



Issue 43 - June 2025

Marie Curie Alumni Association

Newsletter

Sustainable Career Transition Pathway: Bridging Academia, Public Sector, and Industry

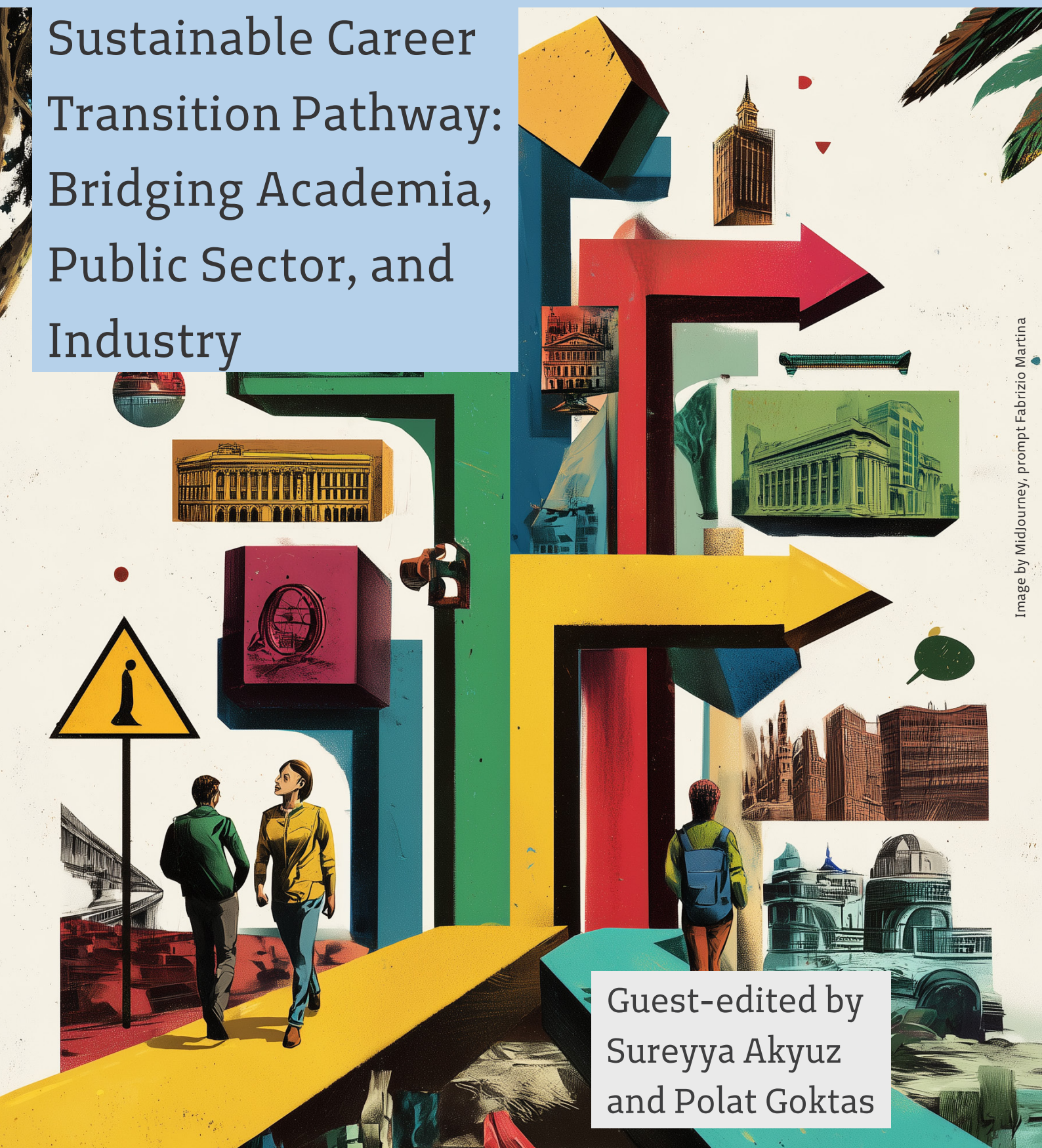


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Table of contents

Message from the Board	4
Editorial	7
Special Issue: Sustainable Career Transitions	
MCAA Academy Mentoring Programme:	
Interview with Pooja Khurana	9
MSCA Industrial Doctorates model: Interview with Sohail Luka	14
MSCA as a bridge between thinking and doing:	
From research to real-world impact	17
Wrong turns, right destination: Research management	20
Research, or there and back again	23
Career trajectories of Marie Skłodowska-Curie Fellows	
across sectors	26
Dealing with the PhD degree mindfully to ensure employability	30
From bench to boardroom: Lessons from a non-linear career	33
Bridging entrepreneurship, academia, public sector,	
and industry – Personal transition	36
Spatiotemporal modelling for rainfall forecasting:	
using social media data to support sustainable career	39

News from the MCAA

Slow science to move forward?

Rethinking science policy and research careers **42**

PROHITS: Unlocking the potential

of thermophiles for a sustainable future **46**

Advertorial

Galicia, a growing R&I ecosystem, welcomes MSCA talent **49**

Accessibility Statement **51**

Editorial information **52**

Message from the Board

Dear MCAA Members,

We hope this message finds you well.

As we enter the second half of the year, we're excited to share with you this Special Edition of the MCAA Newsletter, centred on a theme that resonates strongly with our mission: **Sustainable Career Transition Pathway: Bridging Academia, Public Sector, and Industry.**

At the core of the Marie Curie Alumni Association lies a deep commitment to empowering researchers across disciplines, countries, and career stages. This edition reflects that commitment by exploring how our members navigate diverse, non-linear career trajectories. Researchers today need support, flexibility, and visibility as they move beyond traditional academic paths. That's why this issue showcases alumni experiences, institutional insights, and initiatives that contribute to building resilient and impactful careers across sectors.

Our vision of a research ecosystem that is open, inclusive, and socially engaged is reflected in everything we do: from advocacy to mentoring, from webinars to global collaborations. We sincerely thank all contributors to this edition for helping highlight how these transitions are not only individual milestones but also essential to strengthening Europe's knowledge economy.

News from Our Community

Launch of the CSA CAPTAIN

We are proud to announce the signing of our new Coordination and Support Action, CAPTAIN, the primary vehicle through



which the European Commission supports the core functioning, development, and professionalisation of the MCAA. It is also the key funding instrument behind our upcoming activities.

With CAPTAIN's support, the **Call for Chapter & Working Group (C&WG) Activities is now open**, funding initiatives through March 2026. We encourage Chairs of C&WGs to apply and join the upcoming information sessions.

Strengthening Advocacy and Science-Policy Networks

MCAA has been accepted as an associate member of [YASAS](#) (Young Academies Science



Advice Structure), marking a significant milestone that strengthens our voice within Europe's science-for-policy networks. Additionally, we are also excited to announce two key developments in our policy engagement: we have published strategic recommendations on the [Multiannual Financial Framework](#) and the [Choose Europe](#) initiative, advocating for increased investment in mobility and talent attraction.

MCAA Academy Mentoring Programme

Our first thematic mentoring programme, Careers in the Public Sector, launched in May, connecting mentors and mentees for six months of guided growth and professional development. Within the MCAA Academy, our Association offers the General Mentoring Programme, where a growing community of members actively connects, shares experiences, and supports each other's professional journey. [Join here](#) to be part of the programme and stay informed about future opportunities.

Around the World Webinar Series – Back in 2025!

We're pleased to relaunch our Around the World Webinar Series, which brings together members and experts to discuss pressing global research topics. The last session, organised by the MCAA Communication

Working Group, took place on 27 June and focused on the future of health research in the EU. Don't miss the opportunity to follow this initiative in the future!

Recent Engagements and Representations

MEDNIGHT Gala – Celebrating Gender Equality and Mediterranean Science

On 14 March, in Brussels, Vice-Chair Joaquín Capablo and Board Member Virginia H. Albarracín had the honour of representing the MCAA at the MEDNIGHT Gala, a powerful celebration of Mediterranean research, women in science, and institutional gender equality efforts. The event featured inspirational contributions from figures such as European Commissioner Ekaterina Zaharieva, member of the European Parliament Lina Gálvez Muñoz, and from the European Women Rectors Association Gülsün Sağlamer, alongside representatives from Marie Skłodowska-Curie Actions (MSCA). During the Gala, awards were presented to outstanding women scientists and universities that lead diversity and inclusion programmes.

Horizon Europe Showcase

Secretary Maria Magdalena Razalan represented MCAA at the UK Research Office Horizon Europe Showcase in London on

18 March, celebrating the first year of the association, bringing visibility to Marie Curie alumni, and reinforcing our commitment to thriving European research collaborations.

Erasmus Mundus Association (EMA) Annual Conference

On 15–17 May, the MCAA participated in the EMA Annual Conference and General Assembly in Paris, which gathered participants from over 40 countries. Our Treasurer, Pablo Bazilinsky, contributed to key discussions on the evolving role of education, technology, and community in shaping international researcher development and collaboration.

Board Meeting in Helsinki & Launch of the Finland Chapter

On 7–8 June, the MCAA Board met in Helsinki, Finland, for a hybrid meeting focused on shaping the long-term planning and overall strategy of the Association. A major milestone during this visit was the official launch of the MCAA Finland Chapter, which brings new energy and vision to our growing global network. We thank all local members who participated and express our sincere appreciation to Success Clinic for hosting us.

SAM Conference on Science for Policy

On 26–27 May, the Austrian Academy of Sciences in Vienna hosted the 2025 edition of the Scientific Advice Mechanism (SAM) conference, titled Building bridges: Shaping Europe's science-for-policy landscape. Our Executive Director Mostafa Moonir Shawrav engaged early-career researchers in science policy and moderated a roundtable on EU science diplomacy.

These activities illustrate our continued efforts to support researchers in motion, amplify their voices, and strengthen the connections between science and society. We encourage all members to get involved, whether by sharing your story, attending an event, or initiating a new idea, and help us shape a more inclusive, resilient research ecosystem.

Thank you for being an essential part of the MCAA.

Warm regards,

Virginia Helena Albarracín   

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Editorial

Dear MCAA colleagues and members,

It is our privilege to share this June 2025 Special Issue of the MCAA Newsletter, dedicated to a theme at the very heart of what our community stands for: **enabling researchers to navigate sustainable, fulfilling, and sometimes unexpected career pathways that bridge academia, industry, and the public sector.**

Across all the stories you will read in this issue, whether about mentoring, Industrial Doctorates, research management, open science, or personal tales of moving from bench to boardroom, one message is clear: careers in research are no longer defined by a single institution or linear ladder. Instead, they are living journeys that adapt, respond, and evolve in dialogue with global challenges, emerging opportunities, and the changing needs of our societies.

Why this theme now?

As MSCA alumni, we know first-hand that the research world today demands mobility, resilience, and openness. We also know these



Photo by Polat

qualities are not built alone. While moving between sectors can be deeply enriching, it is also a leap into the unknown for many, a moment when practical guidance, solidarity, and a community that understands the value of non-linear growth make all the difference.

Mentoring as a bridge

One highlight of this issue is our in-depth interview with MCAA Career Development Manager Pooja Khurana, who has designed and coordinated the **MCAA Academy's new pilot mentoring track**: Careers in the Public Sector. This initiative is more than a pilot; it is a signal that our community is listening to the evolving needs of our members and investing in targeted, structured support where it is needed most. In the interview, you will read how the mentoring pilot combines personal commitment, thoughtful design, and collective effort to help current and former MSCA fellows step confidently into roles that serve the public good.

This mentoring is not a checkbox but a living practice grounded in equity, reciprocity, and the simple but powerful idea that shared experiences can guide, strengthen, and empower.



Photo by Sureyya

Stories that challenge the single story

Alongside this feature, you will find reflections from alumni who crossed borders, not only geographically but also professionally. Some moved from research labs into consultancy and back again, discovering that skills like clear communication, critical thinking, and resilience travel remarkably well. Others stepped into policy advising, data science leadership, science communication, or the start-up world, sometimes by design, sometimes by surprise, but always with lessons worth sharing.

You will read about the Industrial Doctorates model, reminding us that bridging academia and non-academic sectors can and should begin as early as doctoral training, co-creating value for researchers, industry, and society alike. You will meet colleagues who found purpose in research management, turning what once seemed an accidental career step into a fulfilling vocation that sustains the research ecosystem behind the scenes.

These stories are not just inspirational anecdotes. Together, they point to a bigger truth: that the richness of research impact is magnified when people bring ideas across boundaries, translating scientific insight into policy, industry, community initiatives, and public dialogue.

