

Two scientists jointly received the Young Scientist Award today from the President Toomas Hendrik Ilves at the Office of the President – botanist and mycologist **Leho Tedersoo** and media and communication researcher

Andra Siibak

. For the first time, President Ilves also awarded the Special Young IT Scientist Award to the creator, developer and applier of the Sharemind data processing system,

Dan Bogdanov

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The monetary prize for the Young Scientist Award is 5,000 euros, which is contributed by **Väino Kaldoja**

. The monetary prize for the Young IT Scientist Award is 5,000 euros and is allocated by **Skype Estonia**

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President Ilves stated in his address that Andra Siibak, Dan Bogdanov and Leho Tedersoo are the very embodiment of a new generation in Estonian research. "While we often hear people complain that the research, economic and governance sectors all pursue their own goals and are unable to communicate with each other, it can be said that you, the laureates, have proven them wrong. You have shown that research does not solely represent articles and references to a database of research articles – although we shouldn't underestimate them. You have proven that scientists are the first – and have always been the first – to feel the new horizons of human development," said the Head of State.

President Ilves emphasised that the committed work of the laureates brings value and practical benefits to Estonia. "As the author of one of the letters of recommendation, quite appropriately, noted: thanks to your work all the eyes of scientists in the sphere across the world will be focused on you. This is why the Cultural Foundation of the President had to present, in an exceptional move, two Young Scientist Awards and one Young IT Scientist Award this year. The latter was being presented for the first time in the history of the awards. "I thank you for the wonderful contribution you have made to expanding the world for all of us," President Ilves added.

For the first time ever and supported by Skype Estonia, President Ilves today presented the Young IT Scientist Award. "We established the Young IT Scientist Award, in conjunction with the Cultural Foundation of the President, to ensure the required support for the thirst for

knowledge, thinking big and the commitment to research work among young Estonian scientists," said the CEO of Skype Estonia, Andrus Järg. "We wish to offer talented individuals the opportunity to focus in depth and go to the top on a global scale. The first recipient of the award, Dan Bogdanov, is an ideal role model for young scientists and I do hope that the future candidates will follow his example. We in Skype believe that the research-based generation will help create opportunities for the fusion of curiosity, education and technological development to contribute to economic development and the viability of Estonian society in general," he added.

Andra Siibak, PhD, is a Senior Research Fellow of Media and Communications in the Institute of Social Studies at the University of Tartu and programme leader of doctorate curricula of media and communications studies. After she defended her doctor's degree in the speciality of media and communications in 2009, Siibak continued her career in University of Tartu and at Södertörn University (2009-2012) in Sweden, where she completed her post doctorate studies. She has also been a guest Research Fellow at University of Aarhus (Denmark) and guest lecturer at Masaryki University (Czech Republic). Siibak's research interests are mostly related to the sphere of internet studies; her work mostly focuses on investigating practices for using new media among various generations in a society that is saturated with technology. She has studied the textual and visual creation of identity among young people in social media environments; analysed the role of teachers, parents and peers as internet use mediators among young people, observed the understanding of people of the imaginary and real audience in social media and published a number of methodological research articles in the field of children's and youth studies.

Leho Tedersoo is a Senior Research Fellow at the University of Tartu Natural History Museum. He defended his doctoral thesis on the ecology of fungi living in symbiosis with plant roots and the diversity of forest ecological systems in Estonia, Seychelles and Australia. The importance of his work involves the identification and modelling of the diversity and functions of soil microorganisms (above all, fungi) and the natural processes that influence these at a global level. Understanding these processes will help to weigh the general impact of climatic changes on forestry and agriculture, as well as the nature conservation value of local level soil microorganisms. In his research, he has successfully applied the new generation DNA sequence identification technologies; the integration of the respective technologies with information technology data processing, physics of stable isotopes and statistical analysis of ecological background data has been highly successful in this interdisciplinary field. Tedersoo's current research work focuses on the more accurate modelling of global soil processes and functional properties of microorganisms, also involving information provided by thousands of microorganism genomes. Leho Tedersoo's numerous research papers on molecular ecology, metagenomics and climate change have had a considerable effect on frontline research in this field. He is the most frequently quoted scientist of this field in Estonia; more than 5,000 references have been given to his work. In the course of nature studies organised by Tedersoo, the fruiting bodies of the highly appreciated delicacy mushrooms *Tuber aestivum* (summer truffle) and *Tuber borchii* (whitish truffle) were found in Estonia for the first time, and the

experimental inoculation of oaks with these truffles was successful.

Dan Bogdanov, who was awarded the Young IT Scientist Award, is the head of research and development processes at Cybernetica and the creator, developer and applier of the Sharemind data processing system. Bogdanov's master degree thesis, "How to Conduct Secure Calculations Using Shared Confidential Data", was the first research paper to present the safe shared calculation platform Sharemind; the development of this platform has provided the essence for further research and the engineering career of Bogdanov. Secure shared calculations represent encryption technology that allow stakeholders who do not trust each other to analyse each other's private data for calculation results without "leaking" the data; the parties identified in the analysis plan as end consumers will be the only ones to learn the final results. Secure shared calculations represent one of the main methods for enhancing the privacy guarantees of disseminated systems, cloud calculations included. The Sharemind platform is Bogdanov's contribution to the sphere of secure shared calculations. The main outcome of Bogdanov's doctoral studies was a software platform that allows the user to carry out calculations while maintaining privacy, which could be used for solving real life problems. The given system has been developed further since his initial studies and today a number of successful developments have transpired.

The Young Scientist Award is available for application for young scientists aged 35 or younger who already have completed their doctorate and are conducting research at an Estonian or foreign college, university or research institution.

The special Young IT Scientist Award is earmarked for a young scientist aged 35 or younger who has acquired a doctoral degree, has been admitted for a doctoral studies programme (at either an Estonian or foreign university) or whose research work is closely related to the development of information technology and related spheres (main focus: software development and applications). The award can be used to promote research work or for its implementation in practice.

Office of the President
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