EURAXESS Korea Quarterly Newsletter Issue 13 Q2 2021

Dear Colleagues,

I hope you are staying safe and healthy through these unusual times. Despite the ongoing vaccination process, Korea reported its highest daily rise in COVID-19 cases since the outbreak of the pandemic. I remain optimistic and hope that the second half of this year will bring us a new, better reality.

The second newsletter this year brings you to Romania – a country famous not only for Dracula, medieval towns, time-capsule villages, delicious cuisine, picturesque monasteries, virgin forests, majestic mountains, a blossoming art community, impressive landscape but also high-quality education and excellent research facilities.

Secondly, we explore how the EU spells out its global research and innovation (R&I) approach in a changing world. Whether it is tackling climate change, health crises, or marine pollution, global challenges require a global R&I approach that is open, reciprocal, and focused.

Lastly, Paweł Sikora, a Marie-Skłodowska Curie Actions fellow will share his experience in getting the MSCA fellowship and explain his connection to Korea.

Do not hesitate to contact me, I remain open to any inquires or suggestions for collaboration. I wish you health and success with all your undertakings.

- *Tomasz Wierzbowski,* EURAXESS Korea Represenative

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Web: korea.euraxess.org

Mail: korea@euraxess.net

Twitter: @EURAXESS_Korea

Address: #302, Main Building HUFS, Seoul Campus, 107, Imun-ro, Seoul, 02450

Edited by Dr. Tomasz WIERZBOWSKI
EURAXESS Korea Representative

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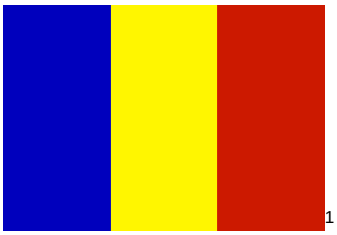
Contents

EURAXESS – Researchers in Motion is an initiative of the European Research Area (ERA) that addresses barriers to researchers mobility and seeks to enhance their career development. This pan-European effort is currently supported by 42 countries, each of which will be profiled in our quarterly e-newsletters.

In this edition, we will zoom on Romania

EURAXESS members in focus: Romania



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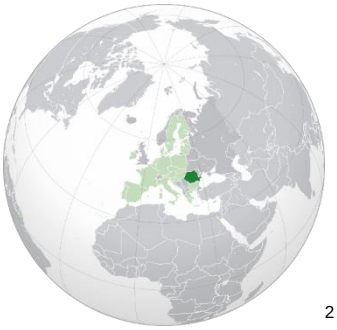

[2]

Location	South-eastern Europe
Capital	Bucharest
Population	~19 million
Area	238,397 km^2
Language	Romanian
Currency	RON
Time zone	UTC+2

Whereas probably the most known thing about Romania is the legend of Dracula, Romania is much more than that. Think medieval towns, time-capsule villages, delicious cuisine, picturesque monasteries, virgin forests, majestic mountains, a blossoming art community, impressive landscape and, of course, high-quality education and excellent research facilities.

The Ministry of Research, Innovation and Digitisation (MCID) is responsible for the overall research, development and innovation (RDI) policy described in its National Research and Innovation Strategy. While the Romanian Academy coordinates fundamental research in 14 sections, carrying out programmes of national interest via its institutions, MCID oversees the policy side with the help of the **Executive Agency for Higher Education, Research, Development and Innovation Funding** (UEFISCDI), the **Romanian Space Agency** (ROSA) and the **Institute for Atomic Physics** (IFA).

The main funding instruments of the National R&I Strategy are the Romanian National Plan for Research, Development and Innovation (PN3), the Core Programmes and the Operational Programme Competitiveness – Axis 1 (POC-AP1).

Together, PN3 and POC-AP1 allocate competitive, project-based funding through a set of tailored programmes to address the specific needs of the distinct R&D performers and their technology readiness levels, and to support inter-sectoral and cross-border collaboration. Proposal selection is based on peer review, complying with the international principles of evaluation.

Four consulting bodies help MCID develop, monitor and implement RDI policies: the Advisory Board for Research Development and Innovation, the National Council for Scientific Research, the National Council for Technology Transfer and Innovation, and the National Council for Ethics of Research, Technology Development and Innovation.