Shared challenges, shared responsibility

This issue also acknowledges that moving between sectors is not without its obstacles. Cultural barriers, funding gaps, institutional inertia, and precarious contracts still hinder many who would otherwise bring their knowledge where it is needed most. The data and policy reflections here show that tackling these barriers requires collective will, from

institutions, funders, networks like the MCAA, and each of us as individuals.

An invitation to shape what comes next

We share these articles because they show what is possible. But they are also an invitation: to ask how we as a community can expand the spaces where mentoring, peer support, and cross-sector mobility flourish. How can we normalise non-linear careers, celebrate diverse success stories, and design systems that make it easier, not harder, for researchers to adapt their skills to the world's urgent needs?

If you have ever wondered whether a change in direction means losing your identity as a researcher, this issue offers many gentle reminders: your training, curiosity, and commitment do not disappear when you step into a new environment; they grow. And when we connect, support, and mentor each other, we all grow stronger.

We hope you find insights here that inspire you, reassure you, and remind you that you are not alone on the path, whatever shape that path may take. May this issue encourage you to mentor, ask for support, share your next step, and keep building bridges between sectors, ideas, and each other.

On behalf of the Guest Editors,



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Special Issue: Sustainable Career Transitions

Photo by Pineapple



MCAA Academy Mentoring Programme: Interview with Pooja Khurana

Alongside this, Pooja advocates for menstrual equity and mental health in academia, areas too often overlooked but deeply tied to the researcher experience. For her, creating supportive, inclusive environments in research isn't just work — it's a commitment shaped by personal experience and a belief in what research culture can become.

Pooja Khurana is a former academic and MCAA alumna, who currently serves as the Career Development Manager at the MCAA. Having navigated research systems across India, Germany, the UK, and the US, she is well aware of the challenges, particularly for international researchers navigating new environments.

This fuels her passion to build spaces where researchers feel seen, supported, and valued. At the MCAA, Pooja leads initiatives like the Peer Exchange Platform for Narrative CVs ([PEP-CV](#)), the [MCAA Academy](#), and the Coursera-based [learning programme](#), each designed to foster inclusive research cultures, better mentorship and career development. She also works as a project officer for the European Citizen Science ([ECS](#)) project, co-leading the Network of Researchers for Citizen Science ([NR4CS](#)), and volunteers with the MCAA Editorial Board.

Could you introduce the MCAA Academy mentoring system?

The MCAA Academy mentoring initiative supports the MCAA's mission to offer lifelong career development and a supportive network for MSCA fellows. While the Academy platform launched in 2022 for general mentoring, this new pilot, Careers in the Public Sector marks our first thematic programme. I have led the design and coordination, with valuable guidance from Xavier Ronald Eekhout Chicharro (REBECA, EURAXESS Spain), whose insights helped shape a thoughtful, responsive approach.

Within the MCAA Board, I exchanged ideas with the Mentoring Contact Point, Maria Magdalena Razalan and worked closely with Maria Romano, whose feedback was key throughout. I also collaborated with



MCAA

ACADEMY

Mentoring Programme



MCAA Academy Pilot Mentoring Programme Careers in Public Sector

platform developers Aluminati, especially Rebecca Whitton (Client Success), along with Kira Keini and Viktoriya Zoriy from the MCAA Secretariat's Communication Team. It has been a truly collaborative effort, and I am proud to have helped shape something grounded in the real value of mentoring.

What are the main goals or intended outcomes of this mentoring initiative?

This pilot creates a dedicated space for career reflection, especially for those exploring public sector transitions. Many researchers face uncertainty when navigating non-traditional paths, and clear guidance is often lacking. Yet, these paths can be deeply fulfilling. Our diverse MCAA community is well-placed to bridge this gap through shared experiences and mutual learning.

I want this programme to go beyond career advice to foster meaningful connections, empower mentees to take ownership of their goals, and offer a structured way to set expectations and share feedback. It is also about supporting mentors in giving back with intention, creating a reciprocal space for growth.

Who is this programme designed for?

This pilot is designed for current and former MSCA fellows registered with the MCAA who are exploring or pursuing public sector careers. Mentees were selected based on motivation, availability, and alignment with the programme's theme, particularly regarding their current or desired job sector. Mentors were chosen for their public sector experience in policy, research administration, or consultancy, and their willingness to support others through career transitions. Their ability to offer sector-specific insights and foster reflective conversations was key.

How can participating in this mentoring programme support mentees in their career journey?

Mentoring creates space for honest reflection, something often missing in fast-paced academic environments. Mentees gain structured guidance, a trusted sounding board, and personalised insights to help them move forward with more clarity and confidence.

Having made interdisciplinary and international transitions myself, I know how transformative mentorship can be when rooted in mutual respect and a growth mindset.

In this pilot, mentees receive one-to-one support over six months. Both mentors and mentees will have access to curated Coursera courses on public sector careers and personal development, along with themed webinars, community discussions, and cohort-wide activities. To ensure these resources are relevant, we will soon send out a needs assessment to tailor learning opportunities to the cohort's interests.

What can mentors and mentees expect from their participation? If challenges arise, where can participants seek support or guidance?

I am glad you asked. Clear, shared expectations are key to a successful mentorship. Mentors offer guidance and perspective, while mentees take the lead by setting goals and initiating conversations. To support everyone, I have included regular check-ins and shared useful resources like

the induction recording and toolkit. But the real strength lies in the relationship itself — open, honest communication is everything. If challenges come up, and they might, participants can contact me anytime. And since this is a pilot, we're learning together. Feedback, positive or constructive, is not just welcome; it's encouraged with just one request: to share it kindly.

What are the key takeaways for mentees?

Mentees can gain clarity on their goals, confidence in exploring new sectors, especially the public sector, and a better understanding of their strengths. They also learn how to build professional relationships, express their needs, and reflect on their growth — skills that last beyond this programme.

One thing we often overlook is how mentorship helps us practice equity, diversity, and inclusion. It's a personal space where we learn how to listen, communicate boundaries, and see from another's perspective. These aren't just career skills — they're life skills.

Image by Midjourney, prompt Fabrizio Martina



How is the mentor's involvement structured to make a meaningful impact?

While mentees take the lead in setting goals and scheduling meetings, mentors commit to meeting at least four times during the six months, and more if they'd like. They are also asked to complete two short feedback forms based on their sessions.

But more than the logistics, what matters is what mentors bring to the space: their experience, perspective, and humanity. We encourage mentors to co-create goals with mentees and show up as empathetic, honest guides. The real impact isn't about having all the answers; it is about pointing the mentees in the right direction and holding space for them to grow.

How does the mentor-mentee pairing process work? Do mentees have the opportunity to choose their mentor?

The matching process was one of the most important, and time-consuming, parts of setting up the pilot. To ensure the matching was thoughtful and fair, we used mirrored registration questions for mentors and mentees to understand their goals, preferences and expectations while reducing ambiguity and inherent bias in the process.

I built a weighted matrix based on sector, skills focus, and expectations, then added manual checks for roles, equity, diversity, and inclusion (EDI) preferences, time zones, and availability. We also used the Academy platform's matching tool for extra accuracy. While mentees didn't choose their mentors directly, every match was made with care to ensure alignment and shared values.

That said, great mentorship isn't just about similar job titles. Often, the richest insights come from different perspectives, and being open to that makes the experience more meaningful.

Is there a follow-up plan or continued engagement after the initial six-month mentoring cycle?

Oh, absolutely! We are planning closing reflections, feedback opportunities, and hopefully future rounds. If resources allow, I'd love to see this evolve into an alumni network where past participants can connect, support, and inspire each other.

My hope is that this pilot helps grow a stronger mentoring culture in the MCAA and encourages a reshaping of how we recognise and value career and skills development in the long run. This is just the beginning.

Will there be a closing session or follow-up meeting for participants to share feedback and experiences?

Yes! We will hold a reflective closing session in December to share experiences and celebrate the community we've built. The pairs' feedback will be key to shaping and improving the programme moving forward.

The registration deadline has passed. Did the number of applications meet your expectations?

Great question! With over 22,000 members, I thought we might be flooded with responses, especially given the need for this kind of support. Initially, mentor applications were fewer than expected, but after extending the deadline, we received 24 mentee applications and 14 mentors, resulting in 11 carefully matched pairs.

What stood out was not just the numbers, but the generosity behind them. As an ex-academic myself, it was genuinely moving to see members step up with such warmth and willingness to share their time and experience. The enthusiasm confirms how needed this is, and we are already thinking about future rounds, with new themes to

Image by Midjourney, prompt Fabrizio Martina



make it even more inclusive and impactful. This is just the start!

And lastly, how has the experience of initiating this mentoring programme been for you, as the programme coordinator and MCAA Career Development Manager?




Initiating a mentoring programme is no small task. It is not just about setting things up; it is about managing expectations, creating meaningful opportunities to connect, keeping people engaged, and encouraging mutual investment. And let's be honest, in today's stretched work environments, that's no easy feat.

From designing the programme, setting up registrations, developing communications, and creating resource guides, to evaluation, matchmaking, onboarding, and ongoing support, I have learnt and evolved at every step. I am currently curating guided Coursera courses to offer more structured, targeted support to this pilot cohort. I am also listening closely to participants' feedback to shape future webinars, engagement spaces, and knowledge-sharing opportunities.

I am grateful to the MCAA Board and Secretariat for their trust, especially Chair Gian Maria Grecco and Executive Director

Mostafa Moonir Shawrav. I'd also like to acknowledge former MCAA Chair Fernanda Bajanca, former Board member Donata Iandolo, and many others who laid the groundwork by launching the MCAA Academy platform several years ago with the vision of building a meaningful support network.

This has been a journey marked by hard work, learning, and steady growth for me, for the participants, and for everyone who's contributed along the way. I hope that this programme offers real value: helping people connect with purpose, navigate transitions with confidence, and build the kind of support networks we all need.

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Special Issue: Sustainable Career Transitions

Could you briefly introduce the concept of Industrial Doctorates within the MSCA framework?

The MSCA Industrial Doctoral (ID) programmes were first introduced in the MSCA in 2014 with the launch of the Horizon 2020 programme, facilitating doctoral programmes via partnerships between universities, research institutions and infrastructures, SMEs and other socio-economic actors. Their objective was, and still is, to promote international, inter-sectoral and multi/interdisciplinary collaboration in doctoral training in Europe and beyond.

To achieve this, doctoral candidates are co-supervised by supervisors from both the academic and non-academic sectors and must spend at least 50% of their fellowship time in the non-academic sector. This is, of course, on top of the basic features of any MSCA Doctoral Network (DN) that already promotes inter-sectoral and interdisciplinary collaboration as well as the emphasis on transferable skills. It is important to recall that the MSCA ID caters not only for the industry but also to other non-academic actors such as NGOs, charities, think-tanks, hospitals, museums, and so on.

One of the core goals of the Industrial Doctorates is to connect academic training with real-world industry challenges. In your experience, what are the biggest barriers to successfully implementing such collaborations, and how might institutions and companies work together to overcome them?

The MSCA ID projects are effective in delivering their objectives and with a high level of satisfaction from all three sides:

MSCA Industrial Doctorates model: Interview with Sohail Luka



Photo by Sohail Luka

the academic partner, the non-academic partner, and the doctoral candidate. However, we are keen on continuously improving our Industrial Doctorates through regular consultations with stakeholders and feedback from projects. The top three challenges identified from this feedback were joint supervision, intellectual property rights (IPR) issues, and the need for more flexibility, especially with the secondment

Image by Midjourney, prompt Fabrizio Martina



rules. With regard to joint supervision and the IPR issues, prior agreements within the consortium at the start of the project proved essential in avoiding them and in clarifying mutual expectations. As to the need for more flexibility, we have already relaxed some of the requirements for IDs since the launch of Horizon Europe, and we are currently reflecting on going even further with simplification measures in the future.

Balancing academic excellence with industry applicability can be complex. How does the MSCA Industrial Doctorates model ensure that researchers maintain scientific depth while gaining hands-on industry experience?

It is true that the cultures of the academic and non-academic worlds are different. Their objectives are different, and, in a way, they sometimes speak different languages. On the surface, this could appear as a conflictual divergence between the two respective objectives of advancing knowledge (academia) and valorising knowledge (non-academia). Yet, in fact, it is in this very divergence that

the added value of Industrial Doctorates lies, as it provides exciting horizons for cross-fertilisation. At the same time, academic excellence and rigour are not being put at risk since it is the academic partner that awards the doctoral degree using the same standards and criteria applied to other types of doctorates.

What unique skills or competencies do Industrial Doctorate researchers gain compared to their peers in purely academic settings? How do these experiences shape their future career pathways, especially in innovation-driven sectors?

