ERC Starting Grants for professors

Five Assistants Professors at IST Austria are to receive Starting Grants from the European Research Council (ERC). Computer scientist Bernd Bickel, mathematician Jan Maas, evolutionary biologist Beatriz Vicoso, and neuroscientists Gaia Novarino and Sandra Siegert secured an award, each with a budget value of approximately EUR 1.5 million. IST Austria President Thomas Henzinger congratulates the awardees: “ERC Starting Grants recognize young talented scientists for their excellent research. With five more Starting Grants for IST Austria researchers, the total number of our ERC-funded projects has now risen to 28. This success strongly confirms our recruiting strategy.”

In 2016, faculty members at IST Austria have secured eight ERC Grants so far. In addition to Bickel, Maas, Vicoso, Novarino and Siegert having been successful within the Starting Grant scheme, neuroscientists Peter Jonas and Ryuichi Shigemoto as well as physicist Robert Seiringer received ERC Advanced Grants this year.

Novarino receives SFARI award

Professor Gaia Novarino has been granted a Pilot Award of the Simons Foundation Autism Research Initiative (SFARI) for her project on “Probing development and reversibility of autism spectrum disorders”. Launched in 2003, SFARI is a scientific initiative within the Simons Foundation’s suite of programs focusing on the science underlying a medical condition. Its mission is to improve the understanding, diagnosis and treatment of autism spectrum disorders by funding innovative research of the highest quality and relevance. To this end, SFARI grants annual awards to individual scientists who conduct particularly bold, imaginative, rigorous and relevant research.

The Simons Foundation also seeks to create strong collaborations and foster cross-pollination of ideas between investigators, as these interactions often lead to unexpected breakthroughs and new understanding. As the recipient of a Pilot Award, Gaia Novarino also becomes a member of the prestigious community of Simons Investigators.

Six new professors join IST Austria

President Thomas A. Henzinger announced the names of six new professors: the neuroscientist Maximilian Jösch, the mathematician Julian Fischer, the computer scientist Dan Alistarh, and the physicists Peter Krosgstrup, Johann Georg Danzl and Maksym Serbyn will join IST Austria as Assistant Professors, bringing the number of the faculty to 46.

Henzinger welcomed the new professors: “These appointments are an indicator for the great attraction that IST Austria has for extraordinarily promising young scientists. I am very happy that they will join us at this stage of their career because they will further broaden our research portfolio. At IST Austria they can expect an environment that will enable them to contribute outstanding results to their fields of research.” Following the recent promotion of Eva Benkova and Krzysztof Pietrzak to tenured professors, this brings the number of faculty to 46, among them 21 tenured Professors and 25 Assistant Professors including the newcomers. The 46 members of the IST Austria faculty come from 22 countries.
It is generally accepted that the synapses between neurons, play a key role in pattern completion, but how this exactly works has remained enigmatic. In their Science paper, Jose Guzman, Alois Schlögl, Michael Frotscher, and Peter Jonas have investigated these mechanisms by combining functional connectivity analysis and network modeling. Their findings suggest that the rules of synaptic connectivity between CA3 pyramidal cells contribute to the remarkable efficiency of pattern completion. Previous theories of the hippocampal formation often depicted the CA3 region as a network of highly interconnected cells. The neuroscientists tested this hypothesis using a technique that allows monitoring the connection between electrical signals in up to eight neurons at the same time. Using this technique, they made several highly surprising observations. First, they found that connectivity was sparse, with an average connection probability of approximately 1%. This massively challenges the dogma of a network of highly connected cells. Even more surprisingly, they discovered that connectivity in the network is not random, but exhibits connectivity motifs that occur much more frequently than expected for a random network. Thus, the structure of the hippocampal CA3 network may be somewhat reminiscent of a “small world” architecture as found in social networks. Finally, the authors revealed that synaptic connections between two cells are mediated by only one or two synaptic contacts. This is also remarkable because much higher numbers have been found for excitatory synaptic connections in the neocortex.
Upcoming IST Lecture / IST Science and Society Lecture

On November 30, the American physicist Steven Chu will be giving an IST Lecture on “Climate change, clean energy and nanotechnology for energy”. He is William R. Kenan, Jr., Professor of Physics and Professor of Molecular and Cellular Physiology in the Medical School at Stanford University. He has been granted numerous awards including the 1997 Nobel Prize in Physics for laser cooling and atom trapping.

On December 14, the Austrian demographer Wolfgang Lutz will be delivering the IST Science and Society Lecture titled “Human capital as the root cause of development and policy priority for the 21st century”. He is Founding Director of the Wittgenstein Centre for Demography and Global Human Capital, and has published extensively on international population trends.

For further information on the talks and registration visit the IST Austria website.

Student Open Day 2016

IST Austria will hold this year’s Student Open Day on November 25. Talented students who are interested in performing their doctoral studies in biology, neuroscience, computer science, mathematics, or physics at IST Austria will be invited to a varied program on campus, ranging from information talks, lab and campus tours and research group sessions. Dean Nick Barton and PhD Program Chair Gasper Tkacik will provide them with information on the PhD program and internship opportunities available at IST Austria. The prospective PhD students will also get the opportunity to meet professors, postdocs, and PhD students and ask them about their research. In addition, they will also take campus tours to learn more about the founding principles of IST Austria as well as its past and future development. A think&drink event will conclude the Student Open Day 2016, with IST Austria scientists presenting their ongoing research.

For detailed information on the program and registration see the IST Austria website.