



IRRADIUM  
MAGAZINE

# 2022: THE EUROPEAN YEAR OF YOUTH



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# Chair's Letter



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Dear Member,

Let me start by wishing you a happy 2022 filled with joy, safety and inspiring ideas. I hope you and your loved ones remain COVID-free and healthy. Though the coronavirus pandemic was painfully present in all

our daily lives, the MCAA board strategically planned to hold nearly all activities online in order to ensure safety and provide support to our members as needed. Let's look at some of the key events, policy initiatives, career development opportunities and various organisational aspects that were in focus last year.

At the beginning of 2021, MCAA organised two sessions at the annual meeting of the American Association for Advancement of Science (AAAS). During the first session we discussed the results of the MCAA - KAZI Survey and how we could minimise the gap between researchers and prospective employers. This session was a continuation of the ESOF session on the same topic. During the second session we provided practical guidance on how to prepare a career inside and outside academia.

Our flagship event, the Annual Conference 2021 took place in virtual format between 5 and 7 March with the theme "Research in the Time of Crisis." There were 15 parallel sessions, which focused on career development, science policy, researchers' mental health and many more. Distinguished guests and high officials of the European Union such as European Commissioner Mariya Gabriel, AAAS CEO Sudip Parikh, Chief Scientific Advisor Nicole Grobert, Secretary General Lidia Borrel Damian, President of International Science Council Prof. Peter Gluckman, and Economist Tim Harford graced us with wisdom and encouragement at different sessions.



Externally, MCAA representatives were invited to speak at several high-level events including, [European Research & Innovations Days](#), [1st EuroScience Policy Forum](#), [Science Business Event](#) on the value of Science to Society, [Global Research Council Regional Meeting](#), [Brussels Future Talks](#), and [MSCA Conference 2021](#).

As regards providing career development opportunities, MCAA provided courses on career mapping and entrepreneurship in early 2021. Throughout the year, we provided complimentary access to LinkedIn learning, Coursera and e-Cornell to targeted member groups. Overall, over 38,000 learning contents were viewed and over 1,100 courses were completed by the MCAA learners on these platforms. In addition, the pilot phase of the mentoring platform is currently running among the selected members. The mentoring platform will be accessible later to all MCAA members free of cost, guiding them on various career-relevant topics towards different career paths. Moreover, led by the Communication working group, different chapters and working groups are organising regular MCAA monthly webinars focusing on career development.

In 2021, MCAA officially [became a member](#) of the International Science Council ([ISC](#)). This will certainly allow our members to take part in different ISC initiatives focusing on research policy, Gender and Diversity in Research, and Scholars at Risk. MCAA also became a member of the EU Science Diplomacy Alliance. I am glad to report that several MCAA members are contributing to different working groups already.

In the Policy arena, the MCAA took part in several policy initiatives, joined numerous stakeholders' meetings focused on different action points of the ERA Policy Agenda. The MCAA experts also provided their feedback on the ERA Talent Platform, Future of EURAXESS, Revamping of European Charter & Code, Mobility flows in MSCA and the Knowledge ecosystem project.

The MCAA was part of [an open letter](#) urging policymakers to include stakeholders in the ERA Forum for transition. Thanks to this initiative, the Council of the European Union adopted a conclusion that supports the inclusion of seven stakeholders' groups in the ERA governance. MCAA is now a part of group 4 - Individual researchers. MCAA Policy WG Chair Renaud Jolivet was selected as the representative of this group. On a different topic, MCAA together with 24 other organisations issued a statement urging the European Commission and the UK Government to work towards a successful [UK association to Horizon Europe](#). Last but not least, DG Research & Innovation from the European Commission published a scoping report on the future of research assessment. As a next step, a coalition similar to Plan S will be established to work on the reform of the researcher assessment. MCAA was part of the initial meeting on 8 December and will actively contribute to changing the assessment system for the researcher.

From the organisational point of view, MCAA has over 20,000 members from 151 countries. This increasing number is a unique opportunity for the association to understand the challenges faced by researchers. This



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understanding will be key to developing future strategies for the association as well as providing policy input to relevant stakeholders. That's why our Survey working group conducted a study and the preliminary results will be presented at the MCAA Annual Conference 2022. Our chapters and working groups around the globe organised numerous events. In November 2021, seven board members and service providers joined a face-to-face board meeting in Vienna. This was the first on-site board meeting since October 2019.

At the beginning of 2022, MCAA secured funding for two Horizon Europe projects focusing on Citizen Science and researchers' assessment.

As this board will finish its term in March 2022, looking back at the last two years, MCAA boasted a significant growth in terms of numbers and initiatives as an association. One of the biggest achievements was the new type of contract with the European Commission which ensures organisational sustainability. This association was born out of the passion of its volunteers. But due to the enormous growth, a stable operational team is necessary in future – and that future looks bright!

Personally, it was an absolute honour and privilege for me to serve the association for over four years: two years as vice-chair and two years as chair. I was lucky to be a part of MCAA when it was born and to be part of its growth as an association. I had the chance to see the brilliant minds of MCAA impacting diverse fields in different countries. This issue of the magazine

is the perfect example of this. I am immensely grateful for the support I received from internal and external stakeholders, namely chairs of chapters and working groups, past and current board members, service providers, the MSCA Unit, active volunteers and YOU! A special thanks to my daughter and my wife for bearing with me during the last four years. From the bottom of my heart, I thank you for your contributions and I hope that you will continue to make MCAA the best version ever. I truly hope that the new MCAA leadership will take this association to a new level. I hope that our paths will cross again in the future.

Until then, let us pay it forward and Good Luck!

**Mostafa Moonir Shawrav**  
**MCAA Chair**

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# Overcoming the crisis: "Reuniting the scientific and literary elements of a desirable culture"



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In her autobiographical notes published as an appendix to her book on Pierre Curie, Marie Skłodowska-Curie recalls how since her childhood she had a “strong taste for poetry” which became “even more developed when [she] became acquainted with foreign literatures” (Curie, 1923, p. 160). She was “familiar with the fine works” of German, French, Russian, and English literature, while also learning “easily mathematics and physics” (Curie, 1923, p. 160-161). At eighteen years of age, before turning “towards mathematics and physics,” she “had not yet decided what path to choose. [Because she] was as much interested in literature and sociology as in science” (Curie, 1923, p. 165).

Twenty years later, in 1907, she reached out to some friends, including Paul Langevin, Jean Magrou, Henri Mouton, and Henriette Perrin. “The cooperative” – as they used to call their informal group – aimed at providing their children with an education “reuniting the scientific and literary elements of a desirable culture” (Curie, 1923, p. 195) and overcoming what they saw as the limits of the French system of the time. Each member was in charge of teaching several subjects. The curriculum included mathematics, physics, chemistry, natural sciences,

history, geography, French literature, foreign languages, and drawing as well as sports and visits to the Louvre and Carnavalet museums. The lessons were integrated with practical activities; for instance, Langevin’s classes were held at his Sorbonne laboratory (Jacquemond, 2014; Quinn, 1995). Fifty years before Snow (1959) delivered his influential and controversial lecture on ‘The Two Cultures’, Marie Skłodowska-Curie had already made an effort to neither discard one nor the other but to ‘reunite’ them into a ‘desirable culture.’

For years now, we have been inundated by alarms of crises in academia. Two popular ones are the crisis of the humanities and the STEM crisis, where STEM usually stands for science, technology, engineering, and mathematics. While they are labels that attempt to frame multi-layered situations with many facets of complexity, in popular discourse they tend to be reduced to a handful of oversimplified cases. The STEM crisis is often summarised as a lack of STEM professionals whose numbers cannot – and will not – satisfy the increasing job demands of a STEM-driven world as well as the need to address current and future shortages through aggressive education reforms. As for the crisis of the humanities, some of the points



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within its general discourse are usually the corporatisation of higher education and the transformation of university education into vocational training, which results in cutting courses, graduate programmes, and funding. As might be imagined, the social sciences – which Snow (1964) calls the third culture – are in crisis as well.