The RDI system in Romania consists of 263 public R&D organisations (56 public universities, 46 national R&D institutes, 65 research institutes and centres of the Romanian Academy, and another 96 public research institutes and centres), as well as about 600 private companies declaring their R&D activities. Meanwhile, the Network for Technology Transfer and Innovation (ReNITT) has around 50 specific organisations (technology transfer centres,

[1] Image by Clker-Free-Vector-Images from Pixabay

[2] Source: Wikipedia

technology information centres, technology and business incubators) and four science and technology (S&T) parks.

The RDI sector employs 43,973 people nationwide[3]. This includes 18,249 (41.5 %) with a PhD or postdoctoral degree, 37,393 (85.0%) with a higher education degree, and the remaining 6,580 (15.0%) possess secondary education certificates. The vast majority of Romanian R&D staff members (31,271 or 71.1%) are active in the public sector, while the remaining 12,406 (28.2%) work in privately owned institutions. Nearly three-quarters (72%) of the employees work full time; 27,168 (61.8%) are categorised as researchers, 6,195 (14.1%) as technical staff, and the remaining 10,610 (24.1%) are listed as 'other'.

Scientific visa

In Romania, a long-stay visa for scientific research activities, identified by the symbol D/CS, is granted to foreigners once approved by MCID and the General Inspectorate for Immigration.

Currently, 29 research organisations[4] are licenced under the Scientific Visa Directive (Directive no. 801/2016), hosting researchers from third countries including Moldova, China, Algeria, Turkey, USA, South Korea, Japan, Canada, Mexico, Morocco, India, Egypt, Republic of Serbia, Georgia, Ukraine, Russia, Israel, Macedonia, and Colombia. They are carrying out research activities in universities/institutes across Romania and under various funding and programming environments, including the EU Horizon framework programmes, the Romanian National Research, Development and Innovation Plan, EU Structural Funds, and inter-organisational agreements.

Marie Skłodowska-Curie Actions (MSCA) are a reference programme for doctoral education and postdoctoral training in the EU. They support the mobility of researchers between countries, sectors and disciplines, helping them acquire new knowledge, skills and competencies. MSCA also promote excellence and set standards for high-quality researcher education and training in line with the European Charter for Researchers and the Code of Conduct for the recruitment of researchers. During Horizon 2020 (2014-2020), €16.20 million was directed towards Romanian RDI organisations involved in MSCA projects. Colombia is among the top 10 nationalities of fellows working in Romania, while the USA is in the top 10 destinations of Romanian fellows going abroad via MSCA.

[3] Figures reported at the end of 2019

[4] https://www.research.gov.ro/ro/articol/5226/tiin-ifica-pentru-cercetatorii-straini-in-scopul-desfa-urarii-in-romania-de-activita-i-de-cercetare-dezvoltare-inovare-pentru-o-perioada-mai-mare-de-90-de-zile

STUDY IN ROMANIA

REGISTRUL MATRICOL UNIC

National Student Enrolment System

Over 1.4 million students enrolled in over 7,000 study programmes starting as from 2015.

brainmap

The online community of researchers, innovators, technicians and entrepreneurs

EERIS
Engage in the European Research Infrastructures System

Romanian entrepreneurial ecosystem

Romania welcomes foreign investments by providing special tax incentives and ensuring an investment-friendly business climate. The most intense R&D activity is taking place in the automotive, IT and automation sectors.

The Romanian entrepreneurial ecosystem is increasingly dynamic and shows high potential. UiPath is the world-leading provider of robotic process automation (RPA) and artificial intelligence (AI) software, growing from around $1 million to over $100 million in revenue in less than 21 months. Following UiPath's success, other start-ups grew rapidly. Most of the scale-ups operate in RPA, AI, cybersecurity, mobile technologies, and online applications.

Innovation in Romania is of great importance because it is regarded as creative driver and an economy booster. Human talent and R&D are crucial factors for enhancing innovation. Public expenditure on education and intensive staff training also stimulate innovation in high-performing economies.

From 2014 to 2020, Romania launched its strategy[5] for strengthening entrepreneurship through policy measures focused on improving access to finance, responsive administration and entrepreneurship. The strategy addresses inclusiveness, job-creation in rural areas, entrepreneurship education and support programmes, aiming mainly at the vulnerable or disadvantaged social groups. Romania is thus addressing a legacy of disparities between rural and urban communities by supporting entrepreneurship and job-creation in underprivileged areas.

