

**EURAXESS Korea  
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EURAXESS –  
Researchers in Motion  
is an initiative of the European  
Research Area (ERA) that  
addresses barriers to the  
mobility of researchers and  
seeks to enhance their career  
development.

This pan-European effort is  
currently supported by over 40  
countries, of which we will  
profile one in each of our  
quarterly EURAXESS Korea  
newsletters. In this edition, we  
will zoom in on Serbia

# EURAXESS Members in Focus: Serbia

## Serbia's research landscape

### Outlook of R&D ecosystem

In terms of both quantity and quality, R&D landscape is dominated by **state and public research organisations**. There are seven public universities with 89 faculties acting as independent legal units involved in tertiary education and R&D. Some of the universities host research institutes, while the other organisations are either independent or affiliated to Serbian Academy of Sciences or Arts.

### Research funding

Most of the research funding comes from the Ministry of Education, Science and Technological Development which runs the framework, comprised of the basic science, technology development and interdisciplinary research actions. However, this framework is expected to be significantly revamped in 2019, as a result of recently passed legislation on National Science Fund.

Since 2011, the [Serbian Innovation Fund](#) implements various financial aid instruments for fostering the establishment of new and strengthening the existing innovative companies, by allowing them to access venture capital markets, and by attracting foreign direct investment in the high-tech research and development sectors. It also awards successful industry-academia collaborations through the Collaborative Grant Scheme for R&D Organisations and Private Sector Enterprises; it helps different stakeholders focusing on the technology transfer aspect of innovation through the Technology Transfer Facility programme; and it implements a number of mini and matching grants.

### Research impact

For years, especially since 2009, Serbia is regularly being endorsed as a rising star in different scientific fields as it has achieved the highest percentage increase in total citations, based on bi-monthly Essential Science Indicators from Clarivate Analytics. According to [Scimago Journal & Country rank](#), Serbia is ranked as 57<sup>th</sup> in number of citations, better than many European countries.

Regarding the participation in Horizon 2020 framework, Serbia is one of the top performers in the region, with 76.3 million € of net EU contribution and 158 unique participants. When considering its very low national investment in science and research (0.89% of GDP in 2017), all this can be taken as an exceptional result and reflection of its highly skilled work force in this domain.

### Open science



Population (2017): 7,02 million  
(World Bank)

GDP (2017): 41,4 billion USD  
(World Bank)

89th largest economy in the  
world in 2017 (World Bank)

Global Innovation Index  
(2018): 55/126 (World  
Intellectual Property  
Organization)

Global Competitiveness Index  
(2017-2018): 78/137 (World  
Economic Forum)

Gross domestic expenditure on  
R&D in % of GDP (2017): 0,89  
(EUROSTAT)

Scientific/technical journal  
articles per million inhabitants  
(2016): 712,1 (World Bank)

Ease of Doing Business score  
(2018): 73,13 (World Bank)

In 2018, Serbian government formally adopted a [national open science policy](#). The policy mandates deposits of all publicly funded research in open access (OA) repositories and recommends OA to research data. It also places a call to organisations for adopting institutional policies and repositories in the next six months. This is the latest addition to previous initiatives, such as local directories of OA journals ([doiSerbia](#) and [SCIndeks](#)) and [national open access portal for PhD theses and dissertations](#).

## **About PhD studies**

All public universities have accredited doctoral programmes in different scientific fields, welcoming also international students. The outlook of those programmes is very similar to the ones of other European academic organisations; it takes 3 years to complete, it involves attending courses (typically in the first 3 semesters) and independent research (second 3 semesters). The admission to a doctoral programme is conditioned to the completion of a master's degree programme. Typically, the successful completion is conditioned by the results published or accepted for publication in scientific journals with a given impact factor associated to it. Every doctoral student has typically one mentor. Formally, there are three committees involved in the development of a doctoral thesis. First, there is the committee approving the subject and the title of the thesis. Second, the committee responsible for evaluating the thesis, and the third committee, appointed for the defense procedure.

**BioSense institute**

[BioSense Institute](#) is one of the success stories. It is a research organisation striving at introducing advanced IT in agriculture, food safety, ecology and environmental protection. It was kicked-off in 2006 and today it is recognised as European Center of Excellence, with 190 researchers, state of the art equipment and facilities and immense networking capital gained in multiple collaborative projects, funded by FP7, Horizon 2020 and other frameworks. BioSense has established the first Living Lab for precision agriculture which actively engages relevant domestic SMEs, companies, farmers, decision makers and other beneficiaries. It hosts many other forms of collaboration such as demonstration farms, shared research facilities, accelerator and more.

