

Meeting of the ETH Board on 13/14 December 2017

13 professors appointed at ETH Zurich and EPFL

Bern, 14 December 2017 – In response to the proposals received from the President of ETH Zurich, Professor Lino Guzzella, and the President of EPFL, Professor Martin Vetterli, the ETH Board resolved at its meeting of 13/14 December 2017 to appoint a total of 13 professors and award the title of professor to four individuals; it also acknowledged the resignation of four professors and thanked them for their services.

Appointments at ETH Zurich

Professor Elliott Ash (*1984), currently Tenure Track Assistant Professor at the University of Warwick, Coventry, UK, as Tenure Track Assistant Professor of Law, Economics, and Data Science. Elliott Ash is an exceptional young academic. He applies machine learning and natural language processing to large legal data sets in order to investigate the effects of laws, court decisions and contracts on human behaviour and markets. Elliott Ash has established himself at the forefront of research by combining empirical methods drawn from econometrics, informatics and statistics. His appointment will enable ETH Zurich to enhance its leading position in the field of data science.

Professor Philippe Block (*1980), currently Associate Professor at ETH Zurich, as Full Professor of Architecture and Structure. Philippe Block conducts research into historic masonry, computational form-finding methods and the optimisation of support structures. His group's key areas of focus also include innovative manufacturing processes, sustainable construction technology and new concepts of teaching and study. Philippe Block is noted for his clear, precise approach. He uses graphical static to investigate complex three-dimensional shell structures, for example. With special reference to Gothic church architecture, he develops up-to-date digital models for these structures.

Dr Ori Bar-Nur (*1980), currently a post-doctoral student at Harvard Medical School, Boston, Massachusetts, USA, as Tenure Track Assistant Professor of Regenerative and Movement Biology. Ori Bar-Nur's research focuses on the transformation of adult cells into stem cells – an important area of tissue engineering. He is especially interested in cutting-edge transgene systems, which he combines with innovative small molecule screening in order to improve the transformation into stem cells. With the appointment of Ori Bar-Nur, the Department of Health Sciences and Technology at ETH Zurich is boosting its research into biomaterials and regenerative technologies, and into healthy ageing.

Professor Andreas Fichtner (*1979), currently Tenure Track Assistant Professor at ETH Zurich, as Associate Professor of Seismology and Wave Physics. Andreas Fichtner has built up a very productive and globally visible research group at ETH Zurich. His visionary work has won several awards, including an ERC Starting Grant. In his research, Andreas Fichtner uses the latest numerical techniques to describe the three-dimensional structure of the Earth and of seismic sources. His research has focused on constructing a complete seismic model of the Earth and compiling a new data set of global, correlated seismic noise, among other topics.

Professor Dirk Mohr (*1976), currently Tenure Track Assistant Professor at ETH Zurich, as Associate Professor of Computational Modelling of Materials in Manufacturing. Dirk Mohr is particularly interested in optimising metallic sandwich panels. He makes use of his own material models for plastic multiaxial deformation and ductile failure, including under high strain rates. In addition, he has developed a biaxial test machine that is now used in the automotive industry. Dirk Mohr unites scientific excellence with a flair for industrial applications, thus assisting ETH Zurich with the important task of building bridges and facilitating transfers with different sectors of industry.

Dr Rafael Polania (*1983), currently a post-doctoral student at the University of Zurich, as Assistant Professor of Decision Neuroscience. Rafael Polania investigates how the human brain makes decisions and turns them into targeted action. His highly interdisciplinary approach combines modelling neural processes and behaviour with modern imaging techniques and non-invasive brain stimulation. This allows him to affect neural communication within the brain in a targeted manner and explore its impact on human behaviour. Rafael Polania's research was awarded an ERC Starting Grant this year. His appointment enables ETH Zurich to strengthen human research, among other disciplines.

Dr Lesya Shchutska (*1985), currently Research Associate at ETH Zurich, as Assistant Professor of Experimental Particle Physics. Lesya Shchutska is an internationally recognised young scientist who received an ERC Starting Grant in 2017. Her research focuses on searching for physical phenomena beyond the standard model of particle physics. She makes use of data recorded by the CMS experiment at the CERN Large Hadron Collider (LHC) in Geneva. Lesya Shchutska is one of the world's leading experts in the search for supersymmetric particles. ETH Zurich has appointed her with a view to enhancing its leading role in experimental high-energy physics.

Professor Olga Sorkine Hornung (*1981), currently Associate Professor at ETH Zurich, as Full Professor of Computer Science. Olga Sorkine is internationally regarded as a leading scientist in the field of geometric modelling and digital geometry processing. One of her main areas of research is the interactive modelling of surfaces, which plays a significant role in many areas of application for computer graphics. She has obtained crucial research results in this field. At present she is also working on digital fabrication and 3D printing techniques in computer design. Olga Sorkine's results have won a number of awards, including an ERC Starting Grant in 2012.

Professor Alexander Stremitzer (*1974), currently Professor at the University of California, Los Angeles, USA, as Full Professor of Law, Economics, and Business. Alexander Stremitzer is one of the world's leading experts in the application of experimental methods to legal questions. He uses mathematical models to develop hypotheses regarding the interaction between business partners in contractual, liability and bankruptcy law and examines their validity in social science laboratories. His work incorporates findings from law, economics and the behavioural sciences. The appointment of Alexander Stremitzer reinforces the international position of the Center for Law & Economics at ETH Zurich.