While all MSCA DNs emphasise training on transferable skills like management, entrepreneurship, and communication, ID doctoral candidates get first-hand experience in learning, practising, and applying those skills on a daily basis. They also learn the culture of non-academia and start understanding a language not often spoken on campus. Career-wise, the fellowship can metaphorically be viewed as a job interview lasting for years: helping the candidate with

the decision of whether to stay in academia or to switch to the non-academic world, and helping the non-academic partner decide if the doctoral candidate is the right talent it seeks. Indeed, a questionnaire filled out by former MSCA fellows two years after they completed their fellowships revealed the following percentages of fellows working in non-academic entities: Post-Doctoral Fellowships (11%), Doctoral Networks (49%) and Industrial Doctorates (77%).

Many early-stage researchers face challenges in securing funding for interdisciplinary or industry-linked projects. What advice would you offer to navigate the funding landscape effectively and ensure project sustainability?

When asked about their opinion on the benefits of engaging in IDs, for both the academic and non-academic sides, a top benefit was the creation of long-lasting collaborations. Therefore, the sustainability of ID projects after they end is already taking place. These long-term collaborations are even more effective when partners focus on them as an objective from the start of the project. Separately, another source of seeking funding for interdisciplinary and industry-linked projects is the excellent opportunities provided by the European Innovation Council (EIC).

What incentives or approaches have proven effective in encouraging industry partners to invest in or support Industrial Doctorate candidates?

Industry partners are highly interested in access to talent and cutting-edge research. These are important incentives for industrial partners who choose to engage in IDs. It seems, however, that there is a need to further raise awareness among innovation-based industries about the value of having a doctoral candidate as part of their teams. This is, of course, in addition to improving

the conditions already mentioned, like providing more flexibility and administrative simplification.

Do you foresee the Industrial Doctorates model becoming a standard path for doctoral training in Europe and beyond? What steps are needed to scale or sustain these initiatives long-term?

Yes, I do, and it is already a standard format of doctoral programmes in some European universities. However, the interest in IDs is highly field-specific. Looking at the MSCA ID projects we funded in the past, this becomes very evident. Out of the 8 disciplinary MSCA panels, Engineering, Life Sciences, and Chemistry together accounted for 80% of all funded IDs, with Engineering alone standing at 45%. Therefore, a key element in scaling and sustaining IDs is that they would be needed, i.e., that there would be market demand for them. Indeed, in some of the science parks where academia, innovation, and industry intermingle seamlessly, there is not even a need to think about incentives or ways to encourage industries to engage in IDs.

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Special Issue: Sustainable Career Transitions

MSCA as a bridge between thinking and doing: From research to real-world impact

From a spark ignited by my sister to a PhD across the Atlantic, my journey shows how science lives beyond the lab. The MSCA fellowship bridged my work between universities and industry, transforming plastic waste into value. Each step taught me that real impact happens when knowledge meets action. Today, I stand for science as service, adaptable, resilient, and deeply connected to people and planet.

Sabino Armenise is a senior scientist and expert in heterogeneous catalysis, biomass valorisation, and circular economy solutions within the energy and chemical sectors. With over a decade of experience in R&D and industrial innovation, he has led multidisciplinary projects bridging academic research and business strategy, particularly in the development of catalysts for the conversion of waste plastics and biomass into high-value fuels and chemicals. As a former Marie Skłodowska-Curie Fellow, he mentors early-career researchers and is actively involved in science communication. His current work focuses on enabling the transition to sustainable fuels by integrating renewable feedstocks into refinery operations.

Science was always at home. My sister's passion sparked my path long before I entered a lab. From Venezuela to Spain, Ecuador, and Europe again, each step, from researching catalysis to transforming plastic waste, showed me that real science must serve society. After graduating, I gained hands-



Photo by L.A. Lemus

Image by Midjourney, prompt Fabrizio Martina



on experience in the private sector, but a persistent hunger for deeper understanding pulled me back towards research. In 2008, that calling led me across the Atlantic Ocean to Spain on a PhD scholarship, where I explored heterogeneous catalysis and the catalytic cracking of ammonia to produce hydrogen.

Just as I approached the finish line, the economic crisis in Spain forced me to return to Venezuela with uncertainty in my suitcase but with an invincible conviction that my scientific life was far from over. As soon as I could, I began to seek ways of staying connected to science at home. A new adventure arrived in Ecuador, where I worked for a university developing projects with social and environmental purposes near the Amazon jungle. It was a turning point. It helped me envision a more grounded type of science, one that interfaces directly with people and the environment. I learnt that meaningful work is more than just getting papers published in scientific journals. Science, to be significant, must be lived. It must become a service, tool, or solution to real-world problems.

It was then, while reading to my son a children's book on Marie Curie, that the idea of a postdoctoral fellowship in Europe resurfaced. The MSCA programme seemed like the ideal way to return to global research. It wasn't easy; five rejected applications only pushed me to try harder. But I didn't abandon hope. And once I was finally selected for the **Got Energy Talent MSCA Fellowship**, I knew I had been aiming in the right direction all along. My MSCA project was designed as a mixed experience: I worked between two university institutions, Rey Juan Carlos University (URJC) in Spain and Sorbonne University in France, and an industrial partner from the energy sector (Moeve, formerly CEPSA). The goal was to convert plastic waste into useful chemicals, unifying sustainability goals with industrial applications.

Working between these worlds was not just a matter of geography; it was a matter of worldview. I had to learn to shift from the discovery-driven pace of research facilities to the results-oriented pace of industry. I learnt to speak several languages, communicating concepts not only to scientists but also to

engineers, managers, and financiers. I had to turn theory into actionable avenues and understand that timing, scalability, and the regulatory environment are as valuable as scientific creativity.




This experience prompted me to redefine success. It was no longer solely about publishing. Success now included creating change, contributing to value chains, and linking research with market and environmental conditions. Shuttling between these domains convinced me that academia and industry are not opposites; they are two sides of the same innovation engine. Academia gives us the intellectual foundation to think and question. Industry pushes us to act, to measure, and to scale. Combined, they can transform bold ideas into real results. The MSCA fellowship provided me with the framework to exist in both worlds. It showed me that although scientific excellence is the foundation, its influence truly expands when tested under economic, regulatory, and social pressures. That is where cross-sector, interdisciplinary researchers come in as integrators, translators, and drivers of change.

Now, as a member of an amazing team focused on circularity and biomass

valorisation, I bring scientific discipline and strategic thinking to the lab. It wasn't always easy. But with every obstacle — settling into new environments, learning new paradigms, recalibrating priorities — each challenge made me more resilient, sharper, and better attuned to where science can truly make a difference. If you are considering a departure from academia, know this: you're not losing your identity as a scientist; you are broadening it. The curiosity, determination, and problem-solving skills you've cultivated are valuable in any context. But transitioning requires intention. It means being open to learning new models, accepting new definitions of success, and reconnecting with your purpose.

Remember, your career is not a straight line but a dynamic landscape, where adaptability becomes your greatest strength.

Thanks to the MSCA, URJC, Moeve, and my family.

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Image by MidJourney, prompt Fabrizio Martina



Special Issue: Sustainable Career Transitions

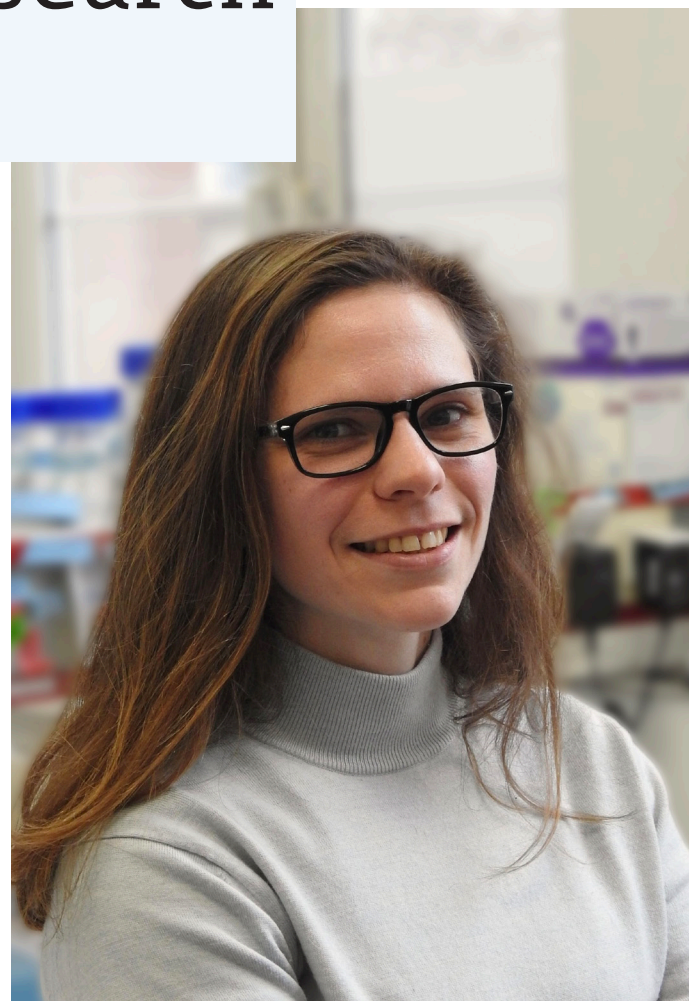
Wrong turns, right destination: Research management

Research Managers play a crucial role in shaping the research ecosystem. As we work to professionalise research management, I hope more academics and institutions will recognise its potential, not as a fallback, but as a fulfilling career.

Irène Arrata is a Project Manager at Inserm's Institute for Translational Medicine and Liver Disease at the University of Strasbourg. After earning a PhD in Chemical Biology from the University of Leeds, she transitioned from academic research to innovation consulting, where she first encountered European projects. In 2020, she returned to academia as a project manager, starting with a MSCA ITN project and rediscovered her love for research, this time through research management rather than on the bench. Since 2022, she has been actively involved in the MCAA Research Management Working Group.

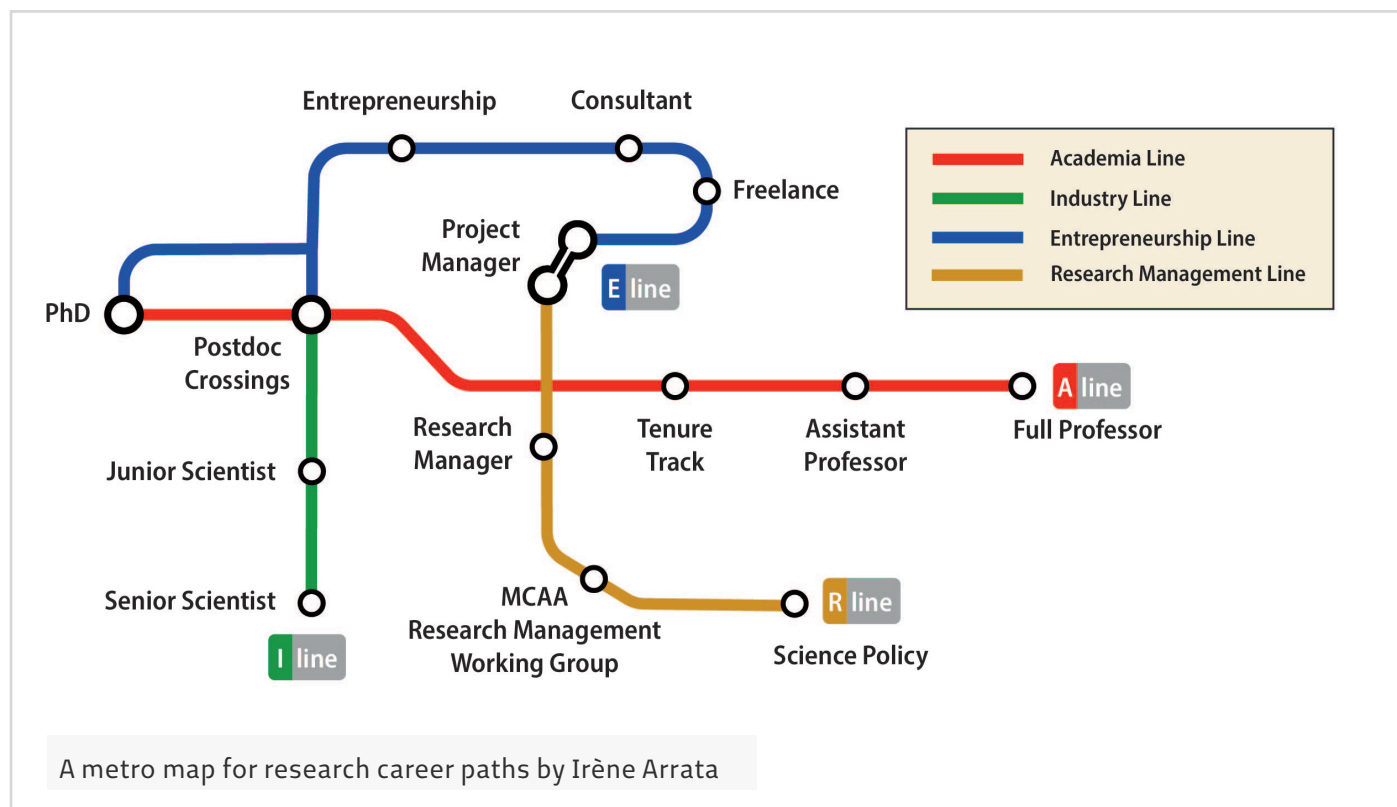
If you ask a Research Manager how they got there, the likely answer you will get is by accident. Like many of my peers, I did not plan this career path, since I did not know it existed.