As we experienced first-hand over the last two years due to the pandemic, the rhetoric of the crisis plays on exacerbating distinctions: ‘us’ and ‘them’, friends and enemies. A possible risk of those cries for crises, especially in their popularisations, is to frame them as fights among disciplines, a sort of clash of disciplinary cultures: STEM against the humanities against the social sciences. A risk that may lead people, especially the youth, to think that they are mutually exclusive. But a STEM-driven world can also be a humanities-driven world. The European Commission’s work on artificial intelligence (AI) over the last few years is a case in point. Faced with the need to address the increasingly pervasive and ubiquitous presence of AI, the Commission established a [High-level Expert Group on AI](#). The group was not made exclusively by, say, computer scientists and engineers. It also comprised scholars from the humanities and the

social sciences, industries, and even social organisations, like the Austrian Association in Support of the Blind and Visually Impaired. The very first deliverable of the group was an [ethical framework](#) upon which future regulations were to be grounded. To address a STEM-driven problem, they turned to a humanities-based solution.

The European Commission has proclaimed 2022 as the [European Year of Youth](#), and the thematic section of this issue of IRRADIUM is devoted to this topic. [Eurostat](#) defines ‘youth’ as people between 15 and 29 years old. It means that ‘youth’ comprises teenagers, who like Marie Skłodowska-Curie, have “not yet decided what path to choose;” undergraduate and graduate students; professionals and researchers at an early stage of their careers. It also means that a portion of the Marie Curie Alumni Association (MCAA) members – such as many holders of doctoral and postdoctoral fellowships – falls within the youth group. The MCAA is in a privileged position to defuse the rhetoric of crisis and promote an interdisciplinary dialogue that could foster common flourishing. Over 20,000 members from 151 countries make up a unique collection of research areas, expertise, cultures, and life experiences. The very Marie Skłodowska-Curie Actions programme we all are or





were part of has as its core tenet the value of dialogue and cross-fertilisation among disciplines.

In the Commission's intentions, the European Year of Youth should be "the moment to move forward with confidence and hope in a post-pandemic perspective." In the midst of the COVID-19 crisis, the Commission decided to look at young people in order to design a way out. This year could also be the moment for the MCAA to begin to pay even closer attention to the youth, its current young members as well as future ones. The MCAA has already started to implement several actions mainly – although not exclusively – addressed to its younger members, such as the soon-to-be-launched mentoring programme. The European Year of Youth could be the time to start taking some more systematic steps. One such step could be the initiation of an internal programme to regularly discuss the problems faced by its young members, for example, in relation to the disciplinary crises. Another step could be an external programme designed to reach out to teenagers and undergraduates – that is, the future researchers in STEM, social sciences and humanities – so that they can see first-hand the wealth there is in disciplinary and cultural diversity and interaction.

A third step could be the establishment of a Working Group on Education. A major issue strictly linked to the disciplinary crises is that of the substantial changes in university education. The MCAA is not a learned society focused on some specific discipline. This could be an advantage. Meaning that at the heart of the MCAA does not lie a single discipline that towers over the others. Its core focus is researchers. Thus, the vast majority of activities, as signified by its Working Groups, has to do with topics like career development, bridging research and business, research funding, and research policies. But the researchers of today and tomorrow depend on today's and tomorrow's education. Once again, over 20,000 members from 151 countries form a rare assortment of experiences of the most diverse education systems. It may be time for our organisation to capitalise on this wealth and start engaging more programmatically with the problem of university education.

Those are but three steps among the many that our organisation could undertake by engaging even more with its current and future youth members. In the European Year of Youth, such an engagement could help the MCAA become a community all the more defined by the openness





of its members to otherness, a community where human and disciplinary diversity is a value. And in doing so, it could take us one step closer to the 'desirable culture' wished by Marie Skłodowska-Curie over a century ago.

**Gian Maria Greco**  
**IRRADIUM Editor-in-Chief**

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# TWO-YEAR REVIEW

## Ensuring the sustainability of the MCAA

**The COVID-19 pandemic may have curtailed activities but growth in MCAA membership remained steady. Mostafa Shawrav, who has been chair of MCAA since 2020, speaks to us about the activities led by the Board during the past two years.**

Mostafa Moonir Shawrav has been the chair of MCAA since 2020 and was vice-chair for the previous 2 years. Entering his new role as MCAA chair, Mostafa faced an unprecedented challenge: COVID-19. “The pandemic created opportunities for us to engage with internal and external stakeholders in a way which we never imagined before,” he recalls.

### TAKING THE LEAD

Like every life experience – especially those that are challenging, the pandemic was an opportunity to learn and grow. “I learned how to persevere, understand different points of view, lead a multicultural, diverse team of volunteers with different expertise, communicate effectively and much more,” Mostafa says.

As MCAA Chair, he has taken on a large variety of tasks and responsibilities – from the overall management of the association and forming multi-level stakeholder relationships to forging internal governance, sponsorships and providing external and internal training. Rising to the challenges, Mostafa dedicated a large part of his workday to MCAA, devoting up to 80 hours each month.

### A COMMITTED BOARD

Mostafa was not alone during the past two years. The work and dedication of the MCAA Board resulted in a series of great achievements. Mostafa is quick to note the creation of a long-term strategic vision for the association that will serve as a baseline for future MCAA leaders. Improvements in communication activities and the internal processes as regards the functioning of the chapters and working groups top the list of achievements.

Mostafa also highlights the Board’s commitment to the field of science policy. “The MCAA was quite active on various policy-related topics focusing on Horizon Europe, the EU key funding programme for research and innovation, as well as the European Research Area, open science, researchers assessment, the mental health of researchers, and many others. It is thanks to the expertise of all our members that the MCAA established itself as a leading association working to shape the future of Science Policy in Europe,” he explains.

What’s more, MCAA offered a range of career development opportunities (online courses via eCornell, Coursera, LinkedIn Learning) and customised courses on topics such as Design Thinking for career planning, entrepreneurship, science diplomacy, and mental health. “Currently, a pilot phase of the mentoring programme is ongoing. After the evaluation, a separate mentoring platform will be opened for all our members,” adds Mostafa.

He also notes the importance of the synergies created with various organisations such as Initiative for Science in Europe, Eurodoc, Young Academy of Europe, and EuroScience. The MCAA also became a member of both the International Science Council (ISC) and the EU Science Diplomacy Alliance.

All the while, membership has been growing. MCAA membership increased from 14,000 to 20,000 in less than two years. “Considering that we couldn’t hold any physical events [due to COVID-19 lockdown measures], this is a remarkable increase,” he says.



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## FOR THE FUTURE MCAA CHAIR

Asked about the future of MCAA, Mostafa foresees significant changes in the financial support the MCAA receives, resulting in a self-sustained organisation. “If there is a single achievement that needs to be mentioned, I think this is ensuring the sustainability of the organisation in terms of future support,” he explains.

When the time comes to pass the baton to his successor, Mostafa will be ready with tips and advice. “My suggestion would be to focus on the holistic view of the association, understand the unique advantage of MCAA, how to leverage a large number of volunteers and engage them in different activities,” he says. For Mostafa, understanding Europe’s evolving research landscape and the challenges faced by researchers is key to ensuring a successful mandate as chair. Also, the next chair should not be afraid to delegate, according to Mostafa.

“It was an honour and privilege to serve the association for two years as chair and prior to that, two years as a vice-chair. I would also like to take this opportunity to thank all of you,” he concludes.

**Aurélia Chaise**  
**MCAA Editorial Team**

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# TWO-YEAR REVIEW

## Influencing the research policy arena



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**As one of MCAA's two vice-chairs, Fernanda Bajanca highlights the variety of the work and the unwavering drive to learn and grow.**

The MCAA is a busy and bustling association. With each new day, a new initiative is launched or an issue highlighted. There's never a dull moment, according to Fernanda Bajanca, who also stresses the importance of teamwork. "Whenever there are defined teams to deal with specific issues, like partnerships, chapters and working groups management and communication activities, it is easy to delegate," she says. "Our job is to match the right people to each request."

