

Estonia is a small North European country. It has been a member of the European Union since 2004.



Promotional page about Estonia is <u>www.estonia.ee</u>.



University of Tartu



Research in Estonia initiative out International carries marketing activities with the aim to introduce Estonian research on an international level and for international audience. The portal offers information and professionals, news for and students scholars. interested in research opportunities in Estonia.

The Estonian Academy of Sciences is an umbrella

organisation uniting researchers, scholars and intellectuals.

# 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 **sevenfold** [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 <u>6 public universities</u> where most research is performed. The leading scientific institution in Estonia is the <u>University of Tartu</u>.

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 9 **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 biomelevel responses, genomics and translational medicine, information and communication technologies (ICT), molecular cell engineering, space studies.

[1] <u>http://www.stat.ee/science-technology-innovation</u> [2] <u>http://blog.ut.ee/how-successful-is-estonian-science/</u> [3] <u>http://www.stat.ee/news-release-2016-132</u>

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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 40 countries, of which we will profile one in our quarterly e-newsletter. In this edition, we zoom in on Estonia



How Skype started in Estonia, read <u>The Story of Skype</u>

<u>e-Estonia</u> – The Digital <u>Society</u>

Enterprise Estonia supporting and advising entrepreneurs



The main funding body is the Estonian Research Council.

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Information and support for incoming researchers on EURAXESS Estonia

## 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 <u>Skype</u>, <u>TransferWise</u>, <u>Lingvist</u>, <u>Starship Technolgies</u> and <u>Guardtime</u>.

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 <u>e-resident</u> of Estonia in order to register your business in Estonia).

<u>Competence Centres (8)</u> 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.

<u>Enterprise Estonia</u> 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 <u>Estonian Research Council</u> 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**. <u>Click here</u> 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

<u>EURAXESS Estonia</u> 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!

See <u>Estonian Embassy in Beijing</u> and all <u>Estonian embassies and</u> representations around the world.

[4] Estonian Research and Development and Innovation Strategy 2014-2020 "Knowledge-based Estonia"





Asian Research Centre in Estonia a project based effort by three leading Estonian universities – Tallinn University, University of Tartu and Tallinn University of Technology – to bring together all contemporary Asia related research and activities in Estonia.

The Centre serves as a platform for cross-sector cooperation between a range of actors from academia and civil society to state and entrepreneurs to facilitate knowledge transfer, research and network building, aimed at strengthening the relationship between Estonia and Asia. It is an umbrella for the listed universities' individual research centres on Asia.



See <u>Estonian Research</u> <u>Council</u> portal for funding calls in Estonia.

Authors: Hanna Raig, EURAXESS Estonia and Tallinn University

### Research collaboration with China

Research collaboration between Estonia and China is mostly based on relations between researchers with particular interest on a specific topic but also through bilateral agreements and participation in European Union – Asia cooperation formats. Many researchers have individual research projects in with Chinese partners without institutional collaboration. There are also several state level agreements between Estonia and China. For example, the Agreement between the governments of the Republic of Estonia and The People's Republic of China on collaboration in science and technology was signed in 1992. In 2015 an agreement between the countries' ministries of education was signed for recognition of qualifications in higher education up to the doctoral level. In the Estonian strategy for internationalisation of higher education 2016-2020, China is one of the target countries from where Estonia welcomes international students.

<u>University of Tartu, Tallinn University of Technology, Tallinn University</u> as well as <u>Estonian University of Life Sciences</u> have partner universities from China. The University of Tartu is active in cooperating with China in various fields, including economics, chemistry, international relations and social sciences more generally, with plans to engage in more collaboration in biology, material sciences and environmental sciences. Tartu Science Park has longstanding cooperation with Tsinghua University's Technology Transfer Center. Tallinn University of Technology has put special focus on ICT programmes and has organized seminars in Shanghai with Shanghai Jiao Tong University and other partners including companies (Microsoft, Ericsson, Huawei). At Tallinn University several Asian studies programmes and the <u>Confucius Institute (CITU)</u> are based.

In 2014, the <u>Asian Research Centre in Estonia</u> was launched in cooperation between Tallinn University, University of Tartu and Tallinn University of Technology. The Centre brings together academia, the state and state-funded actors, entrepreneurs and civil society to foster knowledge transfer and strengthen Estonian competitiveness in Asia. To promote collaboration with Asian countries the Centre organizes various events and seminars.

#### Funding tools

Funding is key to conducting research on Asia due to the costs of travel (fieldwork, meetings, conferences etc.) involved. The most often used funding options available are the grants offered by the Estonian Research Council; Cultural Endowment of Estonia; the European Commission's various projects; various EU or US based foundations, including private ones or the funding organizations of various governments (opened occasionally). Institutional development programme (ASTRA) funds have been used at the University of Tartu to hire academic staff with research interest in China.



All researchers from Asian countries can apply to Estonian Research Council mobility grants. Scholarships for international teaching staff and researchers:

http://researchinestonia.eu/funding/

#### Examples of successful collaborations with China

Successful research collaboration takes place in the fields of spatial mobilities, urban geography and segregation, and temporal and tourism geography between the University of Tartu's Department of Geography (Human Geography and Regional Planning) and Peking University, Tsinghua University (Department of Urban Planning), Shanghai University (Smart City Institute) and Hong Kong Baptist University. Jointly, doctoral students are supervised and research papers written. Methodology of analysis of large cities is developed.



Shuai Li

PhD student of Plant Physiology

Estonian University of Life Sciences



Estonian University of Life Sciences

## Estonia EU presidency in 2017

Estonia will be holding the EU Council presidency in the second half of 2017. The focal themes for Estonia will be the single and digital markets, the energy union and closer integration of our Eastern partners into Europe. We also want to focus on the promotion of e-solutions and the information society in EU policy areas. See Estonia EU presidency programme.

### Interview with Chinese PhD student Shuai Li in Estonia

## 1. How did you hear about Estonia and why did you decide to work in Estonia?

In fact, I knew my PhD supervisor's, **Ülo Niinemets**, name when I started my masters in China in 2009. At that time I read his papers, which are highly related to my master thesis topic. After I finished my master's studies, I contacted Ülo to ask if the PhD position is available in his lab, and he replied and accepted my application. Before that I just knew Estonia but didn't know anything about her. The reason why I decided to study here is that Ülo is a famous and top scientist and I believe that I will receive very good training for my PhD study.

## 2. Name three characteristic things about research work in Estonia or about Estonia in general.

I think the first characteristic about the research work in Estonia is top quality. For example, we have excellent facilities and devices in our lab and very good ideas from supervisor. The second characteristic about the research work in Estonia is very good work environment. You know our University is not big, but very convenient for living and studying. The third characteristic about Estonia is excellent natural environment. Forests cover about 50% of the territory of Estonia. In addition, we also have the sea, bogs, rivers, lakes and of course a lot of wild animals. It is amazing!

## 3. A message to anyone who is considering research work with Estonian partners or moving to Estonia for work.

What I want to say for those Chinese who want to study or work in Estonia is: Estonia is a small country compared to China, but it has specially charming culture, top quality education, excellent nature and environment, and of course friendly people. It is a good place for study, work and living. I believe that once you are here, you are gonna love it!