After a rather conventional undergraduate journey, I began a PhD at the University of Leeds, in the UK. From there, the path was clear: postdoc abroad, then a job in big



pharma. Spoiler alert: it didn't go as planned. By the end of my PhD, I was burnt out, and the very thought of lab work triggered anxiety.

What then? My second love was science communication. I had done a few gigs — including science stand-up comedy! — and organised a Pint of Science event, but had no clue how to turn this into a career. Lacking inspiration and scared of the dreaded gap



on the CV, I took the first opportunity and left academia to become an innovation consultant, helping start-ups secure funding through grant writing. First, I had to unlearn academic writing, switching from meticulously referenced articles to focus on customer acquisition, revenue models, and competitive advantage. I learnt how to analyse markets, assess competitors, and develop compelling business cases. Since most of the projects I supported had nothing to do with my area of training, chemical biology, I had to adapt fast. Thus, I dove into app development, machine learning, Industry 4.0, and deep tech. I also quickly became familiar with EU funding schemes through working on European Innovation Council (EIC) proposals.

In late 2018, with Brexit looming, I moved back to France and started freelancing. Business was steady, but boredom crept in. Then came COVID-19, the lockdowns, and a reduced workload; I quickly realised that a change was needed. One day, the stars aligned: I stumbled across a job advert for an MSCA Innovative Trainin Networks (ITN)

project looking for a part-time European Project Manager (EPM). Although I did not understand half of it, the role intrigued me. I applied on a whim; two weeks later, I had the position.

Finding my place in research: behind the scenes

There is something particular about starting a new role during lockdown, with no prior experience. The learning curve was steep, and I initially had to work more than my official 50%. At first, I felt underqualified but soon realised my consulting background had equipped me well: juggling tight deadlines, communicating with high-stakes clients, and adapting to new fields — these skills translated seamlessly. I picked up the rest along the way: understanding public research, navigating rigid admin systems, negotiating legal documents, managing conflicts, and becoming assertive, especially with senior academics. Although a PhD is not mandatory for this role, I believe having done one myself greatly helped me integrate within a

researcher's network, while having written a thesis is a great prior experience when it comes to preparing project reports.

In 2022, I witnessed the foundation of the MCAA Research Management Working Group (RM WG). This vibrant community of Research Managers shares their knowledge, expertise, and best practices, overcoming the limited access to networking and training within our institutions. Here, I found a sense of belonging I'd been missing for too long.

With the ITN project ending soon and no clear path forward in my host lab, I seized a new opportunity. Since autumn 2023, I have been the manager of the Institute for Translational Medicine and Liver Disease in Strasbourg. Here, research management is valued and integrated into the scientific ecosystem. My role is visible, impactful, and recognised — proof of what's possible when institutions take us seriously.

From research management to science policy

Research Managers across Europe are now working to turn this profession into a structured, recognised career path. The MCAA RM WG, together with [EU-LIFE](#), published the [Toledo Report](#) in 2024, outlining the added value of Research Managers in MSCA projects and offering concrete recommendations for better recognition and support. In parallel, dedicated projects such as [CARDEA](#) and [RM Roadmap](#) have significantly contributed to the creation of the European Competence Framework for Research Managers (RM-Comp). These efforts align with Action 17 of the [REA Policy Agenda](#), which explicitly supports strengthening the role and visibility of Research Managers.

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Image by MidJourney, prompt Fabrizio Martina



Special Issue: Sustainable Career Transitions

Research, or there and back again

From genetics research to the biotech industry to shaping policy in the public sector, I have learnt that a career path doesn't have to be linear. Each turn taught me to transfer skills, embrace rejection, and stay curious. My story shows how crossing sectors can build resilience, open new perspectives, and connect science with real-world impact.

Marta Niedzicka got her PhD degree in evolutionary biology at the Institute of Environmental Sciences at the Jagiellonian University. During her doctoral research, she studied *Lissotriton* newts: prepared their genetic linkage map, and designed, mapped and genotyped markers. In the meantime, she has also finished two statistical courses and a molecular ecology course. Marta has learned Python and R programming languages and has been working in the Linux environment. Marta currently works at the Teagasc, the Agriculture and Food Development Authority in Ireland.

Starting with research and academia

I didn't pursue a PhD immediately after my Master's programme. I had a vision of my career that didn't require one. I had things figured out — or so I thought.



Photo by Teagasc

Two years later, I changed my mind. I was good at genetics — always my favourite field — and quickly realised that all my dream jobs required a PhD. I started looking for a suitable programme that would strengthen my skills.

As a PhD candidate, I have developed so much. I thrived, although with an occasional dread of being an impostor. I learnt so much: hard skills, like population genetics and bioinformatics, but also soft skills, like problem-solving, time management, balancing working independently and in a team, and project management. Thus, I would do all of it again.

Switching to the industry

Yet, after my viva, I didn't see my future at the university. I started to apply for different industry jobs and remember it feeling overwhelming at first. But there

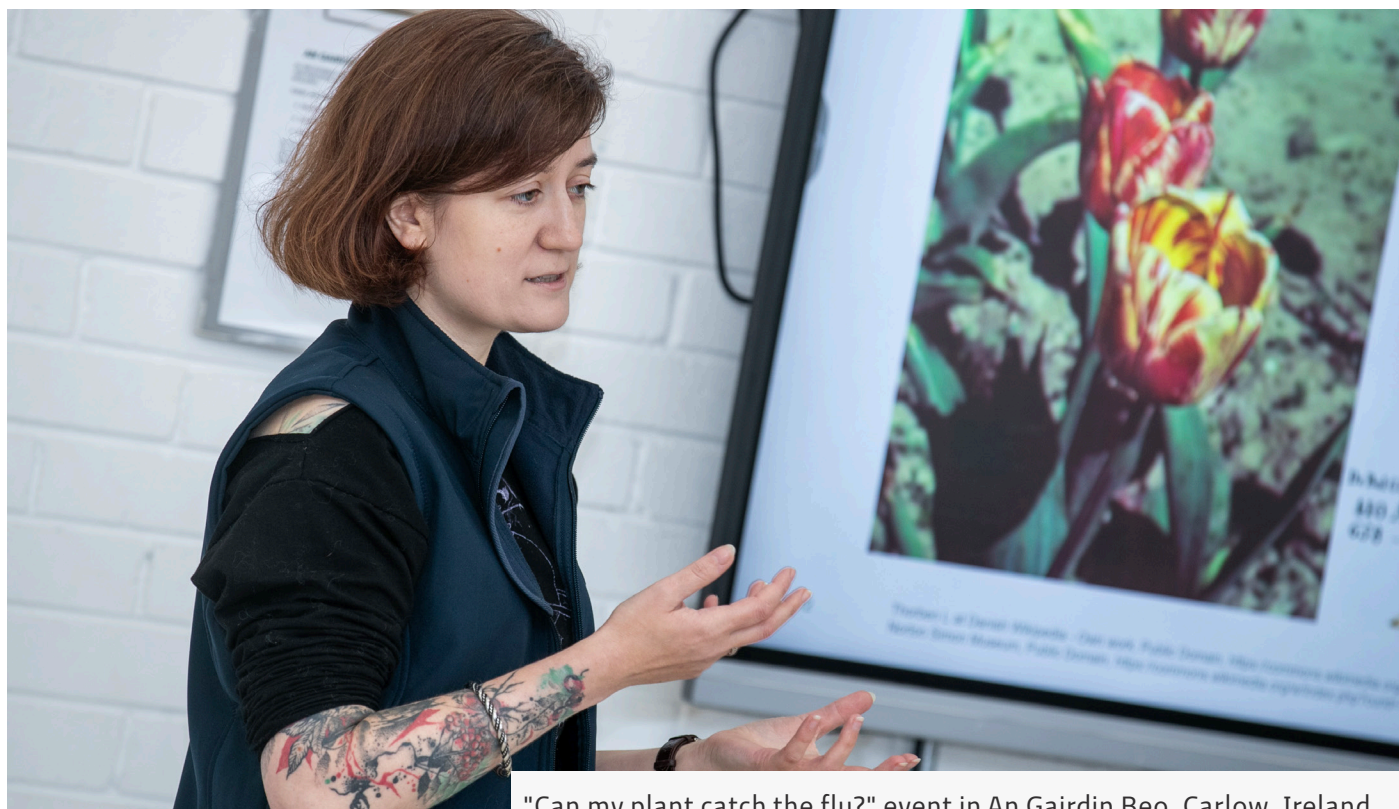


Photo by Teagasc

"Can my plant catch the flu?" event in An Gairdin Beo, Carlow, Ireland

was a biotechnological company looking for scientists with bioinformatics experience, and I was one.

My bioinformatics skills developed when I used them outside of my PhD expertise. I loved seeing how I could reshape the same skills to answer various biological questions. I like challenging my own point of view and seeing from another perspective. I learnt so much about different questions, interests, and trends across various fields.

It was not only my scientific experience that was transferable. Adapting to new situations, finding other options during a crisis, communicating and organising my time more efficiently, documenting processes in detail, and even teaching adults — all these skills were extremely valuable, and I used them every day during my time in the industry.

Making way back into research

After some time, I wanted to go back to research. I had the experience, wider skills, and confidence I lacked before, as well as

much better knowledge about alternative career paths. I knew I could change my mind, although it might not have been easy to find the right option.

There is nothing wrong with having different needs at different stages of our lives. However, finding the right people to work with is essential, and I was privileged to find the right mentors.

My first MSCA Postdoctoral Fellowship submission was rejected, although it was classified for the Seal of Excellence, so we tried again the next year. I barely made it the next year, as the project was accepted from the reserve list.

To whoever needs to hear this: rejection doesn't reflect badly upon you. Sometimes you are rejected not because you are a bad candidate, but merely because there might be someone better suited at that particular time. It doesn't make you the wrong person for the position.

Being rejected is not a failure.

Trying it all

Now, I am back in research, but not in academia. This time I am a postdoctoral researcher in the public sector, in a research-performing organisation.

I didn't stop learning about different career paths and how my experience fits different roles, as now my postdoc includes a secondment in a non-research governmental agency. I have been making my way through academia and basic research to industry, applied sciences and policymaking in the public sector.

I want to better understand how all of these positions and approaches differ and why, and bridge the gap between academia, industry, and the public sector even though I haven't decided yet on my next role.



Communication and mutual understanding are the first steps in allowing us all to work better together.

How to start the change?

It is rarely obvious how to change your career path. There is no solution that fits all, but from my experience, talking with people helps.

The other helpful thing is to try to look at yourself from an outsider's perspective. Look at your CV like it is of your friend from academia whom you have always admired, or maybe a younger colleague you want to mentor. Would you tell them to give it a go? Would you be able to recognise their strengths and realise how they can be applied in other fields?

Bringing new perspectives and thinking outside of the box is valued—and career transitions help with that.

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Image by MidJourney, prompt Fabrizio Martina



Special Issue: Sustainable Career Transitions

Career trajectories of Marie Skłodowska-Curie Fellows across sectors

Supporting researchers' career development is one of the core objectives of the Marie Skłodowska-Curie Actions (MSCA). Based on surveys of former fellows, this piece sheds some light on the career paths of MSCA researchers after the fellowship. Their experience highlights the positive impact of the MSCA, but also the different challenges they may encounter and how they are being addressed.



Anouk Lafortune is a Policy Officer in the MSCA Unit in the Directorate General for Education, Youth, Sport, and Culture at the European Commission (DG EAC) at the European Commission. She notably works on the MSCA Postdoctoral Fellowship action and on more horizontal topics for the programme, including academia-business cooperation, research assessment, and the end-of-fellowship surveys. Before joining the Commission, she was an early-career researcher and holds a doctoral degree in social sciences.