In addition to the day-to-day tasks, Fernanda notes the importance of MCAA's long-term commitments. "The bigger projects require the contribution of several Board members and volunteers. These include the MCAA Academia, the Annual General Assembly and Annual Conference and the revision of the Statutes of the MCAA, just to mention a few of the big ones that we have ongoing at this moment."

Asked to describe her experience on the MCAA Board, she says it's exciting but requires dedication and time. She is happy, however, to have been part of the "core team" as she had the opportunity to learn more about the association. "It is a learning curve and requires a very strong engagement and an open mind," she adds.





## POLICY, CAREER DEVELOPMENT AND NETWORKING

Looking back at the past two years' achievements, Fernanda explains that the Board has organised its activities around three pillars: policy, career development, and networking. It's a strategy, she says, that has been effective.

"MCAA's impact on the research policy arena has been increasingly recognised. We receive invitations regularly to provide input into various policy issues relevant to our member base. We are now members of the International Science Council (ISC) and the Initiative for Science in Europe (ISE), and we are better equipped to make the voice of our members heard at a level that we were not reaching before," says Fernanda.

She also notes how the Board has worked to strengthen the MCAA offer on career development support, by offering hundreds of free licences to the members for platforms such as Coursera, eCornell and LinkedIn Learning.

MCAA also received support from the European Commission to extend the Micro-grants programme to facilitate members' participation in online courses and virtual events. "We now need to officially launch the MCAA Academia to complete our ultimate goal for this mandate relative to support for career development."

## DIGITALLY INCLUSIVE

Networking activities (like all physical events), however, have been limited by the pandemic. Despite some disadvantages, Fernanda emphasises the advantages of going digital. "The ecological impact of virtual activities is lower, and it can benefit a larger number of members regardless of their physical location. This is therefore a trend that we want to embrace, and while planning every activity now we always consider whether we can at least make it hybrid," she says.

For Fernanda, it's important that all MCAA members are proactive and never hesitate to share their ideas. "This association works from the bottom up, so no one needs to wait to be asked in order to contribute," she says, adding that the local level is key. "Once one gets involved it is difficult not to feel responsible for keeping this community growing," she adds.

Ready to take up the challenge?

**Aurélia Chaise**  
**MCAA Editorial Team**

# TWO-YEAR REVIEW

## A role with many hats

Valentina Ferro was happy to serve as MCAA vice-chair for a second term. She talks to us about her role and her experiences before and after the outbreak of the COVID-19 pandemic.

If you ask Valentina Ferro what it was like to serve as MCAA vice-chair, she will likely mention the many hats she has happily worn to help MCAA achieve its goals. This is one of the things she loved the most about her role.

“I had the opportunity to explore and learn many new skills. One day I would be interacting with members, gathering their feedback to improve our website. The next day I would be leading the taskforce for our virtual conference, juggling many complex tasks at any given time from gathering quotes for software, identifying solutions, and coordinating between different stakeholders,” she explains.

### DEEPER COMMUNICATION

Serving as a mediator was a privilege since she could smoothly facilitate the communication and exchange of information between the different MCAA members.

Looking back at the highlights of the past two years, Valentina is proud to have learned to trust. “Showing vulnerability has empowered me and the people I worked with to trust each other, to connect to a deeper level and to better understand the challenges ahead and how to solve them. In my previous term, I was known for always sharing my opinion during meetings. This time around, I tried to listen more,” she says.

### BEFORE AND AFTER THE PANDEMIC

Having served as the MCAA vice-chair for two mandates, Valentina’s experience has been rather unique in the sense that she worked behind the scenes of the MCAA before and during the COVID-19 pandemic. This is something that worked to her advantage. She says: “I feel that despite the odds, and thanks to the unbelievable commitment of the current Board, MCAA has proven to



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be a mature organisation. We have shown our members and ourselves that, with a common mission, we can really overcome big challenges. The complications that the pandemic has created for us made our work extremely interesting and valuable.”

According to Valentina, MCAA currently boasts an excellent reputation within the European research arena. All thanks to the achievements of the past two years. “We have managed to be an ever-present voice for researchers and scientists. And during difficult times like the COVID-19 pandemic, we have been a current source of support and career development opportunities. We have done all by maintaining the highest standards when it comes to sustainability and accessibility, thus aligning our every activity to the core values that we believe in,” she says.



Looking back at her own accomplishments as MCAA vice-chair, Valentina is particularly pleased with the virtual conferences. She recalls all the hard work that went towards the organisation of the first virtual conference. “I coordinated the overall organisation of the conference, leading a committed and talented team that worked behind the scenes of the programme, identifying our technical needs and setting boundaries so that we would not be overwhelmed by the amount of content but instead focusing on the quality of that content,” she adds. This work has been recognised and awarded by the collaboration established between the involved members. Valentina feels thankful. She says: “I’m always floored by the commitment of MCAA active members: they really are the heart of the association!”.

## INVESTMENT IN QUALITY TIME

Addressing her successor, Valentina recommends (above all) to have fun! Dealing with the day-to-day activities of the association is of course part of the vice-chair’s tasks, but Valentina emphasises the importance of dedicating time to an MCAA activity that particularly

matters. “For me, it was the virtual conference and laying the ground for future virtual or hybrid conferences to come. But it can be anything, as long as it is fun and gives you the right motivation to move forward when things might become overwhelming,” she notes.

In the end, the best advice Valentina can offer is simple. Join the MCAA! “If you play an active role, you’d be surprised by the amount of support, encouragement and resources MCAA can provide,” she concludes.

**Aurélia Chaise**  
**MCAA Editorial Team**

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# TWO-YEAR REVIEW

## A demanding, productive and digital journey

There is nothing ordinary about Esther Hegel's MCAA experience except for the fact that she started as an Ordinary Board Member before serving as Treasurer from 2021. We ask her about this dual experience.



Esther Hegel's MCAA journey has been "demanding, productive and digital." This is how she describes it. "At the beginning of our term and the pandemic, it took us a while to set up a new way of working but we adapted very well with less frequent but fixed dates for meetings and suitable platforms to collaborate such as Teams, Zoom, and Monday," she adds.

### STRONG CONTACTS

For Esther, serving the MCAA is all about personal contacts. "Often, the amount of work you face as a member of the Board can be mind-blowing and very tedious; so it's of utmost importance to establish a good relationship with the other members of the Board and active MCAA members to share responsibilities and stay motivated," she says.

In addition to the general Board tasks, Esther mostly dealt with the management of chapters and working groups.

Together with Gledson Emidio and Mostafa Shawrav, she managed to establish new standards for the MCAA chairs, such as standardised logos, Google Workspace accounts and storage places, as well as training and networking initiatives.

"As treasurer, I am currently trying to catch up with our finances. Besides that, I have also been working on partnerships and as a contact point for the Bridging Science and Business Working Group," adds Esther.

### MANAGING THE CHAPTERS AND WORKING GROUP CHAIRS

The board has succeeded in taking the association to the next level, according to Esther. "We improved many processes, offered plenty of career development opportunities, and expanded our network, especially in the science-policy field. Overall, I would say we became more professional!"





Esther is also proud to have contributed successfully to the management of the working group and chapter chairs. She also notes a few challenges such as “Working fully digitally, tons of emails 24/7, too many complicated procedures and rules.”

To her successor, she would strongly recommend the establishment of a tight relationship between the members of the future board, by organising a team-building event to get to know each other and align future expectations and goals. She believes all MCAA members should be active

contributors of the association. “We need your ideas and input to grow further,” she says.