Professor Zhendong Su (*1970), currently Professor at the University of California, Davis, USA, as Full Professor of Computer Science. Zhendong Su is a leading international expert in software engineering and programming languages. He has made substantial contributions in many key areas of computer science. These include developing innovative test methods for compilers – the most important software development tool. He is also noted for test and analysis techniques which improve the security of web applications. The appointment of Zhendong Su ideally strengthens the Department of Computer Science's research and teaching in the field of software engineering and programming languages.

Appointments at EPFL

Professor Gregor Rainer (*1970), currently Associate Professor at the University of Fribourg and Adjunct Professor at EPFL, as Associate Professor of Life Sciences. Gregor Rainer is a globally renowned neuroscientist. His research focuses on the section of the cerebral cortex which forms part of the visual system and enables visual perception. Gregor Rainer will hold a joint professorship at EPFL and the University of Fribourg, where he also works as Coordinator of the Swiss Primate Competence Centre for Research. His research direction and experience will make a significant contribution to advancing translational neuroscience at EPFL through the use of new approaches.

Professor Herbert Shea (*1971), currently Associate Professor at EPFL, as Full Professor of Microtechnology. In the course of a successful scientific career, Herbert Shea has conducted research in a wide range of fields relating to applied physics and microtechnology. His highly interdisciplinary work has gained worldwide recognition. It includes significant and innovative contributions in the areas of touch screen technology and designing the human-machine interfaces of the future. Herbert Shea is an influential figure in the field of microsystems. His future research at EPFL will concentrate in particular on advanced technologies for the manufacture and application of polymer-based switching devices.

Professor Maryna Viazovska (*1984), currently Tenure Track Assistant Professor at EPFL, as Full Professor of Mathematics. Maryna Viazovska is a highly gifted young academic in the field of pure mathematics. She is particularly interested in problems relating to number theory and discrete optimisation. In spring 2016 she caused an international sensation by solving the sphere-packing problem in dimensions 8 and 24. Since Maryna Viazovska's appointment as an assistant professor in December 2016, her results have appeared in the top publications in her field. By promoting her to a full professorship, EPFL is ensuring that it retains the creativity and innovative energy of a scientist who aims to be one of the best in the world.

Award of the title of Professor

Dr Arthur Gessler (*1965), currently a Research Group Leader at WSL and Lecturer at ETH Zurich, as Adjunct Professor at ETH Zurich. Arthur Gessler is an outstanding scientist with a wide range of research interests, from plant ecophysiology and ecosystem biogeochemistry through to landscape dynamics.

Dr Michael Leunig (*1962), currently a Departmental Head at the Schulthess Clinic in Zurich and Lecturer at ETH Zurich, as Adjunct Professor at ETH Zurich. Michael Leunig has not only achieved global recognition as a top surgeon, but is also known for his innovative teaching and as one of the world's leading researchers in his field. At ETH Zurich he combines problems arising from his everyday work at the hospital with topics in the natural and engineering sciences.

Dr Kai M. Udert (*1971), currently a Research Group Leader at Eawag and Lecturer at ETH Zurich, as Adjunct Professor at ETH Zurich. Kai Udert's innovative research on waste water separation, decentralised technologies, nutrient and urine source separation and resource recovery enjoys the highest international recognition. In addition to conducting research, he is very committed to teaching.

Dr Martin Wörter (*1969), currently Senior Scientist and Senior Lecturer at ETH Zurich, as Adjunct Professor at ETH Zurich. The main focus of Martin Wörter's internationally acclaimed work is research into empirical innovation at the interface between management and economics, and between technological developments and economic framework conditions.

Departures from EPFL

Professor Stewart Cole (*1955), currently Full Professor of Life Sciences, will leave EPFL with effect from 1 January 2019. Stewart Cole was appointed as a full professor at EPFL in 2007 and also directs the Global Health Institute. He is an internationally recognised microbiologist. His findings enabled significant advances to be made in combating infections and diseases such as HIV and AIDS, cervical cancer and tuberculosis. Stewart Cole will be pursuing his career as the head of the renowned Institut Pasteur in Paris.

Professor Nicola Harris (*1972), currently Associate Professor of Life Sciences, is to leave EPFL with effect from 1 January 2019. Nicola Harris is a globally recognised expert on infections of the digestive

tract. She was appointed to the post of assistant professor at EPFL in 2009 and will now be moving to another university.

Professor Pierre-André Farine (*1953), currently Full Professor of Microtechnology, is to retire at the end of March 2018. Pierre-André Farine has worked at EPFL since 2009, when the Institute of Microtechnology of the University of Neuchâtel, which he directed, merged with the Institute of Microtechnology at EPFL. His skills as a highly active researcher in different fields of microelectronics and signal processing, as well as his great commitment as a university lecturer, have contributed substantially to the scientific results and reputation of EPFL in recent years. Pierre-André Farine has also initiated valuable partnerships with other universities and with industry.

Professor Anton Schleiss (*1953), currently Full Professor of Hydraulic Constructions, is to retire at the end of February 2018. After a career in the private sector, Anton Schleiss joined EPFL as an associate professor in 1997. His research focused on gaining an in-depth understanding of the physical processes connected with water as an element, and with hydraulics, as well as on developing practical applications for his findings. Under his direction the Hydraulic Constructions Laboratory has made significant contributions to teaching and research at EPFL. Anton Schleiss has supervised an exceptionally large number of students and doctoral candidates. He has also undertaken management roles at the Federal Institute of Technology and at well-known institutions in his specialist area.

The ETH Board would like to thank the departing professors for their services to science, teaching and academic administration.

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