**Top research performers**

Besides major public universities in Belgrade, Novi Sad, Kragujevac and Niš, top research performers (based on national funding) in Serbia include: [Institute of Physics](#), [Vinča Institute of Nuclear Sciences](#), [Institute Mihajlo Pupin](#), [Institute for Biological Research „Siniša Stanković“](#) and [Institute of Chemistry, Technology and Metallurgy](#).

**International cooperation**

International cooperation is one of the top priorities of the national R&D ecosystem. All universities have very active international cooperation offices, while there are also similar institutional initiatives on the faculty level. Serbia is associated to the European research funding frameworks since FP7 (2007) and it is considered as an equal opportunity stakeholder in ERA. It participates in the H2020 programme development (19 Programme Committee members), it is committed to supporting local scientists in grant development through the network of National Contact Points (17 NCPs) and mobility (5 EURAXESS Centres). For years, Serbian government maintains its own fund of science collaboration grants with a number of countries. Bilateral cooperation with People Republic of China is one of the recent additions to this programme and it has shown to be quite successful in the first round of funding (2017-2019).

**Serbian participation in Marie Skłodowska-Curie Actions (MSCA)**

According to [MSCA Country profile](#), 40 foreign researchers have been hosted by Serbian R&D organizations in period 2014-2020, most of them in RISE actions. However, as the interest in national R&D landscape for participation is growing (68 different organizations have participated in some MSCA action in the period above), this number is expected to significantly increase in the future.

**Working as a researcher and living in Serbia**

Since 2013, Serbian organisations are involved in achieving the highest level of commitment to the principles of [The European Charter and Code for Researchers](#) (so called, Charter and Code), demonstrating their care for human resources as the Country's most valuable asset. In the period of 2013-2019, all public universities have been awarded HR Excellence in Research label by the European Commission as an endorsement to successfully implemented HR management policies.

Work culture in Serbia is similar to the one dominant in Mediterranean countries. People prefer informal behavior and open communication; they cherish personal relationships. Serbs tend to respect the deadlines, agreements and obligations. Fluency in foreign language (especially English) is very high.

According to the [statistical office of Republic of Serbia](#), out of 16,000 researchers employed in different R&D organisations (including industry),

50.04% are women. Some under-representation is visible at management layers though: 38.3% of all managers of R&D organisations are women.

Despite the rising quality of living and modern facilities, Serbia is still a cheap country to live in. Based on [Numbeo online service](#) index, it is ranked 89<sup>th</sup> of 119 countries, more expensive than Turkey, Philippines, Mexico and India, slightly cheaper than Russia, Bulgaria, Poland and China. According to Numbeo crowd-sourced data, the typical basket of goods and services for 3-member household with apartment rent costs approx. 1,600 EUR (for comparison, the cost of the same basket in Amsterdam is 5,000 EUR, in Boston, USA: 6,400 EUR).

On the latest release of the Transparency International corruption perception indexes, Serbia takes 72<sup>nd</sup> position (of 176 countries), with the global average score.

## **EURAXESS Serbia**

Serbia joined EURAXESS in 2009. Since 2011, 5 EURAXESS Service Centres are continuously providing support to researchers on the topics such as relocation and career development. Since 2017, two Career Development centers (in Belgrade and Niš) are actively involved in the network. EURAXESS Serbian coordinator (Faculty of Mechanical Engineering, University of Niš) is continuously and actively engaged in network collaboration, especially in EURAXESS portal development (leader of TOPIV WP8 Open EURAXESS portals) and Open Science initiative, HRS4R assessment, different think-tanks (WG Network Management) and service data analysis (EURAXESS Service Data tool).