Annelies Van de Ven recently joined the European Commission's MSCA Unit as a Policy Officer responsible for COFUND, Open Science and Synergies. Prior to commencing her current role, she was an FNRS-funded postdoc working at the inter-section of archaeology and collections management. Her move to the policy role was motivated by her work as a representative of the scientific staff of UCLouvain and as a slow science advocate co-organising the inter-university doctoral school on the future of academic research.

As a research and training programme, the MSCA supports researchers' training, skills, and career development, notably through international, intersectoral, and interdisciplinary mobility and collaborations.

Since 2018, all researchers participating in MSCA projects have had to fill in two questionnaires after their fellowship. To date, over 25,000 participants of Horizon 2020 (H2020) projects have completed an evaluation questionnaire immediately after the end of their MSCA fellowship, and 5,000 have submitted the follow-up questionnaire two years later.

These questionnaires gather feedback from former fellows on their experience with the programme and on the impact the fellowship has had on their skills and professional development. They also provide data on the careers of former fellows, in particular those who participated in doctoral programmes (H2020 MSCA ITNs), postdoctoral individual fellowships (H2020 MSCA IFs), or co-funded programmes (COFUND). These figures offer valuable insights both for the programme and for current and future fellows on career prospects after their MSCA fellowships.

MSCA training and relevance for career development

The results of the questionnaires indicate that MSCA training equips researchers with a wide range of both scientific and transferable skills that they can use in their research careers afterwards. Among the skills developed through the fellowships, former fellows most often report research knowledge and expertise, the ability to build international and intersectoral networks, and communication and presentation skills. 83% of former fellows also report acquiring project management skills through their MSCA fellowship.

Nearly all former fellows (~99%) report using the skills they acquired during the MSCA fellowships in their subsequent careers. These results suggest that the skills acquired are relevant and support the fellows in their career development.

The programme notably encourages fellows to gain experience in sectors outside academia. It is estimated that around one third of fellows have spent time in non-academic organisations during their MSCA fellowship. Among those, almost all (95%)



Image by Midjourney, prompt Fabrizio Martina

declare that their experience benefited their career, including 54% who consider that their non-academic experience was to a very large or large extent beneficial for their career.

Sectors of employment of former fellows

Most former doctoral and postdoctoral fellows continue to work in research and innovation at least two years after their MSCA fellowship, with 90% of employed fellows working in a research-related field.

While most of them (73%) pursue research careers in academia, many also end up working in other sectors, including companies, public administration, and civil society organisations.

The share of former fellows working in different sectors of employment varies according to their career stage. Former doctoral researchers are notably more likely to work outside academia (i.e., 56% of former ITN doctoral fellows), compared to more experienced researchers who received an MSCA individual fellowship, of whom 86% were still in academia two years later.

Type of contracts by sector

The table below presents the duration of employment contracts of former fellows working in different sectors two years after the MSCA fellowship. On average, 44% of former fellows had permanent or indefinite contracts within two years after their MSCA fellowship. The results, however, indicate that the types of contracts tend to vary according to the sector, with academia notably having the highest share of former fellows under short-term and temporary contracts.

On average, around 33% of former MSCA doctoral and postdoctoral fellows working in academia had a permanent or indefinite contract two years after their fellowship. The share was higher among postdoctoral researchers (43%) than among former doctoral fellows (13%).

This is in stark contrast with the shares in other sectors: for former fellows working in the private for-profit sector, 80% or more are in permanent or indefinite contracts, and the share is over 60% for most other non-academic sectors.

These results reflect the low job security in research careers in Europe particularly

Table 1. Duration of employment contracts of MSCA fellows (ITN, IF, COFUND) two years after the fellowship, by sector of employment

Sector of employment	Up to 1 year	More than 1 year and up to 3 years	More than 3 years	Permanent or indefinite contract	Sample of respondents
Academia (higher education, public research institute)	17%	33%	17%	33%	1798
Large enterprise	11%	7%	1%	82%	222
Small and Medium Enterprise (SME)	9%	10%	1%	80%	137
Private non-profit	12%	21%	3%	64%	73
Public administration/government	17%	27%	8%	48%	71
International organisation	10%	21%	3%	66%	68
Other sector	21%	12%	1%	66%	100
All respondents	16%	28%	13%	44%	2542

Source: Results of MSCA end-of-fellowship evaluation questionnaires (Horizon 2020) 2025 report

affecting early-career researchers in academia. The issue of precarity in research careers has been the object of several recent studies, for example, the OECD's [Reducing the precarity of academic research careers](#) report, CESAER's [Research Careers Survey](#) and the Initiative for Science in Europe (ISE's paper) [Towards establishing funding schemes that promote academic Job Security for Early Career Researchers](#).

As a response to this issue of precarity, the MSCA is launching a [Choose Europe for Science](#) pilot call in the final months of 2025. This pilot will aim to increase the attractiveness of European research careers by encouraging research organisations, including universities, to offer long-term career prospects as well as excellent working conditions to researchers at the postdoctoral level. These criteria will be part of the evaluation of proposals alongside research objectives, recruitment procedures, and career development opportunities during the project. Just like in all MSC actions, the programmes selected under this call will be open to researchers of any nationality, based within or outside Europe, with the objective to retain promising talents in Europe and attract new ones from abroad.

To find out more about former fellows' experiences and careers after MSCA, read the published [MSCA end-of-fellowship questionnaire annual reports](#).

To find out more about our upcoming Choose Europe for Science call, check out the [dedicated page](#) on the MSCA website.

NOTE: Proposals are to be made at the level of institutions. Projects will be selected in 2026 and will then issue their own vacancies for researchers.

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References

- CESAER (2024). *Research careers: A critical choice for Europe. Results, insights and recommendations from CESAER Research Career Survey 2024*. Available: <https://www.cesaer.org/content/5-operations/2024/20241211-research-careers-report/20241211-cesaer-research-careers-report.pdf>
- European Commission (2025). *Results of MSCA end of fellowship evaluation questionnaires (Horizon 2020)*. Available: <https://op.europa.eu/en/publication-detail/-/publication/81fb9a26-2a2d-11f0-8a44-01aa75ed71a1>
- European Commission (2025). *Horizon Europe Work Programme 2023-2025*. Marie Skłodowska-Curie Actions. European Commission Decision C(2025) 2779 of 14 May 2025. Available: [wp-2-msca-actions_horizon-2023-2024_en.pdf](https://ec.europa.eu/horizon-2023-2024_en.pdf)
- European Commission (2025). *Choose Europe for Science*. Available: <https://marie-sklodowska-curie-actions.ec.europa.eu/actions/choose-europe-for-science>
- ISE (2024). *Towards establishing funding schemes that promote academic job security for early career researchers*. Available: <https://initiative-se.eu/wp-content/uploads/2024/08/ISE-WG-RC-Job-Security-def.pdf>
- OECD (2021). *Reducing the precarity of academic research careers*. OECD Science, Technology and Industry Policy Papers, No 113. Available: https://www.oecd.org/content/dam/oecd/en/publications/reports/2021/05/reducing-the-precarity-of-academic-research-careers_2d4e2194/0f8bd468-en.pdf

Special Issue: Sustainable Career Transitions

Dealing with the PhD degree mindfully to ensure employability



In today's changing job market, a PhD is no longer just a ticket to academia. Being mindful and strategic during your doctoral journey can unlock diverse paths in research, industry, policy, and communication. By recognising transferable skills, staying curious, and building supportive networks, you can shape a fulfilling career far beyond the traditional professor's track.

Pallavi Deolal was born and raised in Pithoragarh, Uttarakhand, India. She attended the University of Delhi for her Bachelor's and the University of Hyderabad for her master's and PhD. Since January 2023, she has been a postdoctoral researcher at the Max Perutz Labs in Vienna, Austria. Apart from life, science and life in life sciences- she is enthusiastic about the importance of sustainability and mindfulness in the research ecosystem.

Traditionally, a PhD was designed as a direct path from university education to a professorship. It assumed a linear academic trajectory with the end goal of a faculty position. But in today's fast-paced, technology-driven world, that is no longer the dominant or even expected outcome for most PhD graduates. The nature of education itself has changed: it is now global, more accessible, and deeply interdisciplinary. These shifts have brought about major changes in the job market, creating a demand for new roles that extend far beyond the boundaries

of academia. Therefore, being intentional, mindful, and strategic about how one manages their PhD experience can make a significant difference in navigating this changing landscape. It can open doors across sectors and help make career transitions smoother and more fulfilling.

Identifying opportunities

A variety of career opportunities have emerged that directly support research and education. Many of these roles, such

as facility management, grant advisory, and research administration, exist within academic institutions themselves. In some places, entire teams are dedicated to organising conferences and scientific events. There are several positions related to editorial work, publishing, and science communication. Publicly funded research needs to be accessible to the public, and this has given rise to opportunities in science journalism, writing for mainstream and scientific publications, and producing content for digital platforms and social media. Many people now disseminate science through blogs, newsletters, or various platforms, helping to make science more inclusive and engaging for non-experts. This is often also asked when applying for grants.

The entrepreneurial and industry sectors also offer fertile ground for PhD graduates. Technology transfer is a big part of what many research institutes now do, and they even support start-up incubators that allow researchers to engage with both industry and academic cultures. These hybrid environments often require professionals who understand intellectual property law, patents, and the

legal frameworks that govern scientific innovation. Safety officers, regulatory experts, and compliance professionals are also vital to these ecosystems.

Making a switch

When academic life feels shattering and narrow, stepping outside it can be eye-opening. Attending interdisciplinary conferences or informal meetups, joining seminars outside your research area, reaching out to alumni or entrepreneurs, or simply following people with unconventional career paths can provide a fresh perspective and new ideas. In thinking about career transitions, it is useful to reflect on which PhD-acquired skills are transferable and how to present them effectively. Writing a dissertation, mentoring students, designing experiments, or applying for grants may not have direct analogues in the corporate world, but they clearly reflect project leadership, problem-solving, strategic thinking, and communication. The challenge lies in translating these skills in ways that resonate with non-academic audiences, whether through structured resumes, interviews, or networking conversations.

Image by MidJourney, prompt Fabrizio Martina



Image by Midjourney, prompt Fabrizio Martina



Being creative during the PhD journey is not just helpful but rather necessary. Because it is such a long and demanding process, it helps to find joy in small, creative acts: illustrating your research if you like drawing, teaching colleagues or school students if you enjoy explaining concepts, or engaging in community science outreach. These activities help sharpen communication skills, reinforce your purpose, and often bring unexpected satisfaction.




Despite the growing number of opportunities, many PhD students experience uncertainty and ambiguity. Building a sense of community and taking time to reflect on your interests, strengths, values, and the skills you want to develop can offer clarity. Often, this kind of self-awareness is best developed in conversation with others. Finding or forming a peer group with shared goals and values can help you feel supported, grounded, and motivated.

Practicing mindfulness

Mindfulness is a helpful tool throughout this process. It begins with a pause, a moment to check in with yourself. What do I enjoy? What am I good at? What energises me? Since these

questions do not always have easy answers—and if you do have answers, they change over time—journaling or simply keeping notes can be a great way to track evolving thoughts. This also helps to develop clarity in expression, something essential for both academic and non-academic endeavors. If things feel overwhelming, physical activity and creative outlets can be a great reset. Social activities, whether yoga classes, dance sessions, or informal gatherings, are more than just fun; they help build the relationships and networks that make a PhD journey less lonely and more enriching.

And finally, if you are still unsure about where you are headed, that is okay. Science often demands that we become jacks or jills of all trades—learning a bit of everything, juggling research, teaching, writing, mentoring, and more. If you enjoy the challenge of balancing many roles, academic research can still be an exciting and deeply meaningful place to be.

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Special Issue: Sustainable Career Transitions

From bench to boardroom: Lessons from a non-linear career

Curiosity, not certainty, shaped my journey from a PhD lab to consulting and back to research. I discovered that skills like communication, critical thinking, and adaptability are more portable than I ever imagined. My story shows that stepping beyond your comfort zone can blend the best of academia and industry, and redefine what success looks like.

There was no epiphany. No dramatic turning point. Just a curiosity for the other side. I had spent my PhD studying the effects of Cognitive Behavioural Therapy in tinnitus patients. The work was interesting, but I found myself in need of a faster pace, one not burdened by publication cycles and grant applications.

After months of aimless searching, I came across a consulting role at Trilations. The title of the position didn't speak to me, but the description mentioned the necessity of some statistical knowledge, critical thinking, and healthcare affinity, all within a fast-paced, results-driven environment. I was hooked.