**Aurélia Chaise**  
**MCAA Editorial Team**



## TWO-YEAR REVIEW

# Thinking out of the box to increase membership



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Serving as Secretary of the MCAA Board, Marina's work was greatly impacted by the COVID-19 pandemic and lockdown measures that required the entire association to go fully digital.

Marina is pleased to have taken up the challenge. "As Secretary, I focused my efforts on communication, both within the Board and outside, with chairs and members," she says. "I started on this work with the ambition to increase member engagement and had to think of ways to do this without using traditional interfaces."

For Marina, serving as secretary was an opportunity. "I have learned so many things about policy work related

As the outgoing Secretary of the MCAA Board, Marina Rantanen highlights the benefits of an overall strategy and commitment to a strong work ethic. She also sheds light on the importance of time management when volunteering for the MCAA.

to the European Commission and how an organisation such as ours can contribute positively within a landscape which is not always easy to navigate," she explains.

### TRANSPARENCY AND ETHICS IN THE SPOTLIGHT

Marina devoted much of her time to issues related to transparency, and more specifically to transparent criteria for the attribution of micro-grants awards. In this scope, the Board has also worked on the formation of an ethics committee. Marina believes this aspect is of most importance and should be carried on by the future Board.

On a more personal level, Marina is glad to have established the MCAA Insider, an internal newsletter that aims at communicating the latest news from the ExCom, board, chapters and working groups.

"Before the Insider, we had to refer to the ExCom and board meeting minutes, chapter and Working Group websites and social media, which can be time consuming and difficult to filter," explains Marina. She hopes that this initiative will also be continued by the next board and eventually published on the website to be accessible to all members.

### TIME MANAGEMENT IS KEY

For her successor, Marina has a special message: "Plan your work well ahead of time and set specific time aside for the various tasks. Working on all the tasks of the MCAA



Board requires a huge time investment, if one wants to do it well.” For instance, time management was one of the biggest challenges she encountered as Secretary of the MCAA. Therefore she strongly recommends setting short-term goals.

Marina encourages all MCAA members to get involved in the association and highlights the benefits of being active. “This organisation will work best for you if you work for

this organisation! My years as chair of the Germany Chapter helped me build my network, taught me about research policy work and gave me new perspectives on my future career,” she concludes.

**Aurélia Chaise**  
**MCAA Editorial Team**



# On the advantages of European technological grants

During my first faculty position, which was a joint appointment between the European Organisation for Nuclear Research (CERN) and the University of Geneva, I was expected to secure funding to start and finance my own research group, as my appointment did not come with any significant startup funds. While I had the opportunity to apply for national and more local funding, these did not necessarily suffice. More importantly, they might not have been enough to expand my research in new, more ambitious, and collaborative directions.

It was thus natural to turn to European funding, and more specifically to Horizon 2020 Future and Emerging Technologies Open grants (H2020 FET-Open). These grants now fall within the remit of the newly created European Innovation Council (EIC) and are called Horizon Europe (HE) EIC Pathfinder Open grants. These grants are specifically designed for consortia that aim to develop new technologies essentially from scratch. In this context, “Open” means that applicants can submit anything they like. This is in opposition to so-called “Challenges” calls, for which the European Commission asks for applications for specific technologies or domains.

For a young group leader, there are several advantages to these grants.

First, while their funding rate is not necessarily much better than other EU funding vehicles, typically ~15%, but sometimes as low as 6%, there are regular calls – up to two per year. You can resubmit every 8 months (more or less) until you are successful. This obviously means more work, and persistence in the face of rejection, but the initial investment is not lost. This is not the case for all EU calls, such as the ERC.

Second, as a young researcher, you will gain valuable experience in putting together a complex scientific project and building collaborations with other researchers and organisations.

Third, as the grant is written collectively, you can benefit from the expertise and reputation of more senior researchers in the consortium, and the amount of writing you may need to do could be quite limited. In my case, I did relatively little writing (there were however numerous calls to hash out the details of the projects). We submitted

a first project proposal twice and it was funded on our second try. For a second project, we were awarded funding on the third try. The generous funding from these projects has been a vital source of support for my lab for more than four years.

Finally, it is possible to cover part, or all, of one’s salary with such grants. This can be a huge relief if you need to bridge a gap to your next position, which happened to me. It allowed me to remain employed continuously beyond my initial appointment in Geneva (I was hired on a fixed-term non-tenure track position), until I moved to my current permanent job at the University of Maastricht.

So, how does one join a successful consortium? In one word: networking. The more people you know, the more likely you are to be asked to be part of one. However, networking is not enough, you need to take initiative and seed the idea of such collaborative projects. You will thus also have to think outside of the box and actively pursue collaborators. And you need to be open-minded regarding the directions these projects can take. For example, I am a computational and experimental neuroscientist. I use computational biology and experiments to ask fundamental questions about the workings of the brain. My expertise was relevant in different ways for each of the two technology projects that were funded.

The first project is called IN-FET (grant n. 862882), received a total funding of EUR 3.4 million, and will be carried out in the period 2020-2024. In this project, we are developing a totally new approach to manipulate neuronal cell excitability – modulating neuronal firing and synaptic transmission by direct ionic actuation at the microscopic scale and monitoring cell responses by nanoscale transistors. It is anticipated that this new technology will





be applied to the treatment of drug-resistant epilepsy, which affects about 30% of epilepsy patients worldwide. My team is responsible for the simulation of the effect of that new technological platform on the biophysics of neurons, and for experimental data analysis.

The second project is called GAMMA-MRI (grant n. 964644), received a total funding of EUR 3.4 million, and will be carried out in the period 2021-2024. In this project, we are developing a novel breakthrough imaging technology manipulating gamma rays with MRI, combining the best of these two technologies into a new (pre-) clinical imaging modality. This new technology will be initially applied to the diagnosis and treatment of stroke, the second most common cause of death worldwide, a pathology for which there is a very narrow time window of a few hours for treatment initiation. Again, my team is responsible for the simulation of the biological aspects of the technology using biophysical and metabolic models of neurons, non-neuronal cells, and the vasculature. These constitute merely two examples of how a computational biologist can contribute concretely to the development of a new technology.

What happens in 2024 when both projects run out? The EIC now offers a new funding vehicle that is the direct follow-up to a Pathfinder grant, the Transition grant. We will soon be applying to Transition calls for both IN-FET and GAMMA-MRI, with the objective to expand the application domain of both technologies, and to bring them to the market in a timely fashion.

Interested in joining us?

Please contact me at [r.jolivet@maastrichtuniversity.nl](mailto:r.jolivet@maastrichtuniversity.nl).

We are always looking for enthusiastic young scientists to join our team.

**Renaud Jolivet**

Follow us on Twitter: [@fet\\_in](https://twitter.com/fet_in); [@gammamri](https://twitter.com/gammamri); [@RenaudJolivet](https://twitter.com/RenaudJolivet).



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## Giving a voice to researchers in the new ERA

MCAA has made its voice heard on the role of stakeholders in the new European Research Area (ERA). Renaud Jolivet and Karen Stroobants shared with us what happened behind the scenes of the discussions.

### Renaud Jolivet, in his own words

I trained as a physicist (MSc) and neuroscientist (PhD). After my PhD, I worked as a postdoc for several years in various subfields of neuroscience. During that time, I benefited from a Marie Skłodowska-Curie Actions (MSCA) Individual Fellowships (IF) to spend time at University College London. In 2016, I started in my first faculty job in a joint position between the University of Geneva and CERN (both in Geneva, Switzerland).

In 2021, after about five and a half years as a junior faculty, I was recruited as a Full Professor at Maastricht University in the Netherlands, where I am currently the chair of Neural Engineering and Computation.

I have been involved with MCAA since it was created eight years ago. I was initially loosely involved in various working groups, then in 2017, I founded the Swiss Chapter with others and became the first chair of the chapter. I was then elected to the Board in 2018, where I served one term. Since 2020, I have been the vice-chair and now the chair of the Policy Working Group.