# Hot topic: Doctoral training in Europe

## About Doctoral education

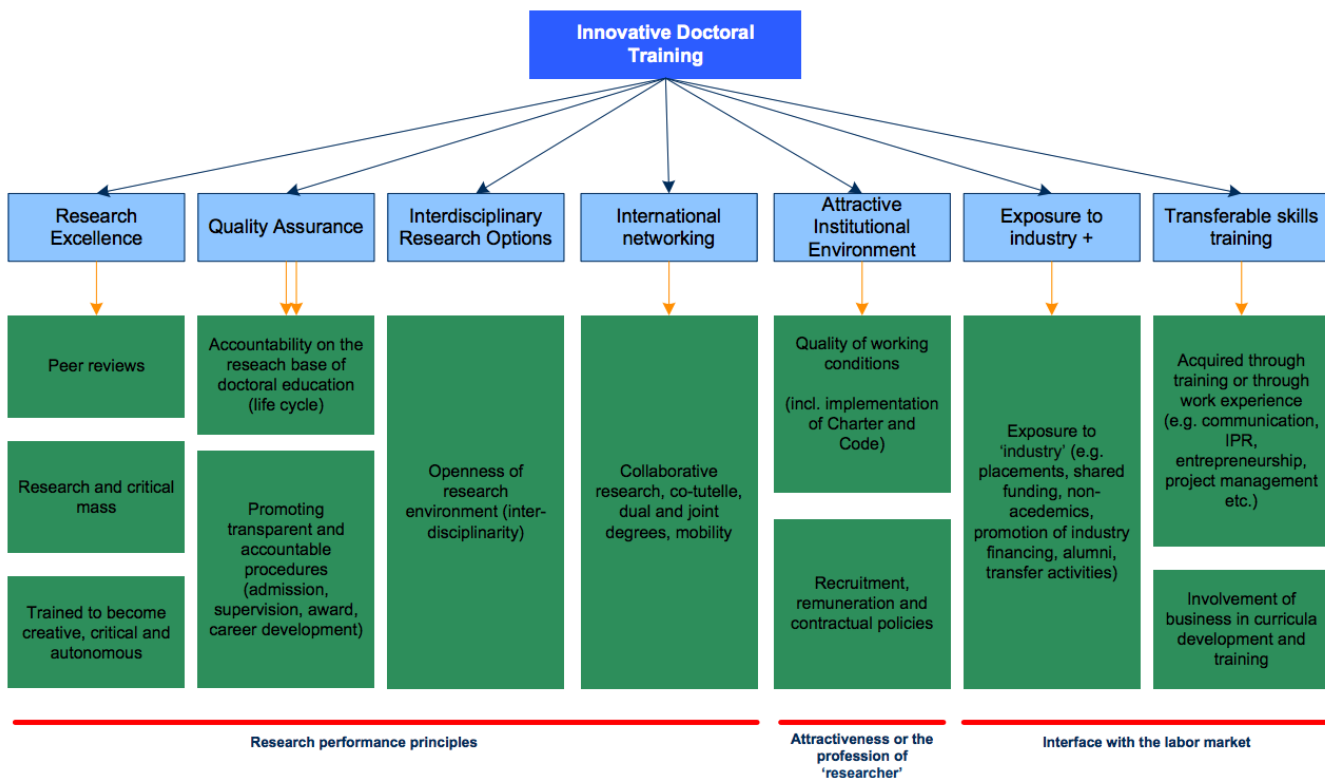
"Doctoral education is a primary source of new knowledge for the research and innovation systems in Europe. The outcomes of doctoral education are both:

- a) young researchers who proved their skills for a professional life as "creative, critical and autonomous intellectual risk takers", and "those who go into roles beyond research and education, in the public, charitable and private sectors, where deep rigorous analysis is required.", as pointed out by LERU, "as well as
- b) the research output in the form of a doctoral thesis that contributes to the development of world science and the innovation system."

## Background

In its Report of Mapping Exercise on Doctoral Training in Europe "Towards a common approach" in 2011, the European Commission (EC) aimed at "shaping the future of doctoral training in the context of the Innovation Union policy. [...] Doctoral training is a primary progenitor of new knowledge, which is crucial to the development of a prosperous and developed society. Developed economies rely on new knowledge and highly skilled knowledge workers to feed a process of continuous innovation. They rely also on adequately trained responsible citizens that can adapt to changing environment and can contribute to the common good. Grand societal challenges like climate changes and healthy ageing require complex solutions based on high level frontier research carried out by new generations of

'Seven principles for innovative doctoral training' Source: IDT tree, by IDEA Consult based on Report of Mapping Exercise on Doctoral Training in Europe: Towards a common approach (2011)



researchers.

Several initiatives have been taken to identify and promote good practice in doctoral training, most notably [...] by the European University Association (EUA).

“In the framework of the Bologna process, the European University Association (EUA) launched in 2005, after extensive consultation through a structured bottom-up process, Conclusions and Recommendations on Doctoral Programmes for the European Knowledge Society, better known as "Salzburg Principles". These principles were confirmed and enriched, in 2010, in the Salzburg II Recommendations.”