Photo by Hanne Kelchtermans

Matheus Lourenço is a trainer at the Flemish Institute for Biotechnology (VIB), focused on Research Data Management (RDM) and personal development. A Marie Curie alum with a PhD in Psychology from KU Leuven and Maastricht University, Matheus's research on the assessment and treatment of tinnitus included innovative methodologies, including Single-Case Experimental Designs (SCED or n-of-1 trials) and Ecological Momentary Assessments (EMA). With experience spanning both academia and consulting, he has delivered impactful training sessions and workshops for a wide range of audiences, from students to senior managers at globally leading pharmaceutical companies. Matheus is dedicated to empowering researchers with practical knowledge and tools through clear, engaging communication. His ability to connect with diverse audiences is rooted in his international experience, having lived and worked in Brazil, Canada, the USA, the Netherlands, Portugal, and Belgium.

Image by Midjourney, prompt Fabrizio Martina



In the interviews, I laid bare my lack of industry experience but also my desire to explore a new career path. I explained that my PhD had given me the necessary skills for the work, not to mention that my research was in a healthcare context. I received a fair offer that would put me at a lower level due to my lack of experience.

Consulting was a new world for me — quick, unpredictable, and focused on outcomes. It wasn't idealistic; it was pragmatic. And since a large part of the job required designing and analysing market research in healthcare, it turned out that a lot of what I'd learnt in academia was useful. My statistics training helped with study design and analysis. My psychology background helped shape better surveys. My time in healthcare (i.e. hospitals and clinics) gave me a superficial understanding of healthcare systems and people. Years of research presentations meant I could explain complex topics to audiences who were not experts.

Over time, I took on more responsibility: managing clients, coaching junior colleagues, contributing to the innovation team, and even

presenting to board members. I learnt that good enough can be better than perfect and that success was measured in deliverables, not citations.

After three happy years, I found myself thinking about the next steps. While I'd grown and enjoyed the ride, I also missed the sense of meaning that academia had given me. I wanted to find something that combined the speed and practicality of industry with the depth of academia.

Once again, I started looking — aimlessly, as before. I did not consider myself a specialist in anything. I had not yet noticed all that consulting had equipped me with. After talking with a career specialist, I came to realise that I had a wide range of valuable skills. I had learnt how to manage expectations, communicate with different stakeholders, guide multidisciplinary teams in effective strategies, answer complex business questions through pragmatic research design, manage budgets, lead teams, handle stress, and also how to fail and bounce back. Most of all, I'd developed a strong style in communication — shaping presentations,

telling stories that inspire change, and engaging different kinds of audiences.

Not long after I recognised these new skills, I saw a vacancy at the Flemish Institute for Biotechnology (VIB), a highly regarded institute in life sciences that sits between academia and industry by funding and supporting research while also incubating biotech spin-offs. They were looking for someone to lead their Research Data Management (RDM) and GDPR training offering. I had no background in life sciences, but I applied anyway. The interviews were rigorous, and I was honest. I did not have experience in life sciences — experience that other candidates might have. But what I did have was broad and varied knowledge in different research settings, which allowed me to bring unique and interesting takes on the topics. More importantly, I had a passion for presenting and communicating knowledge effectively. I was hired.

At VIB, I joined a team that welcomed my mixed background. In addition to training, I have helped with internal projects, strategy discussions, and more. I was given space to

shape the RDM programme and encouraged to experiment. One aspect of this is my goal of making data management training more engaging by creating storylines in every session, something that I picked up in the industry.

Looking back, the common thread in my career hasn't been a specific field or sector, but a consistent focus on communication: between data and decisions, people and teams, and ideas and action. In a world that often rewards specialisation, I've come to value being a generalist.

For those contemplating a change, I offer no formula. Only this: your experience is more portable than you think. And the discomfort of not knowing what comes next is often the first sign that something new is possible.

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Image by Midjourney, prompt Fabrizio Martina



Special Issue: Sustainable Career Transitions

Bridging entrepreneurship, academia, public sector, and industry – Personal transition

From founder to health policy advisor and back to data science leadership, Ornela Bardhi shares her non-linear and deeply intentional journey across sectors, guided by clarity of purpose and a passion for impact.



Ornela Bardhi is the Head of Data Science at Success Clinic. She is a Marie Curie alumna with global experience in AI for health. She advised Albania's Health Minister, co-founded two start-ups, and serves on the MCAA Board, promoting EU research and innovation.

A few years ago, I wrote an article for the Marie Curie Alumni Association on [Post PhD careers](#). It highlighted the transferable skills gained during a PhD and how non-linear career paths have become the norm. Mine has been exactly that.

As a child, I was drawn to medicine, perhaps unsurprisingly considering I had a doctor in the family. At the same time, I was drawn to computers, which led me to pursue a degree in computer engineering. But I never truly let go of medicine.

Midway through my undergraduate studies, I received an Erasmus scholarship to study computer science in London. The shift in focus opened new ways of thinking. I was very curious. One week, I was captivated by the Internet of Things; the next, I was immersed in quantum computing. I didn't yet know what I wanted to do, but I knew I loved learning.

During my master's, I began attending hackathons and entrepreneurship events. Listening to people describe real-world problems and their attempts to solve them was inspiring. At the time, I was working on a remote pregnancy monitoring solution for my master's thesis, which I shared during one of these events. The idea drew attention. Soon after, I joined an accelerator, filed for a patent, and secured some funding.

Photo by Pexels



Highway intersection signifying the different career paths people can choose or end up on during their lives.

Ultimately, the idea didn't materialise into a viable business. But I didn't walk away empty-handed. I discovered a genuine love for research.

When I began exploring PhD options, I had two non-negotiables: it had to combine healthcare and technology, and it had to involve industry collaboration. The MSCA CATCH Innovative Training Networks project checked all the boxes, and more. I would be embedded in a hospital environment, working directly with patients. Until then, I had collaborated with physicians and patients, but always from the outside. This time, I would be part of the system. Understanding the patient's perspective changed my view of healthcare. By then, I had a clear vision for my next role: I wanted to work at a hospital, either building data-driven systems to improve patient outcomes or working as a data scientist. Ideally, both.

Then came 2020. I was still completing my PhD when the pandemic hit. Like many, I was frustrated by how scientific research was selectively interpreted by different governments. Policy responses varied wildly, even when grounded in the same research. Soon, I realised that many decision-makers lacked a scientific background. Many politicians were crafting their own narratives, rather than

deferring to experts. That gap between science and policy deeply concerned me.

As I approached the end of my PhD, I began applying for roles in the pharmaceutical industry, particularly those integrating AI into healthcare. It seemed like a natural extension of my work — an opportunity to stay close to the data and continue building meaningful tools.

But as the pandemic dragged on, so did my frustration. I made a bold decision to return to Albania and take a fellowship as an adviser to the Minister of Health, a stakeholder I had never worked with before. It was an opportunity to influence the system from within.

The experience was both rewarding and frustrating. Evidence-informed policymaking is critical, but translating research into national policy is far more complex than designing a study in a single hospital unit. Even the most promising ideas might not align with political priorities. Elected officials are expected to deliver on campaign promises — often on timelines that do not accommodate long-term, evidence-based initiatives.

Still, I learnt a great deal. But I missed working with data. I missed the pace of

technological innovation. And after nearly three years without a proper break, I desperately needed one.

Two months into my sabbatical, I started applying for jobs. I interviewed from various corners of the world, which was sometimes thrilling, sometimes stressful, especially with unreliable internet. I was planning a return to London when an unexpected opportunity came my way.



In early 2023, I reached out to the managing director of Success Clinic, the company I had collaborated with during my PhD, to wish him a good start to the year. Two Teams meetings later, I accepted a position and relocated back to Helsinki. I have since been promoted twice and now lead our research and data science projects.

As of last year, I have taken on a role I never anticipated: serving as a Board Member of the MCAA. I'm grateful to the community for electing me. The boardroom world was entirely new to me, but it has offered valuable lessons and sparked yet another reflection on where my career might head next.

To many, my career path may appear disjointed. But to me, it makes perfect sense. I have always been passionate about medicine and technology. I entered entrepreneurship young, but healthcare is a heavily regulated industry, and rightly so. I needed time to understand the system, the stakeholders, and the patient experience.

Yes, I have changed job titles, from founder to researcher to policymaker to data science leader, and industries, often at the same time. It's never easy. But I had clarity about my **why** and **what**, especially after beginning my PhD. The when was trickier, but things unfolded as they needed to. I wanted a career that worked for me, not the other way around.

Wants and needs evolve. You evolve. Like any scientific instrument, you need recalibration. Be open to where that recalibration leads.

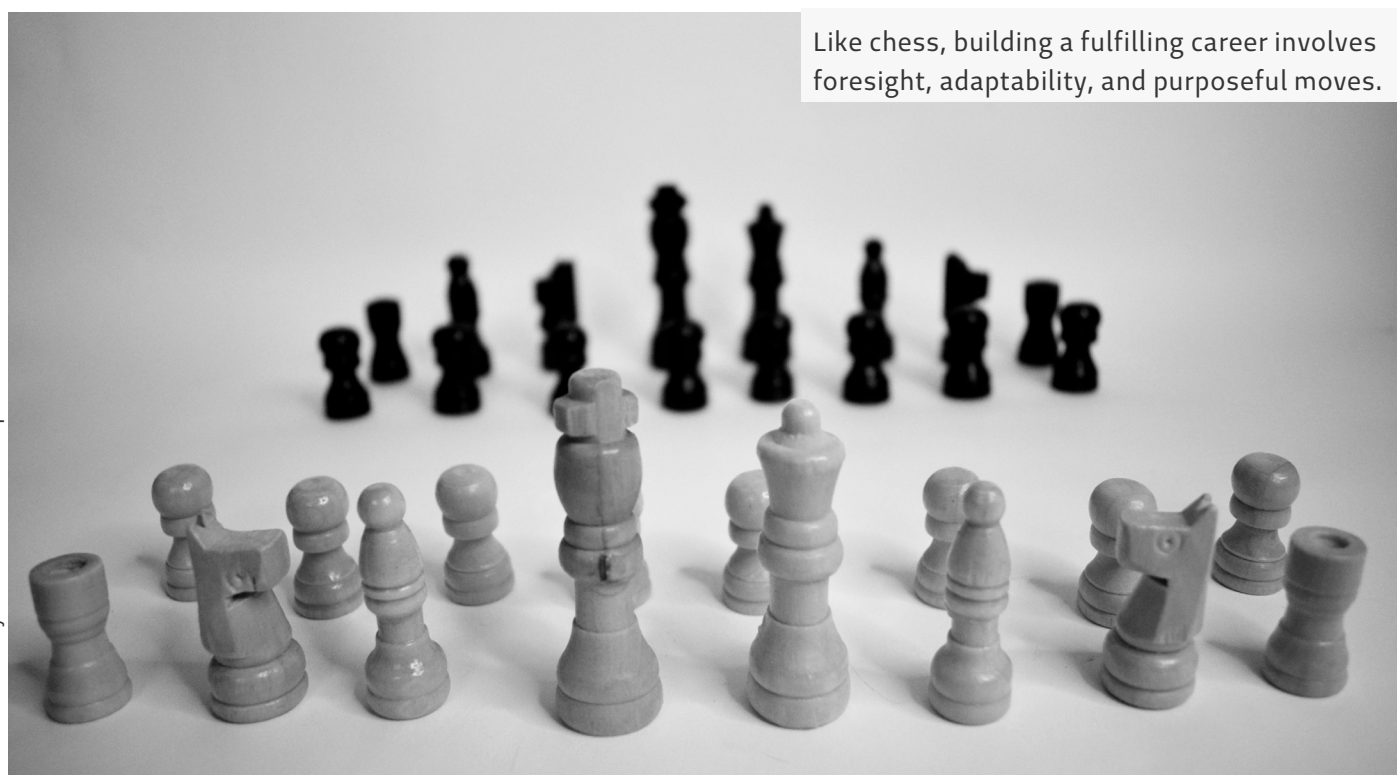
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Like chess, building a fulfilling career involves foresight, adaptability, and purposeful moves.

Photo by Tamara Gak on Unsplash



Special Issue: Sustainable Career Transitions

Spatiotemporal modelling for rainfall forecasting: using social media data to support sustainable career

Can social media and satellite data help predict rainfall more accurately? This study, introduces a powerful spatiotemporal model, GSTAR-NN, that combines machine learning and climate data to support both environmental forecasting and sustainable research careers.

