitat research for Marine NATURA 2000) and MAREA (Mediterranean hAlieutic Resources Evaluation and Advice). Due to these projects, I could participate in conferences and workshops both locally and internationally and share Malta's fisheries experiences with other Mediterranean countries. I also continued to be responsible for the Department's GIS system.

### **How does your current employment meet your professional expectations?**

Living almost my entire life on a small island where beaches are only a couple of minutes away from home awakened my interest in the subject. Working with the Fisheries and Aquaculture Department allowed me to work in the marine industry. However, I have always wanted to do something about the beaches and tourism industry. I started my PhD in beach management while working at the Fisheries

***My PhD research focused on the public and stakeholders' perception of beach management. By including a social perspective, one would enhance their knowledge and understand the way the people out there (who will make use of that type of resource) think. (...)The knowledge I gained while studying my doctoral dissertation helped me understand the importance of including the stakeholders and practising this skill at work.***

Department. Still, I then moved on to ERA, where I got the opportunity to practice my skills in a much broader environment, including both the terrestrial and marine areas.

**What brings you most satisfaction in your current job?**

My current job allows me to assess the impacts a proposed development will likely have on the environment. In this regard, together with my team, we try to minimise the environmental impact as much as possible by introducing mitigation measures/conditions and sometimes even reducing/amending the proposed project's size. This gives me so much satisfaction as we are like the guardians of the environment where we protect and safeguard our environment for future generations.

**Would you be willing to share with us your professional victories and failures?**

For me, every time we manage to safeguard the environment by either objecting to a proposal that would have otherwise resulted in a significant impact on the environment or implementing conditions or mitigation measures, it is an achievement. The Maltese Islands are the smallest EU member state and so every little thing has an effect directly or indirectly.

With regard to the failures, it is the opposite of what I have just said. Even though the ERA is the regulator of the environment and tries as much as possible to safeguard the background, I feel that it sometimes lacks power in doing so, as the ultimate decision on a project is not taken by the ERA but by another authority, the Planning Authority. In this regard, sometimes, the ERA may object to a proposal from an environmental point of view, but then the Planning Authority overturns the objection. In the future, I would like to see the ERA have the same power and rights as the Planning Authority.

**To what extent does your professional career correlate with your PhD studies?**

My PhD research focused on the public and stakeholders' perception of beach management. By including a social perspective, one would enhance their knowledge and understand how the people out there (who will use that type of resource) think. As mentioned before, during the assessment of major projects, we also consult with the public and stakeholders during the various stages where they can express themselves. The knowledge I gained while studying my doctoral dissertation helped me understand the importance of including the stakeholders and practising this skill at work.

**Does obtaining a PhD provide more job opportunities or broaden professional horizons?**

This is a challenging question, and I think it depends on where one is located and what the PhD was done. For a small island like Malta, job opportunities after obtaining a PhD could be much better. Most of the time, universities offer jobs and better salaries for people with a PhD. However, this is less common in private and government companies. Most jobs do not require a PhD, and in such cases, experience in that particular job prevails.

**What sort of skills did you develop in your PhD studies, and which one of them would you rate as the most and the least useful?**

I did my PhD as a part-time student for over seven years. During those seven years, I worked full-time, got married, and had a child, so I must say that time management and organisation were both fundamental skills to juggle everything simultaneously. In addition, given that part of my research consisted of undertaking questionnaires and semi-structured interviews with people I did not know, it helped me gain confidence in myself and others. At first, it was a bit difficult for me to approach people I did not personally know to interview them, but then as time went by, I gained more confidence and social skills. These skills help me in my day-to-day job, where I meet various applicants, architects, and public members to discuss things with them.

**Would you like to share a message with current doctoral students about the challenges of completing both a doctoral thesis and a dissertation defence?**

Doing a PhD is not an easy task, and there will be times when you ask yourself, 'why did I do it?' but I guarantee you that once this is over, you will be very proud of yourself and what you have achieved. The essential things are to remain focused and remember why you started it in the first place. Completing a PhD is one of the most rewarding achievements and satisfaction as you would have contributed something original to the broader knowledge. Additionally, you would have gained many skills to use daily and at work.



INSPIRING ALUMNI STORIES:  
TESTIMONIALS OF BLUE DOCTORATE HOLDERS



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