## Seven Principles for Innovative Doctoral Training

Based on the initiatives cited above and many other (by the League of European Research Universities LERU, Coimbra Group, different thematic and international initiatives), as well as good practices in Member States and the Marie Curie experience, the European Commission identified seven principles composing a common approach to enhance the quality of doctoral training in Europe.

1. Research Excellence
2. Attractive Institutional Environment
3. Interdisciplinary Research Options
4. Exposure to industry and other relevant employment sectors
5. International networking
6. Transferable skills training
7. Quality Assurance

These principles have been endorsed in the Council conclusions on the modernization of higher education, Brussels, 28-29 November 2011.

The Council calls on institutions and Member states "to link, where relevant and appropriate, national funding to the Principles for Innovative Doctoral Training". With that aim, the European Commission is supporting National funding agencies through the Marie Skłodowska-Curie Actions COFUND scheme that covers the co-financing of national or institutional doctoral training programmes in compliance with the 7 principles.

## A diversified European higher education system

“The duration of doctoral education varies across Europe according to the national university structures and disciplinary traditions, but requires as a rule a full-time endeavour of 3 to 4 years.”

The EC 7 principles were not meant to be constraining and are rather considered by EU member states and associated countries as a “guiding tool” to inspire in the reforms in doctoral training and education in Europe.

Doctoral training remains very different from a country to the other. It can also vary within a country across universities, faculties/departments or disciplines. It is important to note that, as stated by LERU, those "varied practices [...] successfully achieve high quality doctoral education within a vigorous research culture and these must not be stifled.”

For more details on how doctorate training is organised in the different European member states and associated countries, check EURODOC survey on the Doctorate structures across Europe [here](#).

To date, country fiches were published on Croatia; Czech Republic; Italy; Netherlands; Norway; Poland; Slovenia; Spain; Switzerland; Ukraine.

## Marie Skłodowska-Curie Actions and innovative doctoral training



MSCA is a European Commission research fellowship programme. It is funded under the framework programme for research and innovation [Horizon 2020](#).

Under Marie Skłodowska-Curie Actions (MSCA) structured research and training programmes are based on [the Principles for Innovative Doctoral Training](#) (European Commission, 2011).

### About Innovative Training Networks (ITN)

ITN is the **main European doctoral training programme**. The objective of the MSCA ITNs is to train a new generation of creative, entrepreneurial and innovative early-stage researchers able to face current and future challenges and to convert knowledge and ideas into products and services for economic and social benefits. The projects funded will allow structuring and raising doctoral training at European level by providing researchers with enhanced career perspectives both in the academic and non-academic sectors through international, interdisciplinary and inter-sectoral mobility combined with an innovation-oriented mind-set

Innovative training networks bring together universities, research institutes and other sectors **from different countries worldwide**. The maximum duration of an ITN project is **4 years**. **All research areas** can be funded

There are **three types of Innovative Training Networks**:

#### 1. **European Training Networks (ETN)**

Joint research training, implemented by at least 3 partners from in and outside academia. The aim is for the researcher to experience different sectors and develop their transferable skills by working on joint research projects.

The organisations should be established in at least 3 different [EU or associated countries](#). Additional participants can join from across the world, **including from Korea**.

#### 2. **European Industrial Doctorates (EID)**

Joint doctoral training delivered by at least one academic partner entitled to award doctoral degrees, and at least one partner from outside academia, primarily enterprise. Each participating researcher is enrolled in a doctoral programme and is jointly supervised by supervisors from the academic and non-academic sector, where they spend at least 50% of their time.

The aim is for the doctoral candidates to develop skills inside and outside academia that respond to public and private sector needs.

The organisations should be established in at least two different [EU or associated countries](#). A wider set of partner organisations from anywhere in the world may also complement the training.

Check MSCA calls 2019 calendar [here](#) to know when the annual call will be announced and read the [guide for applicants](#) for more details.





### 3. European Joint Doctorates (EJD):

A minimum of 3 academic organisations form a network with the aim of delivering joint, double or multiple degrees. Joint supervision of the research fellow and a joint governance structure are mandatory. The aim is to promote international, intersectorial and multi/interdisciplinary collaboration in doctoral training in Europe.

The organisations should be from different [EU or associated countries](#). The participation of additional organisations from anywhere in the world, including from the non-academic sector, is encouraged.

