EURAXESS COUNTRY IN FOCUS: ESTONIA – A PLACE FOR INDEPENDENT MINDS

1 EURAXESS Country in Focus: ESTONIA – a place for independent minds

2 Research and Development in Estonia

2 Research Excellence in Estonia

2 Estonian R&D Strategy

3 Entrepreneurship and Innovation

3 Funding and Recruitment Opportunities

3 Important Information for Incoming Researchers

3 Research collaboration with North America

5 Interview with Kyle Mokma from USA
1 EURAXESS Country in Focus: ESTONIA – a place for independent minds

Did you know that Skype was programmed in Estonia in 2003? Or that Estonia has used legally binding digital signatures since the year 2000? These facts illustrate the innovative attitude of the small North European country called Estonia perfectly. Estonia has an attractive environment for research, top-level infrastructure, a collaborative research community and excellent research achievements.

Research and Development in Estonia

Estonian researchers are good partners in international collaboration projects and the number of international co-publications is rising. Research in Estonia is becoming more international as the number of foreign researchers from 2005 to 2014 has increased *seventifold* [1]. The impact of papers authored by Estonian researchers is growing rapidly; average citations per paper exceed the Thomson Reuters’ Essential Science Indicators (ESI) mean citation rate by 5% [2].

There are 20 R&D institutions in Estonia, including 6 public universities where most research is performed. The leading scientific institution in Estonia is the University of Tartu.

The ratio of total R&D expenditure to GDP in 2015 was 1.5%, with nearly half of R&D expenditure in 2015 coming from the state budget [3].

Research Excellence in Estonia

**Biological sciences** are at the forefront of Estonian research – 2/3 of the top researchers (among 1% most cited in their field worldwide) who are affiliated with an Estonian research institution are biologists and ecologists [2]. Each Estonian paper published in environment/ecology and plant and animal science receives about 40% more citations than papers in these fields in general. Additionally, clinical medicine, molecular biology and genetics, physics, pharmacology and toxicology, and psychiatry/psychology are also above global average [2].

There are 12 *Research Centres of Excellence* in Estonia, composed of internationally highly regarded research groups. Featured topics are: terrestrial ecosystems in the context of global change from molecular to biome-level responses, genomics and translational medicine, information and communication technologies (ICT), molecular cell engineering, space studies.

Estonian R&D Strategy

The Estonian R&D strategy document Knowledge-based Estonia 2014–2020 outlines four objectives: 1) Research in Estonia is of high level and diverse 2) RD functions in the interest of Estonian society and economy 3) RD makes the structure of economy more knowledge-intensive 4) Estonia is active and visible in international RDI cooperation. The strategy foresees that by 2020 investments in R&D will reach 3% of GDP [4].

Entrepreneurship and Innovation

Innovation and the start-up ecosystem in Estonia are growing rapidly. Notable recent success stories backed by R&D in the IT field include Skype, TransferWise, Lingvist, Starship Technologies and Guardtime.

Estonia is standing out as a digital society. We have developed highly innovative and practical solutions for digital public services including online tax-declarations (in use since 2000), digital signatures (2000), online voting (2005), digital recipes (2010), and most recently the e-residency (2016) for anyone in the world (you can become an e-resident of Estonia in order to register your business in Estonia).

Competence Centres (8) are designed to improve the competitiveness of enterprises through strategic cooperation between Estonian science, industry and the public sectors. Main topics are health and food technologies and ICT services.

Enterprise Estonia promotes business and provides financial assistance, counselling, cooperation opportunities and training for entrepreneurs, research institutions and the public and non-profit sectors.

Funding and Recruitment Opportunities

Research in Estonia is primarily financed on the basis of quality competition. Financing comes from the state budget, foreign funds (mostly EU H2020 and other means) and companies. The Estonian Research Council is the principal funding body of R&D in Estonia, consolidating different grants and types of funding and giving research more visibility within society. There are also several mobility grants. Click here for the funding calls.

As most research is performed in the public universities, most research jobs are also available in public universities. PhD students are regarded as students and receive a monthly scholarship.

Important Information for Incoming Researchers

EURAXESS Estonia provides information and support to international researchers for free. We provide information about entry conditions, visas and residence permits. Estonia in general, the Estonian research landscape, job & funding offers, events for researchers and much more!