#### Karen Stroobants, in her own words

I am an experienced researcher and policy professional, currently working part-time as Lead Policy Advisor on research & innovation policy for the Royal Society of Chemistry (RSC) – the UK's professional body for chemical scientists – and part-time as a freelance consultant and advisor on research strategy, policy and evaluation. I previously held roles as Research Leader on 'research on research' at RAND Europe, as Science Policy Unit Lead and before that as Policy Advisor on open access policy at the RSC. I started my career in research policy at the Royal Society- the UK's national academy of science – where I worked on research culture and developed a narrative CV format for researchers.

I moved to the UK initially to conduct research on the molecular basis of Alzheimer's disease at the Department of Chemistry, University of Cambridge for which I received a Marie Skłodowska-Curie post-doctoral fellowship. Prior to this, I obtained a PhD in chemistry at KU Leuven in Belgium.

Since 2020, I am a Board Member of the MCAA, and in this capacity support the MCAA's policy and advocacy work. I was vice-chair of the MCAA's Policy Working Group from 2018 to 2020.

The European Research Area (ERA) has the ambition to create a single, borderless market for research, innovation and technology across the EU. Since 2018, a new ERA based on excellence is being shaped, to

be better equipped to face the new societal, ecological and economic challenges. MCAA has been part of this process and has been invited, with other stakeholders, to give its contribution.



## IMPROVING STAKEHOLDER REPRESENTATION

The Association has been focusing on the key issue of stakeholder representation in the piloting of the new ERA. Karen explains: “The Policy Working Group and Board decided to focus their efforts on discussing consultation questions about governance, and who has a seat at the table, since, ultimately, the stakeholders involved in governing the new ERA will be able to set directions and have a final say on priorities and values.”

MCAA has a strong statement on the role of stakeholders in the new ERA. According to both our interviewees, stakeholders should co-design the new ERA, and not only be consulted in an advisory capacity. This should translate into seats at the table of the highest governing body, with voting rights. To Renaud, having such rights for stakeholders has been enabled in other contexts. “There is a successful precedent for such arrangements in the Bologna Process,” he says.

MCAA’s position is publicly acknowledged, as the Association has published an [open letter](#) to have research stakeholders represented alongside Member States as part of the governance of ERA. To Renaud, having this open letter signed is a strong signal. “The letter was to publicly share our position and to advocate for researchers having a real voice in the design of the new ERA, which is likely to affect all of us in some way or another in the next years,” he says.

Renaud had already the opportunity to present MCAA’s position at the “New ERA - Presidency conference” in Brdo, Slovenia, organised under the auspices of the [Slovenian Presidency of the Council of Europe](#) in October 2021. To Renaud, the road is still long to make the voice of researchers heard at the top political level. “I think that we need more scientists in politics. The issues we are facing soon will all involve extensive use of scientific ideas, and we should follow where evidence drives us,” he emphasises.

## SEVEN SEATS FOR SEVEN STAKEHOLDER SECTORS

When asked about the next steps as regards MCAA’s involvement in the new ERA, Karen is confident that

MCAA’s voice will have an influence. “Our advocacy work has been making an impact,” she says.

Both our interviewees highlight the following success: Seven seats in the new ERA governance have already been made available for seven stakeholder sectors (universities and other higher education institutions; research and technology performing organisations; Research & Innovation (R&I)-intensive businesses; individual researchers and innovators; research infrastructures; R&I-funding organisations; national academies).

## SHEDDING A LIGHT ON EARLY-STAGE RESEARCHERS

To Renaud, the next focus should be made on Early-Stage Researchers. “For MCAA, the next main objective is that the representative for the “individual researchers and innovators” sector is a staunch defender of early-career researchers. To this end, we are engaging with similar-minded stakeholder organisations such as Eurodoc, the Initiative for Science in Europe (ISE), the Young Academy of Europe (YAE) and others, to agree on and propose an appropriate representative. It is our hope that this approach will result in a considered solution,” he concludes.

**Aurélia Chaise**  
**MCAA Editorial Team**

# SPECIAL COVERAGE – 2022: THE EUROPEAN YEAR OF YOUTH

## Promoting the potential of young people

One out of six people in the European Union is aged between 15 and 29, according to data published by Eurostat on 5 January. This makes the 2022 European Year of Youth (EYY2022) ever more important.

EYY2022 aims to throw a spotlight on how young people have been affected by the COVID-19 pandemic. It will also bring to light initiatives aimed at empowering and inspiring the next generation.

“The pandemic has robbed young people of many opportunities – to meet and make new friends, to experience and explore new cultures,” European Commission President, Ursula von der Leyen said in a press statement. “While we cannot give them that time back, we are proposing today to designate 2022 the European Year of Youth.

‘From climate to social to digital, young people are at the heart of our policymaking and political priorities,’ she added. ‘We vow to listen to them, as we are doing in the Conference on the Future of Europe, and we want to work together to shape the future of the European Union. A Union that is stronger if it embraces the aspirations of our young people - grounded in values and bold in action.’

In our special coverage, we met MSCA researchers studying issues related to today’s youth. We interviewed a fellow exploring communication across cultures in various school settings. We learned about another researcher’s in-depth analysis of the relationship between different classroom teaching styles and youth wellbeing. We also found out about the importance of professional training for youth in contemporary art museums.

**Vanessa Alexakis**  
**MCAA Editorial Team**



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# SPECIAL COVERAGE – 2022: THE EUROPEAN YEAR OF YOUTH

## Discovering best practices and optimal inter-cultural communication tools for better schools

As schools in Europe celebrate more diversity, various cultures, and traditions, are youth equipped with the best tools for optimal cross-cultural communication? Do schools know how to foster these skills effectively?

Examining the effectiveness of different approaches in creating better communication across cultures in various school settings is what the EU-funded INCLUDED project is studying. Short for “Culturally Inclusive Schools: Celebrating diversity, teaching common values and fostering intercultural competence among youth” the INCLUDED project is being applied to a nationally representative sample of 14-year-olds in Italy.



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### Maria Magdalena Isac, in her own words

“My main research interests are citizenship education and educational effectiveness. Currently, I am a researcher at the Centre for Political Science Research of the KU Leuven. Prior to this assignment, I held research positions on the same topics at the European Commission’s Joint Research Centre, at the University of Bologna, Italy, and at the University of Groningen, The Netherlands, where I also obtained my Research Master’s and my PhD in Behavioural and Social Sciences. I got my Bachelor’s in Education at the Alexandru Ioan Cuza University of Iasi, Romania.”



Shedding a light on the project is Maria Magdalena Isac, a researcher at the Centre for Political Science Research of the KU Leuven, who leads INCLUDED, to find out how the project aims to generate actionable evidence for research, educational policy, and practice, to add to current research.

### What was your inspiration for the project?

For more than 10 years, I have worked on comparative analyses of educational systems to understand how different formal and informal educational approaches and teaching practices contribute to young people's citizenship learning and competencies. I also have a strong interest in educational inequalities and the use of research findings to inform educational policy.

I developed the project hoping to add to a body of research and policy initiatives at a European level, which aim to foster young people's opportunities to become active citizens and actors of sustainable change. In particular, the project investigates what European school systems could do to further develop young people's intercultural competences."

### What are the aims of the project and how will their successful realisation be measured?

My main objectives are to develop, adapt and validate a multifaceted measurement instrument of intercultural competence and a multifaceted measurement instrument of classroom cultural diversity climate, to evaluate the relationship between different configurations of classroom cultural diversity climate approaches and the intercultural competence of youth, and to examine the effectiveness of these approaches in different cultural school settings and for specific subgroups of young people.