Why rainfall forecasting matters

In daily life, most processes are spatiotemporal, and the data are generated both by where (spatial) and when (temporal) observations happen. Following the 13th pillar of the [Sustainable Development Goals](#) (SDGs) of climate change, rainfall is one of the most essential processes, and rainfall forecasting has become a crucial part of our environment.

In this research, led by Budi Nurani Ruchjana and Atje Setiawan Abdullah from Padjadjaran University and Devi Munandar from the National Research and Innovation Agency,

Budi Nurani Ruchjana received her BSc in Mathematics from Padjadjaran University in Indonesia in 1987, an MSc in Applied Statistics from Institut Pertanian Bogor in Indonesia in 1992, and PhD in Mathematics and Natural Sciences from Institut Teknologi Bandung in Indonesia in 2002. Currently, she is a full professor at the Department of Mathematics at Padjadjaran University. Her research interests include spatiotemporal modelling, stochastic processes, time series analysis, spatial analysis, geostatistics, mathematics and science data, and ethnomathematics.





Image by Midjourney, prompt by Fabrizio Martina

both in Indonesia, we propose spatiotemporal modelling for rainfall forecasting. We use social media data, especially on climate phenomena, as big data provided by the National Aeronautics and Space Administration Prediction Of Worldwide Energy Resources (NASA POWER). We propose a spatiotemporal modelling combined with a machine learning approach based on time series analysis called the Generalized Space-Time Autoregressive Neural Network (GSTAR-NN model).

How the model works

The GSTAR model is a special case of Vector Autoregressive (VAR) as a multivariate time series model, and Neural Network (NN) as part of Machine Learning, which has a powerful model for studying complex and abstract data features, especially in non-linear data. The integration of GSTAR-NN is divided into two steps. First, the model is used to calculate the residuals of GSTAR, the errors between the prediction and actual values, and second, we use NN as a feature extractor for the residual input from the GSTAR results. It can be based on changing the non-linear data pattern into a higher numerical representation through the layers in the Neural Network.

We applied this combined GSTAR-NN model to big data from NASA POWER for climate

phenomena in Indonesia using the data analytics lifecycle methodology. We followed six stages of research:

- **Discovery.** Identifying problems;
- **Data identification.** Determining data sources and hypotheses;
- **Data preparation.** Cleaning, transforming, and data storage;
- **Model planning.** For GSTAR, NN, and their integration process;
- **Model building.** Training, testing, and model validation;
- **Communication.** Evaluation of the model and final stage of discussing implementation with practitioners.

In the development of the GSTAR-NN model, we assume that:

- The data is **stationary**, meaning it doesn't change over time or space.
- The GSTAR model assumes a **linear** relationship between dependent and independent variables.
- The **homogeneity** of error variance across the dataset.
- The **weight matrix** is based on inverse distance.
- The **Ordinary Least Squares** method is used to estimate parameters.

Our case study in developing of the GSTAR-NN model is focused on rainfall data for three

locations in the West Java region in Indonesia: Lembang, Bogor, and Sukabumi. We used a model structure GSTAR(1,1) which means that the rainfall at i location at time t , is influenced by the rainfall data lagged by a one-time unit and the rainfall in the surrounding locations, and an error term.

For the weight initialisation method with the ReLU function, the variance of the weights is calculated based on the number of inputs in the layer, as in the He method. However, there is a change to the calculation of the variance factor in the formula. We applied the GSTAR-NN(1,1) architecture with three locations: one hidden layer, six input neurons, q neurons in the hidden layer, and one neuron in the output layer.


Real impact and collaboration

The results showed that spatiotemporal prediction using the GSTAR(1,1)-NN model reduced computational costs while improving accuracy which is measured using Mean Absolute Percentage Error. Visual reports from the model can help government agencies and organisations make better-informed decisions about rainfall forecasting.

Furthermore, the study can be developed through research collaboration between

academics and practitioners in the field of climate change. We also created an open-source tool in R, so we can work together with an expert in the computer industry to make the programme more user-friendly and easier for society to use.

Finally, we implemented the result in the international consortium of Research Innovation and Staff Exchange Social Media Analytics (RISE_SMA) funded by the European Union during 2019–2024. It is coordinated by Professor Stefan Stieglitz from Potsdam University and involves different partners, including Leiden University, Agder University, Queensland University, Sydney University, UNISINOS University, Padjadjaran University, VIRTIMO Berlin and Kristiansand Municipality. All members contributed significantly to the collaboration, helping to advance research, support sustainable careers, and create practical tools that benefit both society and industry.

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Image by MidJourney, prompt by Fabrizio Martina



News from the MCAA

Photo by Pineapple



Slow science to move forward? Rethinking science policy and research careers

Can slowing down actually help science move forward? In a world where researchers face relentless pressure to publish quickly and frequently, a growing movement, slow science is gaining traction. This article shares insights from the recent MCAA Around The World (ATW) webinar held on 9 May, where experts from academia and policy challenged traditional success metrics and advocated for a cultural shift toward care, collaboration, and meaningful impact in research careers. Discover why rethinking excellence could be the key to building a more inclusive and sustainable scientific future.

Theodota Lagouri is the Chair of the MCAA Policy Working Group and a Senior Research Scientist at CERN, affiliated with Yale University. With extensive experience in particle physics and high-energy collider experiments, she has significantly contributed to scientific research and international collaborations. As an active member of the MCAA and the EU Science Diplomacy Alliance, she advocates for science policy and diplomacy, fostering responsible research and inclusive innovation worldwide.

In an academic world driven by speed and measured by publication counts, funding, and citation metrics, the concept of slow science offers a powerful counter-narrative. At the recent ATW webinar titled [Slow Science to Move Forward? Rethinking Science Policy & Research Careers](#), organised by the MCAA Policy Working Group (WG) in collaboration with the Communication WG and the North America Chapter, speakers explored how

Image by MidJourney, prompt Fabrizio Martina



slower, more reflective research practices can help build sustainable, meaningful careers across various disciplines, particularly for early- and mid-career researchers.

Moderated by Theodota Lagouri, Chair of the MCAA Policy WG and supported by Tereza Szybisty, MCAA Policy Officer, the webinar critically examined the hidden costs of the publish - or - perish culture and the pressures of fast-paced, metrics-driven research environments. The session explored how the pace impacts career transitions, researchers' well-being, mentorship, and equity. Rather than calling for reduced ambition, speakers advocated redefining excellence to emphasise ethics, collaboration, and societal relevance.

From productivity to the ethics of care

Sandra Montón Subías, ICREA Research Professor at Universitat Pompeu Fabra, opened with a critique of academia's pathologies: relentless pressure to publish and the need to fit research into narrow funding calls. She described how publication fever displaces core values of inquiry and knowledge creation.

Sandra called for a cultural shift, from productivity metrics to an ethics of care: for researchers, communities, and knowledge integrity. She shared insights from her project MaGMA, which applies slow archaeology by incorporating rest, reflection, and inclusive fieldwork. In this model, time is not wasted but used wisely to ask better questions and foster deeper collaboration.

Slow science invites us to embrace ethics of care: PhD students are not our resources, but collaborators.

The human cost of acceleration

Sergio Crespo-García, Assistant Professor at Université de Montréal, shared his experience navigating the academic treadmill. Despite building a research group and securing funding, he endured 60–80 - hour workweeks, frequent rejections, and pressure to meet performance metrics.

His talk, "The Gas Pedal of Science: When Will I Be Able to Use the Brakes?" questioned whether early-career researchers can realistically slow down. Efforts to create equitable, supportive environments often

clash with institutional expectations rewarding quantity over quality, driving burnout and attrition.

Sergio's story highlights a critical question: Is academic success worth the personal cost?

Enabling systemic change through policy

Annelies Van de Ven, Policy Officer at the European Commission, offered a systems-level perspective. She stressed science's inherently collective nature and the need for institutional cultures to value mentorship, collaboration, and reflection, qualities often missing from current evaluation systems.

Citing the [Belgian Slow Science Manifesto](#), she emphasised that science should serve the public good, not prestige. Platforms like Open Research Europe promote open peer review, transparency, and sustainability. She called for alignment with reform initiatives such as:

- [Declaration on Research Assessment \(DORA\)](#)
- [Coalition for Advancing Research Assessment \(CoARA\)](#)
- [European Charter for Researchers](#)

Long-term funding schemes like the ERC's seven-year grants were highlighted as crucial, providing researchers with time and space for deeper inquiry and career development.

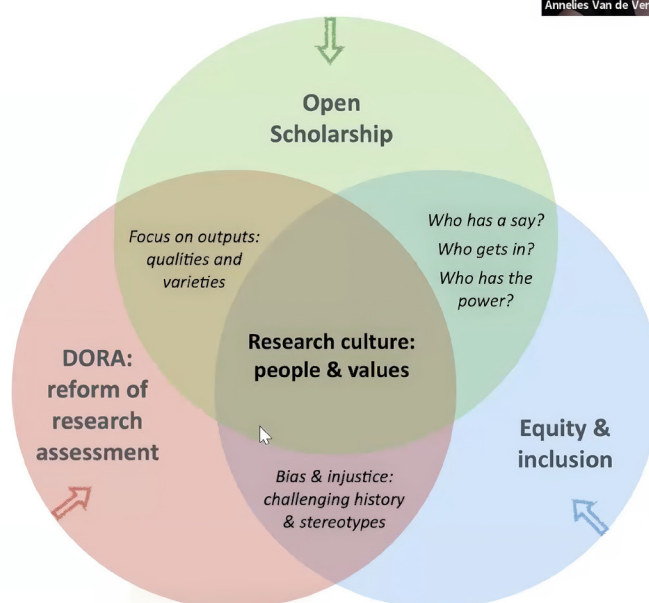
We may go faster alone, but we go further together: collaboration, reflection, and mentoring are essential.

Rethinking excellence and supporting transitions

A key theme was redefining excellence. What if success were measured not by publications or grants but by mentorship, collaboration, and societal impact?

Image by DORA

Accountability
> profitability



The concepts of (i) research assessment reform, (ii) open scholarship, and (iii) equity and inclusion cannot be treated separately.

This is vital for those navigating career transitions. Many leave academia not for lack of talent but because the system fails to support inclusive, balanced lives. Panellists emphasised that truly inclusive research environments must accommodate caregiving, chronic illness, and non-traditional career paths. Institutions must move beyond celebrating individual outliers and build systems that enable sustainable, collective achievement.

Building a culture of care

The session emphasised that meaningful change requires engagement from funders, institutions, policymakers, and researchers. Slow science is not about doing less but about creating space for depth, ethics, and long-term impact.

For those forging careers in academia, policy, or industry, this cultural shift offers a foundation for sustainability and fulfilment. It is a call to rethink not only how science is done but what future we want for research and researchers.

Closing reflections and key takeaways

The webinar highlighted the importance of critical thinking, ethics of care, and long-term reflective approaches as central to science policy. It urged looking beyond publications to lab culture, mentorship, and student engagement as indicators of impact. The discussion emphasised that meaningful scientific progress requires time and space, advocating for slow, open, collaborative practices. Support for platforms, reforms, and sustained funding was deemed essential.

The session closed with a call to reflect on implementing slow science principles within institutions and to continue advocating for policies prioritising quality, care, and collective impact in research.

In a world where research is increasingly pressured by speed and productivity demands, slow science offers a compelling alternative. It advocates for a more thoughtful, deliberate approach, valuing quality over quantity, collaboration over competition, and long-term impact over rapid turnover.

MCAA resources and initiatives

This webinar was part of the MCAA Policy WG's ongoing commitment to promoting inclusive and sustainable research careers with Monika Golinska appointed as the Task Force leader.

To get involved:

- Email: policy@mariecuriealumni.eu
- Follow the Policy WG on [X](#) and [LinkedIn](#)
- Learn more about the MCAA [Policy Working Group](#) and the MCAA [policy activities](#)

Recommended Reading

[Open Research Europe](#): Open access platform with transparent peer review

[PEP-CV](#): the MCAA's Peer-Exchange Platform for narrative CVs

[SECURE project](#): Building sustainable careers for researchers

[OPUS project](#): Reforming research assessment and incentivising Open Science

Theodota Lagouri [X](#)
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News from the MCAA

PROHITS: Unlocking the potential of thermophiles for a sustainable future

The PROHITS project explores heat-loving microorganisms, thermophiles, to develop greener, more efficient bio-based production. By combining proteomics, microbiology, and computational biology, PROHITS aims to unlock their biotechnological potential and train future experts in sustainable science.