In 2019, Romania reported over 1.38 million entrepreneurs, which is the highest number in decades. The fact that 37.5% of them were women shows Romania's progress in gender equality as well as other inclusion criteria (SBA, 2019).

Special programmes and recommendations have been delivered to foster entrepreneurship among women, Roma and refugees in the country. Entrepreneurship programmes were designed for socio-economically disadvantaged and vulnerable groups.[6]

Study in Romania – *www.studyinromania.gov.ro*

Romania is an excellent place to study. Diplomas are recognized all over Europe and beyond. In addition, the Diploma Supplement (DS), issued automatically with a graduation diploma, is bilingual and thus ensures transparency of learning outcomes and improves employability.

[5] The Romanian Governmental Strategy for Development of SMEs and Business Environment (RGSDSMEBE) 2020 (OECD, 2018)

[6] https://accelerate.gov.ro/storage/sustainability-and-innovation-in-the-romanian-entrepreneurial-ecosystem.pdf

In 2020, there were 91 accredited Higher Education Institutions (HEIs) – 54 public and 37 private universities – with a wide choice of university programmes.

The Study in Romania team has recently released a video to promote Romanian higher education. It is accessible on the Study in Romania YouTube account.

The UEFISCDI agency has developed systems to increase the accuracy, transparency, security, volume and usefulness of higher education and research data. One tool offered is the National Student Enrolment System (RMU), as part of the EU-funded '*EBSI4RO: Connecting Romania through Blockchain*' project, in partnership with the University Politehnica of Timisoara (UPT). EBSI4RO is implementing a credentials system for digitally verifying diplomas and qualifications using blockchain technology. It also handles so-called micro-credentials such as proof of informal learning.

Brainmap – *www.brainmap.ro*

Another important UEFISCDI initiative is the online community of researchers and entrepreneurs, Brainmap, which assembles more than 42,000 Romanian and foreign experts into a single human resources (HR) portal for research, innovation and entrepreneurship. The platform is searchable by expertise, country and institution, and it facilitates the selection of experts involved in evaluation processes organised by UEFISCDI.

EERIS – *https://eeris.eu*

Engagement in the European Research Infrastructure System (EERIS) is the first Romanian online platform connecting research infrastructure owners with potential clients (researchers and company representatives). Developed by UEFISCDI, the portal is a gateway for booking services provided by public and private Romanian research infrastructures. Since 2020, the platform has also accepted registrations from research infrastructures and organisations from abroad. The platform's ambition is to build on the services and promote the infrastructures and available equipment both at national and international levels. EERIS is being upgraded using blockchain technology by implementing reputation management tools that will enhance direct collaboration between researchers and research institutes online using an algorithm for trustworthy service contracts.

ELI-NP – *www.eli-np.ro*

The Extreme Light Infrastructure Nuclear Physics (ELI-NP) is one of the most prestigious research infrastructures in the world due to its state-of-the-art equipment. Implemented by the National Institute and Nuclear Engineering Horia Hulubei (IFIN-HH), ELI-NP has been designated by the Nuclear Physics Collaboration Committee of the European Science Foundation as a major facility in the Nuclear Physics Long-Range Plan.

Discover Romania

Bran Castle, also known as Dracula's castle

The Palace of the Parliament Bucharest

[7]Romania Danube Delta

[8]Transfagarasan – one of the best roads in the world

ELI-NP is building a team of dedicated, talented people willing to contribute to the operation and performance of laser-matter interaction experiments using the most powerful laser in the world.

Open positions for early-stage and experienced researchers interested in working in an innovative, dynamic environment are posted here: www.eli-np.ro/jobs.php

Danubius – *www.danubius-ri.eu*

The International Centre for Advanced Studies on River-Sea Systems (DANUBIUS-RI) is a pan-European distributed research infrastructure supporting interdisciplinary research on river-sea systems. DANUBIUS-RI's mission is to facilitate scientific excellence in this complex field, offering state-of-the-art research infrastructure and providing integrated knowledge to sustain and protect river-sea systems.