The main tool to measure the successful realisation of these objectives will be the preparation of research articles for submission to peer-reviewed journals. The articles will

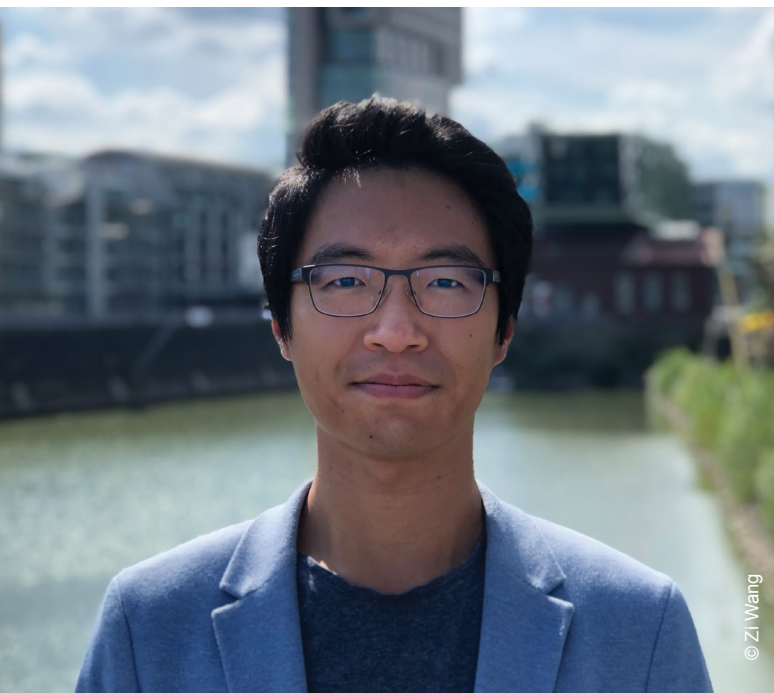
be accompanied by the production of divulgation materials (e.g., policy briefs, animated videos) to be discussed and shared with different groups of stakeholders such as researchers, policy makers, teachers, and students.

### What are some of the challenges in undertaking the research and how are you resolving them?

In these times of great uncertainty, it has become much more difficult to reach out to young people and ensure their participation in research. This is a challenge for the project, as it requires the collection of large volumes of data. Fortunately, I have established a close collaboration with the Italian Institute for the Evaluation of the Education System (INVALSI), which will play a pivotal role in the data collection. With their support, I am confident that I will be able to carry out all the planned activities.

**Vanessa Alexakis**  
**MCAA Editorial Team**

# SPECIAL COVERAGE – 2022: THE EUROPEAN YEAR OF YOUTH



## Discovering the best teaching style for happy students

Parents and academics have long sought to discover which teaching style is best for happy, well-educated, inspired students. By observing classrooms and conducting interviews with focus groups at secondary schools in Helsinki, Paris and Tokyo, researchers are hoping to shed new light on best practices that can help students across the Board thrive happily.

The EU-funded EduWell project – short for Wellbeing of Youths in Secondary Schools: A Comparative Analysis of Teaching Styles and Happiness in Japan, France, and Finland – is studying the relationship between different classroom teaching styles and youth wellbeing. To achieve

its goals, countries were selected based on their varying teaching styles: a more hierarchical teaching style in France, a more participatory one in Finland, and a hybrid style in Japan.

### Zi Wang, in his own words

I am a Marie Curie Fellow currently based at the French Research Institute on East Asia (IFRAE) in INALCO, Paris. I am the principal investigator of the project Education and Wellbeing of Youths in Secondary Schools: A Comparative Analysis of Teaching Styles and Happiness in Japan, France, and Finland (EduWell). Prior to this position, I completed a research project on Language, Migration and Happiness in Germany, funded by the German Research Foundation. I hold a PhD in sociology and Asian studies and am active in the fields of area studies, education, migration, wellbeing, and youth.



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Zi Wang, the project's lead investigator and Marie Curie Fellow currently based at the French Research Institute on East Asia (IFRAE) in INALCO, Paris, shares his insights on the project.

**How did you come about with the idea to perform a comparative analysis of teaching styles and how do these correlate to secondary students' feelings of wellbeing?**

With the demographic change, youth today will have to shoulder greater responsibilities and burdens in their adult years compared to those from one or two generations ago. This is a common problem in the developed world. There are numerous studies and reports documenting how schools prepare youths in gaining knowledge and skills for tomorrow's society. In comparison, we still know relatively little about how schools influence, or promote,

students' subjective wellbeing in the education process. This is a crucial topic as the happiness of youths in schools goes a long way in influencing later-stage wellbeing and achievements in adult life.

**What are some of the reasons you chose these three countries to compare?**

I adopt comparative perspectives from European and East Asian case studies in most of my research as I enjoy examining similarities and differences. The education systems and school contexts in Japan, Finland and France represent a constellation of different patterns regarding teaching methods. Do they have a role to play in students' academic and above all wellbeing outcomes? In addition, when we analyse wellbeing, it is important to incorporate multiple case studies across continents to discern potentially different (or similar) understandings of wellbeing and satisfaction with life.

**What are some of the challenges you're facing and how are you overcoming them?**

This study requires a lot of fieldwork for data collection: interviews with students and teachers, educators and parents, observations of classroom teaching, etc. The biggest challenge is the disruptions due to COVID-19. For instance, the borders of Japan (the single most significant case study) are closed to foreigners for most purposes, including research. In Europe, we also do not know if schools will be shut again. This is daunting. Hence, for now I am analysing secondary data available online (policies documents and surveys) and designing online interviews with educators, while hoping the situation improves in 2022.

**Vanessa Alexakis**  
**MCAA Editorial Team**



# SPECIAL COVERAGE – 2022: THE EUROPEAN YEAR OF YOUTH

## Drawing youth to contemporary art museums



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Inspiring youth to join the creative sector, the EU-funded YouthInMuseums project explores the rise of youth programmes in art museums, and also looks at the potential for professional development outside of formal education.

### Carolina Carvalho Palma da Silva, in her own words

I studied Fine Arts at university, but soon realised I was more interested in working with people and in understanding the potential of art to create relations with and among people, than being an artist myself. I was gradually attracted to art education, in particular art museum education. I worked as a freelance museum educator in different contemporary art museums in Lisbon before moving to London to do my PhD I was there for seven years and was the Curator: Community Programmes at Whitechapel Gallery, before moving back to Portugal to work as a researcher at the Institute of Social Sciences, University of Lisbon.

Studying the educational provision and professional training available for youth in contemporary art museums, and how these programmes boost young people's sense of agency and career opportunities in the creative arts, the project focuses on a pilot case study co-developed with a group of young people and the Museum of Art, Architecture and Technology (MAAT) in Lisbon.

Researchers are aiming at developing a deeper understanding of young people's socio-cultural interests - their perceptions, motivations, and expectations about art and museums; and of how long-term youth programmes can inform museums' future programming for this age group, says the project lead, Carolina Carvalho Palma da Silva, who spoke to us about the [YouthInMuseums project](#).

### How was the idea for the project born?

The project Youth in Museums emerged from my PhD research, which looked at youth collectives in contemporary art museums, mainly in the UK and the US. Being from Portugal and having worked in different museums in Lisbon, I was quite interested in understanding how my international experience and research could be applied to a different context, namely the Museum of Art, Architecture and Technology (MAAT) in Lisbon. The recent professional turn in youth programming in museums was also something that I wanted to research more in-depth - in particular, the influence between youth programmes in science and contemporary art museums.

### What's the aim of the project? How will it improve our understanding of young people's socio-cultural interests, and additionally, how can youth programmes help inspire museum planning?

The project aims to research the educational provision and professional training available for youth in contemporary art museums, and how these programmes can enhance participants' sense of agency and career

opportunities in the creative sector. Another aim is to analyse the potential of a tier-based structure when engaging with this age group (15-25), as it offers them continuous possibilities for their personal, social, and professional development outside of formal education. Using a participatory methodology, the project will be co-developed with MAAT and a group of young people, which will make their voices more audible within the institution.