Citizens of the USA and Canada can stay in Estonia visa free for up to 90 days. For longer stay they will need a residence permit. See the US Embassy in Estonia for USA-Estonia information, news and events.

Research collaboration with North America
Research collaboration between Estonia and North America is wide-ranging and continual.

Research collaboration of Estonia with USA and Canada is mostly based on relations between researchers with particular interest on a specific topic. There are also several state level agreements to promote collaboration with Estonia. For example, the Agreement between the Government of the Republic of Estonia and the Government of the United States of America for Scientific and Technological Cooperation is in force since 2009. The agreement prioritizes collaboration on environmental and biodiversity protection, marine science, energy, space, engineering, and sustainable development. Canada-Estonia Youth Mobility Agreement took effect on August 1, 2010. The agreement facilitates young adults (18-35yr) from Canada and Estonia to travel and gain valuable work or study experience in each other’s country for up to one year.

In 2016 Estonia and USA signed a R&D collaboration agreement in the defence field. That was partly triggered by Estonia’s experience in cybersecurity issues and that the NATO Cooperative Cyber Defence Centre of Excellence (NATO CCD COE) is located in Estonia. The NATO CCD COE is a NATO-accredited knowledge hub, research institution and training and exercise facility. The Tallinn based international organisation focuses on interdisciplinary applied research, as well as consultations, trainings and exercises in the field of cyber security.

All researchers from USA and Canada can apply to Estonian Research Council mobility grants.

Estonian expats in North America are dedicated to advancing R&D relations with their homeland. Estonian communities help young Americans and Canadians with Estonian roots to study in Estonia and create opportunities for Estonians to study in North America.

The Fulbright Programme has been in action in Estonia since 1992. A new and updated Memorandum of Understanding (MOU) of the Fulbright Programme between USA and Estonia was signed on February 19, 2015. “The Fulbright program brings together the best and the brightest of our two nations and this agreement which we will sign today lays the foundation to grow and expand the opportunities for our scientists, researchers and students,” Ambassador Levine said at the signing ceremony. The Fulbright Program is an elite educational exchange program sponsored by the U.S. government, it provides funding for students, scholars, teachers, artists and professionals to undertake graduate study, advanced research, university lecturing and teaching in elementary and secondary schools. In the past 22 years, more than 170 U.S. Fulbright students and scholars have studied, researched, or taught classes in Estonia.

Authors: Hanna Raig, EURAXESS Estonia
Interview with Kyle Mokma from USA

1. How did you get the job in Estonia and why did you decide to work in Estonia?
I am interested in research in behavioral systems analysis. I am a Board certified assistant Behaviour Analyst. I came to Estonia working with an American family providing pediatric psychological services (Applied Behaviour Analysis services). Through this work I discovered that Estonia was attempting to modernize and create increased standards for services offered to children with developmental disabilities and autism. I decided to go to Tallinn University and speak with the head of the special education department to see if she would allow me to teach my profession, which is applied behaviour analysis.

She was excited to try this project and we started teaching graduate students basic theoretical knowledge about behaviourism and behavioural psychology in 2015 course titled Käitumise printsibid (principals of behaviour) and a practicum course titled ABA Praktikum in the fall, that if passed allows the students to qualify to take a board examination through the Behaviour Analyst Certification Board to become a registered behaviour technician.

2. Name three characteristic things about research work in Estonia or about Estonia in general.
Research in Estonia is well organized and well funded. Attending the Welcoming Program is one of the best ways to become familiar with various funding mechanisms, and the overall structure of how research is conducted in Estonia. Research and projects in “smart” areas like cyber-security, information technology, e-governance are very well received here in Estonia as they are areas the government has deemed priority. Estonians are typically very open warm and welcoming to well thought out proposals and ideas.

3. A message to anyone from your country who is considering research work with Estonian partners or moving to Estonia for work.
Estonia is a beautiful country especially during the summer. The countryside is rich with old world culture. There are a number of new private international schools that teach in English and cater to the growing number of international families moving to Estonia to work in the booming IT sector. Estonia is very welcoming to the international community offering language courses, introductions to research, family life, legal system etc. Estonia is working very hard to be a welcoming place to the international community and that is very easy to see.