EURAXESS Romania – *www.euraxess.gov.ro*

The coordination of EURAXESS Romania is ensured by UEFISCDI and The Ministry of Research, Innovation and Digitisation. The EURAXESS network in Romania has **nine support centres**: Banat University of Agricultural Sciences and Veterinary Medicine, Timisoara; Institute for Macromolecular Chemistry 'Petru Poni' Lasi; Lucian-Blaga-University of Sibiu; Bucharest University of Economic Studies; University of Bucharest; 'Gheorghe Dima' Music Academy; Valahia University Targoviste; North-West Regional Development Agency, Cluj-Napoca; and Chamber of Commerce and Industry Brasov.

[7] Image by Andrei Prodan from Pixabay
[8] Photo by Ümit Yıldırım on Unsplash

EU spells out its global R&I approach in a changing world

Whether it is tackling climate change, health crises or marine pollution, global challenges require a global research and innovation (R&I) approach that is open, reciprocal and focused.

On 18 May, the European Commission issued a Communication on its 'Global Approach to Research and Innovation', Europe's strategy for international cooperation in a changing world, and aimed at making our societies green, digital and healthy.

Science takes place in a complex geopolitical setting with often competing demands on scarce resources and time. To achieve the best results and avoid fragmented effort, the EU pursues open, multilateral, and reciprocal engagement with international partners and associates. Its experience is that working together like this is the best way to tackle pressing global challenges.

"Openness has always been a cornerstone in our cooperation with the rest of the world," remarked Margrethe Vestager, Executive VP for a Europe Fit for the Digital Age, on the new Communication. "Our response to the pandemic has shown the benefits of more open science, of sharing data and results for the benefit of people in Europe and the rest of the world."

Europe seeks to engage with partners and strengthen multilateral alliances with those who share its values – i.e. academic freedom, gender equality, research ethics, open science and evidence-based policymaking – and respect international norms in a range of important areas, such as:

- Marine cooperation (i.e. the All-Atlantic Ocean Research Alliance, and the North-South Pole dimension)
- Breakthrough energy technologies
- R&I policy for fair, healthy and environmentally friendly food systems
- Use of digital technology in the fight against climate change and environmental challenges
- International digital partnerships matching the four pillars of the 2030 Digital Compass
- Health security, preparedness and the health system

Team Europe approach

This resoundingly global approach to R&I underscores Europe's commitment to reaching levels of openness needed to drive excellence, pool resources to achieve scientific progress and develop vibrant innovation ecosystems.

But it takes more than EU or public funding and support to ensure that international researchers can cooperate freely across borders, according to Mariya Gabriel, Commissioner for Innovation, Research, Culture, Education and Youth. “We also [need] a clear framework that creates a level playing field on issues like ethical and people-centred research, the fair treatment of intellectual property, and reciprocal access to research programmes.”

Whether it is tackling the pandemic or cooperating with low- and middle-income countries dealing with endemic problems, multilateral platforms and EU-backed projects show how the Union can galvanise scientific knowledge and communities towards the best outcomes.

For example, the ‘Africa initiative’ under the new seven-year framework programme, Horizon Europe, seeks to strengthen cooperation with African countries. The Commission also intends to present guidelines for dealing with foreign interference on EU research organisations and higher education institutions, thus safeguarding academic freedom, integrity and institutional autonomy.

The Commission also plans to encourage initiatives modelled on a ‘Team Europe’ approach, combining the efforts of the Union, individual Member States and European financial institutions. Synergies with other EU programmes such as Global Europe, the neighbourhood, development and international cooperation instrument, are also an important element of the overall approach, according to the Communication.

The good news for the EURAXESS Worldwide community is that Horizon Europe is open to researchers and innovators from around the globe who are encouraged to team up with EU partners in preparing proposals. It includes dedicated actions to strengthen international cooperation and supports multilateral initiatives in areas such as clean and renewable energy, ocean research, earth observation, and infectious diseases.

Background and more info

In 2012, a Commission Communication set out the first strategy for international cooperation in R&I, including relations with third countries, and underpinned the international reach of Horizon 2020. The introduction of more than 30 International Cooperation Flagships under H2020 boosted R&I exchanges with regions such as Africa, Canada, Japan, South Korea, China, India, and others.

Almost a decade on, the new Global Approach to Research and Innovation takes over from the previous strategy to meet today’s significantly changed global context, and to align the EU’s international cooperation with its current priorities.