### What are some of the main challenges in undertaking the project, and how are you overcoming them?

The project was planned before the pandemic and it started in September 2020, when most museums were still operating under very restricted conditions. I decided to incorporate the issues raised by the pandemic into my research and analyse its impact on youth programmes in museums. Readjusting my work plan in terms of fieldwork to this unprecedented situation has been very challenging. To ensure that the planned focus groups with youth and local sociocultural partners were not online, I had to reduce the number of participants. Nevertheless, this has allowed for a more in-depth and cohesive group to be formed.

**Vanessa Alexakis**  
MCAA Editorial Team



# SPECIAL COVERAGE – A DIGITAL DECADE

## Driving the digital transformation home across the EU by 2030

The pandemic has made digital transformation a key priority worldwide and across all types of sectors. To achieve this goal, Europe has outlined a Digital Compass of skills and connectivity with steps to guide us on a Path to the Digital Decade (by 2030). Billions of euros are slated to achieve these goals through digital investment projects across the EU, as well as research programmes that will ensure the digital transformation goes hand in hand with a green transition and a human-centric approach, while ensuring the EU is also self-reliant.

One of the key takeaways from the pandemic is the need to get everyone onboard the digital train and not leave anyone behind in this fast-changing, digitally enabling world.

As COVID-19 forced many people to adapt to working, studying, and even socialising with others while physically distancing, it brought home the key role digital

technology can play in keeping us connected – even if in a virtual world.

The pandemic also helped expose the gaping divide between digitally savvy businesses, organisations, and households with those yet to adopt digital solutions. Also highlighting the growing role of the IT sector and the need



for a more digitally skilled population is the stark figure of more than 500,000 job openings for cybersecurity and data experts remaining unfilled in 2020 across the EU, according to official data.

And although Europe had already started to make great strides in Europe's digital progress and infrastructure before COVID-19 struck, taking stock, EU President Ursula von der Leyen in her 2020 State of the Union speech made a call to make the next years Europe's "Digital Decade," which the European Commission quickly translated into a Digital Compass in spring 2021 setting several digital targets: in skills, connectivity, and services – to be actualised by 2030.

The European Commission followed up its Compass with crucial steps for the Path to the Digital Decade – including plans and incentives for the mass digital upskilling of Europeans as well as the slated design and roll-out of big digital infrastructure projects – to help the EU's 27 states reach those goals at the same time.

Enabling the EU's Digital Transformation are scores of programmes and projects financed or co-financed through both the EU's long-term budget of EUR 1.211 trillion for the years 2021-27, and the EU's NextGenerationEU funds – the latter being the largest stimulus package ever financed by the European Union - with close to EUR 800 billion of funding, loans and grants available for the EU's post-pandemic future – for investments in a



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more digital, greener, healthier, as well as more inclusive Europe. From the NextGen funds' main centrepiece, the Recovery and Resilience Facility budget of close to EUR 724 billion, 20%, for instance, has been allocated to the EU's Digital Transformation.

The Digital Europe Programme (part of the EU's long-term budget) will receive EUR 7.5 billion of funding for investments in supercomputing, artificial intelligence, cyber-security, advanced digital skills and their wide use, including the launch of European Digital Innovation Hubs to help companies improve their businesses using digital technologies and guided by experts.

## EUROPE'S DIGITAL COMPASS TARGETS FOR 2030

Focusing on the four key areas of digital skills for citizens, secure and sustainable infrastructure, the digital transformation of businesses and the digitalisation of public services, Europe's Digital Compass has something for everyone.

One of the key targets Europe is seeking to meet in its digital transformation is for 80% of all adults to have basic digital skills by 2030 (compared to just 56% now), and that at least 20 million will be employed as ICT specialists

in the EU (compared to 8.4 million), with “convergence between men and women.”

Scaling up, the EU’s gigabit network coverage is planned to reach 100% of households compared to 59% currently. The EU is also hoping for blanket 5G coverage of all its populated areas by 2030, compared to just 14% at present - enabling a seamless, connected network across the EU’s populated mainland and islands.

By the next decade, Europe also hopes to see all its key public services online, making for example e-medical records available for all Europeans.

The EU’s goal of a smooth green transition towards a climate neutral Union by 2050, as foreseen in its European Green Deal, will also be enabled through compatible technology. For instance, Europe plans to create 10,000 climate-neutral highly secure edge nodes by 2030.

Another key goal for the EU is to become self-reliant. This will be realised through the creation of a new European chip system, as outlined by EU President Ursula von der Leyen in her 2021 State of the Union address. “Those tiny chips that make everything work – from smartphones to electric scooters, to trains and entire smart factories. There is no digital without chips,” the EU President emphasised while announcing a new European Chips Act that will allow the creation of a “state of the art European chip ecosystem, including production. That ensures our security of supply and will develop new markets for ground-breaking European tech.”

Sustainable, green, self-reliant, and human-centric on top of high tech, the EU’s digital ambitions will be achieved through several large-scale digital projects involving cooperation between countries to curb the uneven digital progress across EU countries of the last few years, which

inevitably translates into different starting points among EU Member States.

Smarter and more accessible cities, safer online shopping, and using AI to fight climate change, improve healthcare, education and transport are all part of the EU-wide digital commitment for 2030. Micro-credentials and individual learning programmes will also be driven by digital advances, allowing individuals both young and old to improve their digital skills, while helping SMEs go online through European Digital Hubs.

Through its digital transformation targets, the EU wants to ensure that all systems are gone when it comes to the fourth industrial revolution (Industry 4.0) – which will see vast interconnection and smart automation across society, from daily business operations to social robots joining human employees in the workspace, and other incredible developments.

We spoke to researchers studying how best to prepare and design our digital future, including those from two stellar MSCA-funded programmes below.

**Vanessa Alexakis**  
**MCAA Editorial Team**

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## DIGITAL DECADE TARGETS/ COMPASS

[https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en)



## SPECIAL COVERAGE – A DIGITAL DECADE

# Delivering the Digital Transformation while also building the next generation of industry transformation leaders

As Europe sets sail on its Digital Decade, the changing industrial landscape is continuously shift-shaping with the addition of new digital and tech innovations, such as artificial intelligence, 3D printing, big data and other advances, creating the need for new best practices on how to handle these.

Exploring how best to design and manage these new innovations across industry are 15 Early-Stage Researchers with the European Training Network for Industry Digital Transformation across Innovation Ecosystems - known as the EINST4INE project, which is funded by the Marie Skłodowska-Curie Innovative Training Networks scheme.

Researchers at EINST4INE - a wide consortium coordinated by Royal Melbourne Institute of Technology (RMIT) Europe - are working across disciplines, using cutting-edge tech tools, such as augmented and virtual reality, to explore best practices in the digital transformation of three areas: the individual, business, and innovation ecosystem.







### Alejandra Rojas in her own words

Alejandra Rojas holds a degree in Administration from the National Autonomous University of Mexico and has more than 5 years of work experience in various industries. She continued her studies with an Erasmus Mundus Master's joint degree in Tourism Management through which she had the opportunity to study in Denmark, Spain and Slovenia. For this programme, she participated in a research project related to technology, where her passion for the human side of technology was ignited. She then investigated intelligent automation solutions in the context of the service sector's job transformation for her Master's thesis. Fascinated by the intersection of humans, technology, and sustainability, she believes in research that contributes to people's wellbeing.

Alejandra Rojas, MSCA fellow at Aarhus University, is working on the individual or human side of the digital transformation, exploring new ways of working through human-machine interaction.

Alejandra is researching how social robots, for instance mobile telepresence robots "can improve our life and

allow us to face the challenges of the future in a better way," she notes, adding that "the goal is to connect with practitioners and translate the research output into new ways of implementing robotic technology."

Through her work, Alejandra hopes to develop insights on human-robot interaction in organisational performance and



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behaviour to fill the knowledge gap and contribute to the strategic introduction and implementation of such robots.

Alejandra is exploring, for instance, how the design and presence of social robots can impact the way a work team engages in problem solving and decision-making in different circumstances, and how this, in turn, influences performance outcomes as well as team satisfaction.