How to find partners for joint projects with EU funding on EURAXESS Portal?

[www.euraxess.org](http://www.euraxess.org)



Members Search Results (25340)

### ITN calls and positions

ITN annual calls are **open to consortia of organisations** such as universities, research centres or companies, that propose a research training network, including **Korean institutions**. Please note, that the call is **not open to individual researchers/students**.

Your home institution is looking for partners to submit a proposal? Check the EURAXESS partnership tool to find organisations willing to collaborate:

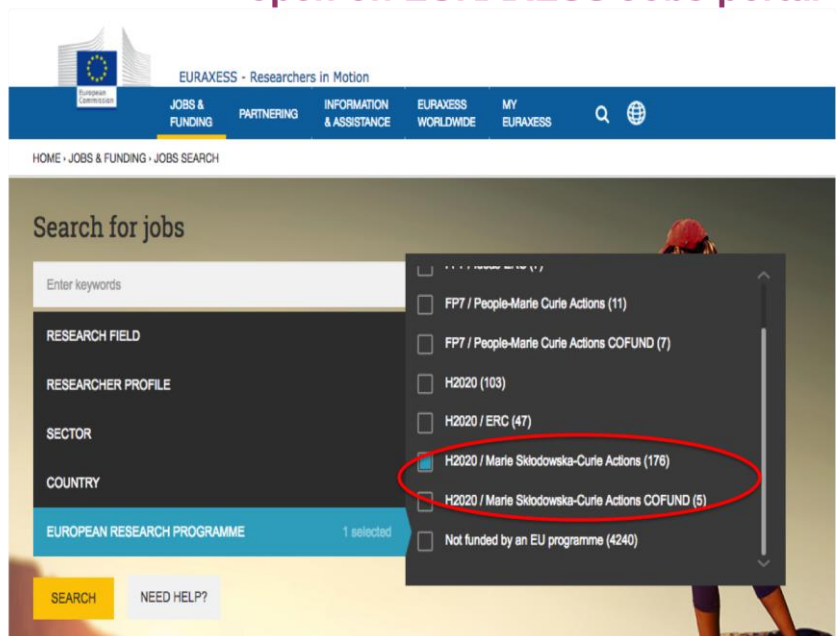
=> **Korea-based researchers** interested in high quality doctoral-level training in and outside academia can apply to the PhD positions created by these networks. They are advertised on the [Euraxess Jobs portal](#) and many will be published in the coming months to start your PhD in September.

Sources:

Report of Mapping Exercise on Doctoral Training in Europe "Towards a common approach", European Commission, 27 June 2011;

Report of the ERA Steering Group Human Resources and Mobility (ERA SGHRM) [Using the Principles for Innovative Doctoral Training as a Tool for Guiding Reforms of Doctoral Education in Europe](#); LERU Advice paper no 19, March 2016, [Maintaining a quality culture in doctoral education at research-intensive universities](#); Eurodoc.

**PhD in Europe (ITN/Cofund)**  
=> open on EURAXESS Jobs portal





Mahmood Mahmoodian is a PhD candidate at both Delft University of Technology (TU Delft) and Luxembourg Institute of Science and Technology (LIST), within the Marie Skłodowska-Curie Initial Training Networks (ITN) [QUICS](#) (Quantifying Uncertainty in Integrated Catchment Studies).

The overall aim of QUICS was to provide high levels of training and carry out research to take the implementation of the Water Framework Directive (WFD) to the next level. It also aims to improve water quality management by assessing the uncertainty of integrated catchment model water quality predictions. The project employed 12 Early Stage Researchers (PhD Fellows) and 4 Experienced Researchers.

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## “MSCA PhDs, Advantages and Challenges...”

*Piece originally published by Mahmood Mahmoodian, Marie Curie Early Stage Researcher, in MSCA project QUICS blog entry of the same title, accessible [here](#), and reproduced below with his consent.*

“Is this a PhD or a kind of tour in Europe?” “Do you have time to do research as well? Or you only travel and teach at schools and kindergartens?” “Ah, you guys and your luxury PhD!”

These are typical comments and questions that we, as Marie-Curie (MC) fellows often hear from friends and colleagues. So, I thought that it might be relevant to write about advantages and challenges of this experience. This can give an overall idea about the situation for students who are interested in this fellowship and want to know more.

Being a Marie-Curie fellow in an ITN network, has numerous advantages as well as some challenges. I will try to list some of them briefly according to my personal experience in a sincere and honest way.