Global Approach to Research and Innovation Communication / Q&A / Factsheet

INTERVIEW: Paweł Sikora

Pawel Sikora entered the Marie-Skłodowska Curie Actions community through a Horizon 2020 fellowship at Technical University of Berlin. He specialises in the 3D printing of lightweight concrete as part of his Ultra-LightCon-3D project.

In 2017, he received his PhD in civil engineering from Warsaw University of Technology, Poland. Prior to the MSCA fellowship he was working as an assistant professor at the faculty of civil and environmental engineering at West Pomeranian University of Technology. He is co-author of numerous papers mainly in the field of cement composites modified with nanomaterials and lightweight concretes.

EURAXESS Worldwide wanted to learn more about his research but also his international mobility experience.

How did you first learn about the Marie Curie-Skłodowska Actions?

I first heard about MSCA during a seminar related to mobility and career development organised by EURAXESS Poland's National Contact Point at my 'mother university'.

What made you apply for this fellowship?

I think there were two main reasons. First, I saw it as an opportunity to further my career, and second was the prestige attached to both the Horizon and MSCA programmes. Being a fellowship-holder shows that you are at the certain scientific level. This means you are much better recognised in your scientific field.

How has your career developed through your MSCA Individual Fellowship?

It gave me the chance to work with the top researchers in my field. This significantly improved my knowledge but also established meaningful international contacts and opportunities for cooperation with a network of partners. In fact, I've already applied as a member of a consortium involving many of these partners for another EU-funded research project.

In terms of my personal development, participation in the project has helped me to get promoted, secure an independent scientific position and establish my own research team. It also means by the end of the project I'll be an associate professor.

MSCA IF underwent some changes under Horizon Europe and the call for applications has just opened. What would be your advice for prospective applicants? Any tips and tricks?

We are living in very difficult pandemic times; severe lockdowns and restrictions make it much harder to implement your research/project. So, I would recommend that prospective applicants consider potential, even unthinkable, scenarios like a pandemic or lockdowns in their risk mitigation section (part of the proposal). Develop your strategy and contingency plans to continue working during potential lockdowns in order to avoid delays and problems in reaching your project goals.

A second, more general, tip to prospective applicants would be to carefully consider the choice of supervisor. If possible, try to meet her/him in person (e.g. attend a conference or write a publication together, arrange a short visit…) before you apply for a project together. For me, knowing my supervisor before was a great support during the project's writing stage.

Knowing the working style of your potential host research group and habits of your supervisor before the project will also help you fit in easier with the group. This is extremely important as you will be working closely with your supervisor and his/her team for at least 24 months.

In the past, you were collaborating with Korean researchers under the KONNECT project. Could you tell us more about this collaboration? What were you working on? How did it go?

Yes, I am a living example that networking is extremely important and everything can start from a random short conversation. Back in 2015, during a brief PhD research stay in Germany (my MSCA current host institution) I met a Korean researcher. Our contact was limited at that time because we were working in totally different fields. Then, one day KONNECT (EU+Korea project) was announced and we realised it would be a great opportunity to start research cooperation between our institutions.

Within weeks our German-Polish-Korean interdisciplinary proposal for sustainable, lightweight concrete materials was ready and a few months later it was accepted. This project was one of the breakthrough moments of my early career. I learnt from experienced professors not only how to be a good researcher but also how to deal with project management and maintain good international cooperation.

Beside the scientific benefits, trips to Korea also gave me great insight into the country's culture, which was extremely helpful in understanding the Korean mentality and that boosted our cooperation, which continues to this day under my MSCA project.

Moreover, the previous experience and knowledge gained during the KONNECT project was partially a base for my MSCA application. Korean partners are involved in many of my research activities today, and we're not only work colleagues but also good friends. I would never have thought before that a chance meeting could evolve into such long-lasting cooperation.

Again, my recommendation to all prospective MSCAs is that networking is really important. Don't just speak to people in your field, reach out to other researchers as much as possible! I'll keep my fingers crossed for your MSCA proposals.

During a short visit to the Yonsei University (Seoul, South Korea). From left: Dr Ji-Su Kim, Dr Pawel Sikora, Prof. Tong-Seok Han, Mr Yong-Woo Kim

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