The programme was borne out of “the need to develop a knowledge base on the human side of digital transformation and bring new perspectives of human-machine interaction,” Alejandra says, stressing there “is a latent need in identifying how social robots can be introduced into a collaborative space and contribute to humans’ well-being,” enabling people to reach their full potential.

“In the end, social robots should enhance humans’ interactions and communication, not diminish them,” Alejandra underlines.

The EINST4INE project, coordinated by RMIT Europe, the European hub of RMIT University, pools together researchers across disciplines and from across the world in the EINST4INE consortium: RMIT Europe (Spain), Lappeenranta-Lahti University of Technology LUT (Finland), Aarhus University (Denmark), University of Cambridge (UK), Universität Stuttgart (Germany), Scuola Superiore Sant’Anna (Italy) and Libera Università

Internazionale degli Studi Sociali Guido Carli (Italy), as well as 15 industry and 2 academic partnering organisations: RMIT University (Australia) and the Garwood Center for Corporate Innovation, Haas School of Business, UC Berkeley (US).

**Vanessa Alexakis**  
**MCAA Editorial Team**

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## SPECIAL COVERAGE – A DIGITAL DECADE

# Training across disciplines for a new digital design paradigm that is responsible and sustainable

One of the challenges in realising the digital transformation of society is to ensure all those from different disciplines have the appropriate design know-how to create what is needed for a responsible, sustainable, and inclusive future. So says Elisa Giaccardi, professor of Post-Industrial Design at Delft University of Technology.

### Elisa Giaccardi, In her own words

I'm a professor of Post-Industrial Design at Delft University of Technology, and coordinator of the [DCODE Network](#). My work is focused on the challenges that a permeating digitalisation means for the field of design. After pioneering work in meta-design, networked and open design processes, my research today is particularly concerned with how digital things actively participate in design, in ways that previous industrially produced objects could not.



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### Mugdha Patil, In her own words

I'm a PhD Fellow within DCODE based at TU Delft. My design journey began in a small town in India called Lasalgaon with a fascination for understanding objects and their impact. I completed my undergraduate degree in Furniture and Interior Design from the National Institute of Design, Ahmedabad but soon realised I was more fascinated by the design of systems rather than products. So, I decided to go abroad and pursued a Master's degree in Design Innovation and Citizenship at the Glasgow School of Art. After gaining some experience in the industry as a design researcher, I have decided to pursue a PhD as part of the DCODE Network to focus on prototyping new professional roles and design practices for the digital society.





#### Mireia Yurrita Semperena, in her own words

I'm a PhD Fellow within DCODE based at TU Delft. I am from a small town in the Basque Country, in the northern part of Spain. In the early years of my career, I mostly focused on modeling and simulating mechanical systems. However, my interests started to change during my stay at Massachusetts Institute of Technology (MIT) Media Lab, where I worked on the design of an algorithmic incentive system to promote walkable communities in cities. In this project, I applied computational modeling techniques in the urban environment. As part of my doctoral thesis, I am looking into methodologies for the principled development and deployment of Machine Learning-driven (ML) systems.

#### Jacob Browne, in his own words

I'm a PhD Fellow within DCODE based at Philips and TU Delft. My research is focused on designing for trust in clinical AI. Before starting my PhD, I worked as a User Experience (UX) researcher and designer for five years. These experiences helped cement my interest in design and gave me a first-hand account of the difficulties of designing for AI. I love spending time with my two dogs, eating good food, and playing jazz music.



The DCODE (Fundamentals of Design Competence for Our Digital Future) project – a European consortium of higher education institutes together with industry, government, and civil society – is training 15 PhD students, focused on teaching them fundamental competencies in design, anthropology, media studies, science and technology, as well as data science.

"DCODE aims to train the next generation of designers to guide society's digital transformation towards inclusive,

sustainable futures," says Elisa, who also leads the DCODE project.

"New foundations for design are key to 'empower businesses and people in a human-centred, sustainable and more prosperous digital future,'" she notes quoting the Europe's Digital Decade: Digital Targets for 2030.

At DCODE, small teams of PhD students from across disciplines, known as proto-teams, are working to

develop and prototype future design roles and practices, and the scientific work needed to support these, to train the next generation.

“The industrial revolution happened, and it's over. We are in the midst of a digital transformation of society. Yet, design practice is stuck in the past. We struggle to reconcile human values and algorithmic logic with sustainable social, economic, and political models,” Elisa says, lamenting that “we lack the knowledge, skills, and roles within companies or organisations to design for interaction with autonomous technologies in ways that benefit humankind. It is time to rethink design and create new pathways to the future. Imagining and manifesting alternative futures has to be a proactive effort,” she concludes.

Taking elements from design, engineering, social sciences, and the humanities, researchers in the DCODE network are focused on five key challenge areas:

1. Anthropological study and principled engineering of inclusive human-algorithm relations.
2. Design of trusted interactions with and across decentralised systems.
3. Sustainable approaches to value creation in data-driven business models.
4. Principles and mechanisms for democratic data governance.
5. Future design practices upholding anticipatory, deliberative, and responsive innovation approaches.

Funded by the Marie Skłodowska-Curie Innovative Training Networks scheme, the European consortium DCODE brings together seven higher education institutes (the Amsterdam University of Applied Sciences, Aarhus University, TU Delft, the University of Copenhagen, the University of Umeå, the University of Edinburgh, and the Akciju Sabiedriba Transport and Telecommunication Institute (University in Riga, Latvia)) with Philips Design Innovation and stakeholders from industry, government and civil society.

## RESEARCHERS SHARE THEIR INSIGHTS TO LEAD FUTURE GENERATIONS

Understanding the “current nature of AI and its use in design in order to discern how design pedagogy and practice need to change in the digital society,” is what Mughda Patil, PhD Fellow with DCODE based at TU Delft, is working on. She is studying the origins of design practices and their evolution, through the “lenses of decolonisation and post-capitalism to create a sustainable model for speculative worldbuilding that can help us cultivate skills suitable for a changing world,” Mughda notes, adding that “the goal is to support future businesses that can use and cater to these new skill sets, create infrastructures ensuring accessibility and fairness, and help us in drafting policies that lead to effective data governance – all while keeping in mind the EU’s Digital Transformation by 2030.”

On her part, Mireia Yurrita Semperena is focusing on machine learning (ML) systems, noting that they have become widespread, but many researchers report the “detrimental effects these systems could bring, from facial detection systems that show higher misclassification rates for dark-skinned women to large Language Models that silence marginalised populations and linguistic minorities,” says Mireia, another DCODE PhD researcher noting how many methodologies have been suggested to tackle algorithmic biases, though most of them “treating the problem as merely a technical issue.”

In her research, Mireia hopes to consider not only the technical side, but also to study the way in which “citizens perceive these systems. If we want to develop and deploy ML systems that are aligned with societal values and gain general acceptance, it is necessary to study the interplay between technical aspects of those systems and human perception,” she says. Mireia advocates designing tools that allow for the inclusion of human perception as an additional layer that computer scientists should take into consideration when developing ML.

Jacob Browne, another PhD Fellow within DCODE based at Philips and TU Delft is focused on designing for trust in clinical AI. “AI development often neglects integrating trust dynamics into the underlying workflow, and the power dynamics inherent in complex sociotechnical systems,” Jacob says. “You may have a state-of-the-art AI that is technologically impeccable, but if the clinician doesn’t trust it, it won’t get utilised. Conversely, if the clinician over trusts the AI they might over comply with the AI’s suggestion, even when the AI is wrong... My main aim is to craft a framework to design for trust in clinical AI. My work will be central to the successful implementation of AI in clinical settings.”

How we design for AI will affect how well we can utilise its transformative capabilities. Trust is a crucial factor in the success of AI integration,” concludes Jacob.

**Vanessa Alexakis**  
**MCAA Editorial Team**

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