### 1) Advantages

Among many advantages that MC fellowship has, I can mention:

#### a) Reputation and being prestigious

A Marie-Curie fellowship is one of the most prestigious fellowships in Europe and perhaps one of the best in the world. The majority of academic people know about it and it can be considered as a valuable asset in the future, if you want to stay in academia, or even if you want to start working outside the academic world. (No need to mention that it is highly competitive to get selected).

#### b) International environment

Each project has various partners (universities, institutes, companies, etc.) all over Europe and even outside Europe. In case of the QUICS project, 9 partners and 7 associate partners which are located in 9 countries! This is truly a unique experience as a PhD student to be involved in a serious project in such an environment!

#### c) Secondments

Each MC fellow has the requirement of undertaking so called “secondments” to other project partners. For instance, I have 9 months of secondments to spend at TU Delft (NL), University of Sheffield (UK), University of Laval (Canada) and RTC4Water (Luxembourg). Hence, there is a great possibility to exchange knowledge and learn more on your topic from other project partners. This mobility will definitely nurture your other life skills as well apart from academic life.

#### d) Lovely training budget!

A generous budget is allocated to each fellow to spend on their training and research as well as transfer of knowledge. We, Marie-Curie fellows, love it! It gives the fellow a great opportunity to attend lots of courses, summer schools, trainings, conferences, and so on. As far as I know, this is not



The project also included 11 international associate partners who were involved in training and also hosted the researchers during secondments. The project also included 11 international associate partners who were involved in training and also hosted the researchers during secondments.

comparable with any other PhD grant. This gives you a unique opportunity to develop your discipline-related skills as well as soft skills and also to expand your professional network!

#### **e) Networking**

In an ITN project, it is all about networking and collaboration possibilities. You have the possibility to meet experts in your field during various project meetings, while attending conferences and training events, or when you are seconded to project partners. You may also have multiple supervisors from different universities and institutes, which is in fact another advantage in this regard.

#### **f) Public outreach events**

As an MC fellow, you are required to convey the general knowledge about your research to the non-academic audience as well. This normally includes some outreach events for public audience such as school students and pupils, technicians at companies and so on. Although it is really challenging to organize these activities in a tailor-made manner, they are really fun in the end! It is a skill to simplify your message to be easily understandable for public.

#### **g) Collaboration**

I think collaboration is one of the main keys to be more successful in research. With collaboration you can expand your knowledge, learn from others, and think outside the box. In the QUICS project there is a great collaboration opportunity at individual as well as institutional levels. For instance, at the moment I am collaborating with 2 other QUICS fellows to write a conference paper and hopefully a journal paper in the future.

#### **h) Soft skills**

PhD topics are normally very detailed and they are defined to solve specific and tiny problems in this complex world. You may be lucky to find another specific and similar research topic or a job title to continue your career after graduation; however, what would make you a more suitable candidate for a wider range of careers is your 'soft skills'. For example: communication skills, teamwork and collaboration, adaptability, project and time management, critical thinking and so on. Personally, I do not assert that currently I am great in these skills, but I am sure that the Marie-Curie fellowship is helping me a lot in this regard. Most importantly, we develop our soft skills via "learning by doing". Besides, there are plenty of courses during our training events and also in our universities and institutes.

### **2) Challenges:**

#### **a) Distraction!**

During the first year of my PhD, averagely, I had almost one work-related travel each month. This is really distracting when it comes to research. Add to this all the travel planning and the bureaucratic procedures. On one hand, they are good for your skills development and changing the monotonous working environment, but on the other hand they can easily distract you from the current step and you would totally forget what you were doing before!

#### **b) Project management and time management**

As a MC fellow, you are connected to multiple locations and entities, each of which brings different responsibilities. [...]

To be honest, sometimes, I realize I am spending a considerable part of my time or a whole day only on bureaucratic tasks. Dealing with the numerous tasks related to my PhD position requires proper project management and time management skills that the MC fellow needs to develop over time.

### **c) Managing secondments**

First of all, you need to define what your objectives are and what the “optimum time” is to go for a secondment. Then you need to plan and organize it:

- Find another accommodation which is normally very difficult for short stays.
- Apply for visa (if you need to) and plan your trips.
- Adapt to the new work environment.
- Do in parallel the responsibilities for your host institute.
- Write a secondment report after finishing.