Dinu received a master's degree in Chemical Sciences from the University of Genoa. He completed his thesis in collaboration with the University of Basque Country working on organic synthesis of bio-active compounds via multi-component organocatalysed reactions. After a short experience as Field Service Engineer, he joined the Italian Institute of Technology (IIT) as a Research Fellow. There, he was involved in investigating omics profiles, mainly

proteomics and lipidomics by mass spectrometry. Dinu has joined the PROHITS project with the aim of conducting collaborative and interconnected research on proteomics studies on thermophiles.



Josephine Boel Andresen received her B.Sc. and M.Sc. in Molecular Biology at the University of Copenhagen in Denmark, which included a study abroad at Imperial College London in the UK, a deep-sea expedition to the

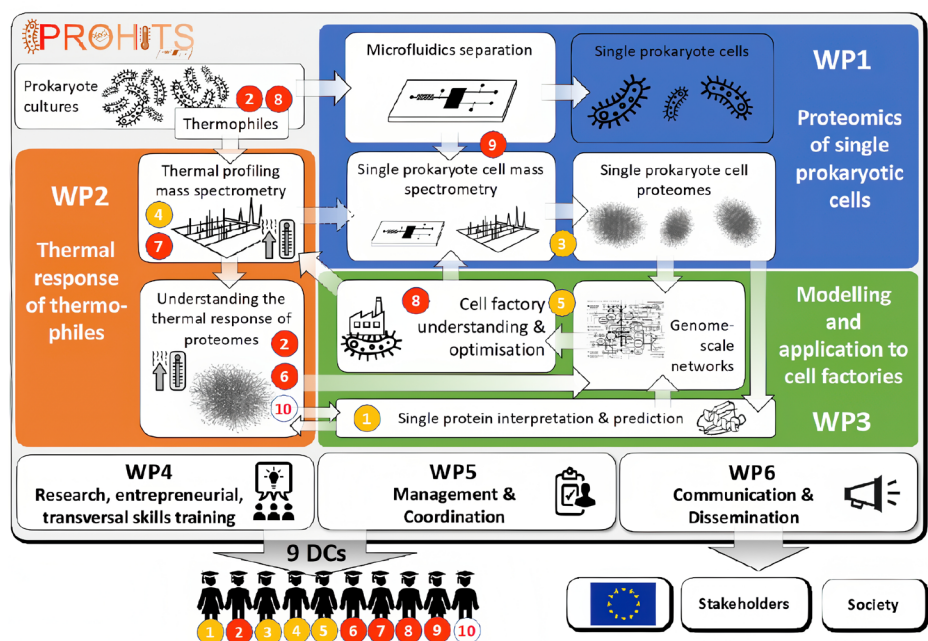
Our society is increasingly facing economic and environmental challenges, thus requiring the timely development of innovative approaches enabling more sustainable and eco-friendly industries. To support this ambition, the PROHITS project (Grant Agreement no. 101119980) aims to generate academic knowledge and industrial know-how to contribute to a better future by supporting the greener production of bio-based products.

Sognefjord in Norway to study life in the absence of natural light, and a thesis focusing on photosynthesis-directed optimisation of microalgae as biofactories. She was employed as a Research Assistant at the Technical University of Denmark to develop biohydrogen production from anaerobic and thermophilic bacteria from the subsurface, before joining the EU-funded PROHITS project, which cements her continuous curiosity in extreme life and how to deploy it for climate change mitigation.

The PROHITS Consortium focuses on studying a class of extremophilic microorganisms that is still unexplored: thermophiles. The term extremophiles covers microbes that have evolved to survive and thrive in environments where most species on Earth would not. This encompasses hypersaline lakes (halophiles), very acidic or alkaline environments such as mining areas (acido- or alkaliphiles), or hot areas like hot springs or solfatara (i.e. fumaroles emitting sulphurous vapours) where the temperature exceeds 45°C. This is where our microbes of interest, the thermophiles, live.

The ability of these living systems to survive in extreme environmental conditions is of great interest: What traits in their biology allow them to survive in extreme heat? Can we translate those traits into knowledge useful for biotechnological applications? For the next three years, PROHITS will bring cross-disciplinary approaches to uncover and explore the biomolecular key players that enable their heat resistance: proteins.

The PROHITS project brings together experts in mass spectrometry (MS)-driven proteomics, microbiology, and computational biology. This collaboration will drive new discoveries in thermophile biology.



Overview of the different work packages of PROHITS and the connections between the DCs responsibilities and expertise. DCs 1-9 are funded by PROHITS. DC 10 is funded by grant 2020-2.1.1-ED-2023-00269 from the Hungarian National Research, Development and Innovation Fund.

Why focus on thermophiles?

Thermophiles' unique features enabling them to thrive in high temperatures make them ideal candidates for many applications. In an industrial setting, higher temperatures mean faster biochemical reactions and higher conversion rates. Once optimal conditions are achieved, thermophiles could transform biomass into biofuels and biomaterials sustainably via fermentation. These microorganisms could also produce proteins, enzymes or active compounds with industrial and pharmaceutical potential. Industrial microbe-derived fermentation also produces considerable amounts of heat,

as the processes take place in large bioreactors.

In typical mesophilic-driven fermentations, such as those using yeast cells, companies must use energy to cool down the reactor to maximise microbial survival. This is due to fermentation being a heat-generating process, which is lethal to the yeast cells without cooling. Thermophiles, on the other hand, thrive on their own heat generation during fermentation. Thus, utilising their fundamental biology as heat lovers can ensure not only that less energy (heat) is wasted, but fewer resources are needed to ensure thermal control. Furthermore, basing the fermentation on thermophilic growth also

removes contamination risks, as external and competing microbes cannot survive in elevated temperatures.

Among innovative approaches in the PROHITS project are:

- Mass Spectrometry (MS)-based proteomics to identify and quantify proteins within multiple and single thermophilic microbial cells.
- Computational biology to integrate, interpret and visualise the large amount of generated proteomic data.
- Temperature-specific experiments to understand how the cells and their proteomes adapt to heat variations.
- Biotechnological applications to implement the knowledge from the proteomics data to engineer thermophilic cells as future bioproduction platforms.

PROHITS is more than just a European research project. It is a training and collaborative network, distributed across five countries, designed to shape the next generation of scientists. Ten Doctoral Candidates (DCs) are working across leading universities and research institutes. The DCs have a diverse scientific background, which ensures the challenges targeted by PROHITS can be explored from different angles.

With expertise in proteomics, data analysis and biotechnology, the DCs will be well-equipped to reshape the future by bringing a new wave of cutting-edge sustainable developments. This outlines the doctoral network that is fundamental to the PROHITS project, in which the mentoring and guidance of renowned experts at the project's respective partner institutions will help them

become the future scientific leaders in the EU.

Understanding thermophile proteomes will revolutionise biotechnology. From biofuel production to sustainable materials production, these microorganisms offer immense possibilities. PROHITS will provide the missing knowledge to harness their full potential as future biofactories.

To learn more about the project, visit the [project website](#) and social media channels ([LinkedIn](#), [Bluesky](#), [Instagram](#), [X](#)).

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Photo by PROHITS

The ten DCs of PROHITS photographed in the LSMBO laboratory in Strasbourg, one of the academic partners of the project, during their first workshop in October 2024.

Partner

Galicia, a growing R&I ecosystem, welcomes MSCA talent



In the last 10 years, Galicia's research and innovation ecosystem has experienced impressive growth and strengthening. Xunta de Galicia, the autonomous government of this region in the north-west of Spain, has made a firm commitment to scientific excellence, promoting a network ([CIGUS](#)) of the most competitive university research centres and creating programmes such as Oportunius to attract and support ERC grantees,

an initiative managed by the Galician Innovation Agency, which is part of the Consellería de Educación, Ciencia, Universidades e Formación Profesional.

The successful [Oportunius Programme](#), which has attracted and funded 34 ERC grant holders since 2014 with an investment of €14 million, is now being extended to include training and guidance for MSCA fellows. Between 2019 and 2023, Galicia has

obtained 123 MSCA grants — an increase of 146% compared to 2014–2018 — and now ranks sixth among all Spanish regions in terms of MSCA Fellowships. The aim is to continue increasing the number of national and international researchers that apply for a MSCA grant with a Galician host institution.

Galicia's rich and dynamic R&I ecosystem offers multiple opportunities for researchers at any stage of their scientific career. The region has three public universities — in Santiago de Compostela, A Coruña and Vigo — and more than 40 research centres. Among them, the 10 centres of the CIGUS Network stand out for their indicators of scientific excellence and cover a very diverse range of disciplines, from ICT — including AI, quantum communications and satellite technologies — to environmental and marine studies, biomedicine, chemical biology particle physics, and more.

The CIGUS Network includes [CIMUS](#), [CIQUS](#), [CITIUS](#), [CRETUS](#) and [IGFAE](#) from the University of Santiago de Compostela (USC); [atlanTTic](#), [CIM](#) and [CINBIO](#) from the University of Vigo (UVigo); and [CICA](#) and [CITIC](#) from the University of A Coruña (UDC). These 10 centres gather around 1,600 researchers, raised more than €180M in competitive funds between



2020 and 2023, obtained 32 ERC-funded projects out of the total 42 in the region, and have promoted the creation of more than 36 spin-offs.

However, CIGUS is just the tip of the iceberg. Together, the three universities have 16 other research institutes, including three inter-university research centres, in fields as diverse as economics, mathematics, engineering, materials science, sociology and cultural studies. The Consejo Superior de Investigaciones Científicas (CSIC), the biggest scientific institution in Spain, has four research institutes and two centres of the Spanish Institute of Oceanography (IEO) in Galicia.

This panorama is completed by unique research infrastructures, such as the [Galician Supercomputing Centre](#) (CESGA) — leading the Quantum Technologies Pole, one of the priorities of the Galician research strategy, nine technology centres with a substantial investment of resources in research — including about 300 R&I positions offered every year,

and an industrial fabric that comprises more than 1,700 innovative companies. This favours not only the transfer of knowledge and technology to society, but also the career development possibilities of junior and senior researchers.

The aforementioned Oportunius Programme, managed by the [Axencia Galega de Innovación](#), is one of these excellent opportunities for experienced researchers. The initiative offers contracts to national and international ERC grantees that want to carry out their projects with a Galician host institution, as well as financial support complementary to ERC funding during and after the grant period. In addition, Oportunius offers economic support and expert advice to researchers from any country willing to submit an ERC application with a Galician organisation who have been successful in the first ERC evaluation phase, or hold an A assessment, without financial awards, in the ERC access process.

To learn more about Oportunius Programme and request specific information,

researchers can visit the website oportunius.eu. Those interested in applying for an MSCA grant with a Galician host institution can directly contact the target centre or the recruitment services of the three universities: USC ([Portal 'Carreira investigadora'](#)), UDC ([Research Staff Recruitment Office](#)) and UVigo ([Research Career](#)).

Galicia offers multiple opportunities to develop a successful research career. Besides top-notch scientific infrastructures, excellent research centres, and an innovative and collaborative R&I environment, working here makes it possible to enjoy a privileged natural landscape, live in medium-sized cities close to the mountains and the sea — Galicia has more than 1,500 km of coastline and delight in a rich culture that combines tradition, historical heritage and modernity.

[Axencia Galega de Innovación](#)

Accessibility Statement

The MCAA believes in a society based on diversity. A society where diversity is the norm, not a deviation. A society where diversity is a strength, not a weakness. Access barriers are created by a society that does not acknowledge the value of diversity. Diversity and access are foundational elements of the flourishing of the research endeavour.

As a community of researchers, the MCAA is committed to increase the accessibility of its products, services, and events. Under the leadership of the Editorial Team of the Communication Working Group, with the support of other Working Groups and the MCAA Board, the MCAA has been promoting a series of actions aimed at increasing the inclusivity of its community and reducing access barriers.

Since the June 2021 issue, the MCAA Newsletter has a new layout. The new design should make the reading experience more accessible by reducing a number of barriers our readers may face.

The new layout complies with many requirements of major print and digital accessibility standards and guidelines. For example, background and foreground colours were selected and paired so as to fulfil the AAA level requirements for colour contrast devised by the Web Content Accessibility Guidelines (WCAG 2.1). Colour selection and pairing also complies with requirements for colour blindness. The text is not justified in order to keep the spacing between words consistent and regular in the entire text. Line spacing and font size were revised and increased too. Each macro-section is identified by a different colour so as to provide the reader with a map of content organisation. The layout adopts TestMe, a font inspired by the Design for All principles. Last but not least, the PDF file now complies with PDF accessibility requirements and can be used by screen readers.



Editorial information



About

The MCAA Newsletter is the main communication channel for and about the MCAA community. It is a publication venue for science communication and public outreach. Its main aim is the dissemination of information about past and current MSCA projects, as well as activities of MCAA Chapters and Working Groups, events, and members' achievements.

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