### **d) Multi-supervisionship**

Having double, triple or even more supervision is another challenge. It is clear that having more than one supervisor is beneficial in terms of sharing the knowledge, experience and new ideas. But sometimes it can be a challenge too. For instance, receiving the feedback from all of them would take a considerable amount of time; sometimes, ideas can be contradictory; besides you need to keep in touch with all to avoid miscommunication.

### **e) Uncertainty in visa applications! \***

I really “dislike” this part and almost everyone in QUICS project knows why... Imagine if you have to wait for about 6-7 months to get a visa to start your PhD in Luxembourg: you will understand very well the meaning of “uncertainty”. I do not want to go into political discussions here, but just a hint to those nationalities who are treated more strictly for entry visas: “Apply very well in advance”.

Based on my experience after living in several countries and spending “n” hours in the embassies, there is no rule about granting visas. The uncertainty bound is too wide. These were totally personal experiences, but I hope I have conveyed the main message.

### **3) In conclusion:**

All in all, a Marie-Curie PhD is a unique one. Although there are some challenges on the way, it will definitely help you to develop your skills as a researcher as well as a project manager. Go for it if you have the chance!

\* EURAXESS can assist you with your visa application! Find out about all the free services EURAXESS provides to researchers and employers. You can save time and money by using **more than 500 EURAXESS Centres around Europe** to help you with a range of issues including **visa requirements, work regulations, taxation and social security**. More information [here](#).



## EU Insight – Innovation scoreboards 2019

The innovation performance of the EU and its regions is increasing. For the first time ever, Europe's innovation outperforms that of the United States. However, the EU continues to lose some ground to Japan and South Korea, and China is catching up fast.

On 17 June 2019, the European Commission released its latest studies on the state of innovation in the European Union. The 2019 [European Innovation Scoreboard](#) (EIS) and [Regional Innovation Scoreboard](#) provide a comparative assessment of the research and innovation performance of the 28 EU Member States and selected associated countries.

The aim of the assessments is to help Member States, regions and the EU as a whole to assess areas on which they perform well and the ones on which they need policy reforms to better promote innovation. The data complements the Commission's recent [country-specific recommendations \(CSRs\)](#) in the framework of the European Semester, which highlight the role of research and innovation and include recommendations to enhance productivity growth and competitiveness.

### Background and the way forward

Europe needs to deepen its innovation capability to compete on global markets and maintain and improve the European way of life, as called for by the European Council as recently as June 2018 and March 2019. That is why the Juncker Commission has set [a new level of ambition](#) for the EU and its Member States and regions, and [proposed Horizon Europe](#), the most ambitious research and innovation programme ever. This will keep the EU at the forefront of global research and innovation.

Carlos **Moedas**, Commissioner for Research, Science and Innovation, said: *"Innovation equals future jobs and growth. I am happy to see general progress in the EU. Yet, to stay ahead in the global race, both the EU and our Member States need to continue investing and developing the right policies for innovation to flourish."*

About two-thirds of Europe's economic growth over the last decades has been driven by innovation. Each euro invested by the programme can potentially generate a return of up to €11 of GDP over 25 years. Investments in research and innovations are expected to generate up to 100 000 new jobs in research and innovation

activities between 2021 and 2027.

The EIS covers the EU Member States, as well as Iceland, Israel, North Macedonia, Norway, Serbia, Switzerland, Turkey, and Ukraine. Additionally, the report also includes some available data for Albania, Bosnia and Herzegovina, Kosovo, and Montenegro.

On a more limited number of globally available indicators, the EIS compares the EU with Australia, Brazil, Canada, China, India, Japan, the Russian Federation, South Africa, South Korea, and the United States.

## The report

To determine the state of affairs concerning innovation across individual Member States, the report follows the methodology of the 2018 edition. However, results should not be compared across editions due to data revisions. Time series using the most recent data allow performance to be tracked over time.

This methodology distinguishes between four main types of indicators (framework conditions, investments, innovation activities, impacts) and ten innovation dimensions, capturing in total 27 different indicators. This composite indicator is known as the “Summary Innovation Index”.

## The 2019 European Innovation Scoreboard: key findings

The EU's innovation performance has been improving for four years in a row.

Based on their scores, EU countries fall into four performance groups: innovation leaders, strong innovators, moderate innovators and modest innovators. **Sweden is the 2019 EU innovation leader**, followed by Finland, Denmark and the Netherlands.

The United Kingdom and Luxembourg dropped from the top rank of innovation leader status to the strong innovators group, while Estonia joins the strong innovators group for the first time. Lithuania, Greece, Latvia, Malta, the United Kingdom, Estonia, and the Netherlands are the fastest growing innovators.

The 2019 edition of the scoreboard highlights that the EU's innovation performance **continues to improve**. Compared to last year, innovation performance improved for 24 EU countries (most notably for Estonia, Portugal, Finland, and Greece) and the growth rate of lower-performing countries compared to higher-performing countries has accelerated.

The process of convergence has accelerated in the EU in 2018.




Bigger view [here](#)

On average, **the innovation performance of the EU has increased by 8.8%** since 2011. Since then, it increased in 25 EU countries. Performance has increased the most in Lithuania, Greece, Latvia, Malta, the United Kingdom, Estonia, and the Netherlands, and decreased the most in Romania and Slovenia.

## What are the key drivers of innovation?

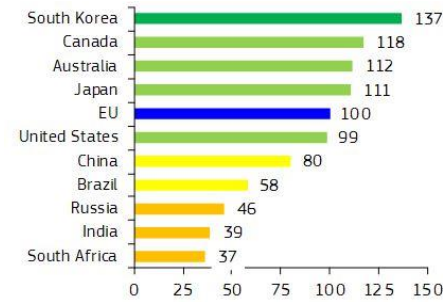
The most innovative countries perform best on all measures. Countries with above average shares of high-tech industries tend to perform better on many EIS indicators. In order to achieve a high level of innovation performance, countries need a balanced innovation system, performing well across all dimensions. They need an appropriate level of public and private investment in education, research and skills development, effective partnerships between industry and academia, as well as an innovation-friendly business environment, including strong digital infrastructure, competition on the markets and efficient allocation of resources.

At the global level, the EU has beaten the United States. 

The EU's performance has surpassed the United States for the first time and has a considerable lead over Brazil, India, Russia, and South Africa. However, China is catching up at 3 times the EU's innovation performance growth rate and Canada, Australia, Japan, maintain a performance lead over the EU.

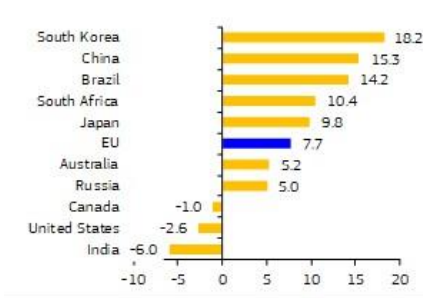
When comparing the EU with its global competitors a more restricted set of 16 indicators have been used for the international comparison of the EU.

Global performance



Bars show countries' performance in 2018 relative to that of the EU in 2018

Change in global performance



Change in performance is measured as the difference between the performance in 2018 relative to the EU in 2011 and the performance in 2011 relative to the EU in 2011

Sources: [MEMO](#) – The European Innovation Scoreboard and the Regional Innovation Scoreboard 2019, Accessed 19 June.

European Commission [Press release](#): 2019 European Innovation Scoreboard, Accessed 19 June 2019.

# EURAXESS Korea Activities Update

EURAXESS Korea concluded first half of 2019 with two dedicated events! On June 25 EURAXESS Korea together with the EU Delegation to Korea promoted selected EU Member States as a research destination for prospective PhD students. The event started with general explanation about EURAXESS activities in Korea followed by presentations by representatives from Belgium, France, Germany, the Netherlands, Spain, Sweden and the United Kingdom. Speakers promoted Europe as the world's best place to build your research career and gain experience. The major 7 European countries provided young researchers with various opportunities to conduct study in Europe, During the seminar, other European country representatives answered individual questions how to study and live in the respective European countries.



On the evening of June 26, EURAXESS Korea hosted its quarterly event, the European Alumni Research Night. This edition provided experience feedback from successful researchers, tips and tricks to better write EU funding proposals, and workshop sessions so as to upgrade researchers' skills in writing proposals. A particular focus was given to the MSCA-IF fellowships programme that allow visits for up to 2 years in Europe (deadline for current opening is 11 September 2019); this training also helped young researchers to improve their proposals for other EU funding programmes.

The EURAXESS Korea team regularly visits universities, research



institutes and government agencies across the country and present European funding opportunities for Korea-based researchers. EURAXESS team members systematically participate in various academic and non-academic events with the aim to extend the EURAXESS network and raise



awareness about European Programmes such as Horizon 2020 in general and MSCA as well as ERC in particular.