

Meeting of the ETH Board on 27/28 September 2017

10 professors appointed at ETH Zurich and EPFL

Bern, 28 September 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 27/28 September 2017 to appoint a total of 10 professors and award the title of professor to one individual; it also acknowledged the resignation of seven professors and thanked them for their services.

Appointments at ETH Zurich

Professor Andreas Krause (*1978), currently Associate Professor of Computer Science at ETH Zurich, as Full Professor of Computer Science. Andreas Krause is internationally recognised as an outstanding scientist in the fields of machine learning and artificial intelligence. In his work on adaptive systems, he develops innovative models and algorithms that can optimise submodular quality functions efficiently and with provable approximation characteristics. His approaches have also demonstrated their worth in practice, such as in medical diagnosis and traffic planning. Andreas Krause is also Academic Director of the Swiss Data Science Center and therefore plays a key role in the ETH Domain's Initiative for Data Science in Switzerland.

Professor Sven Panke (*1967), currently Associate Professor at ETH Zurich, as Full Professor of Bioprocess Engineering. Sven Panke's research interests encompass two major areas of investigation in the field of bioprocess engineering: the design of new integrated process strategies and the application of synthetic biology to the design of biological catalysts. His work on the integration of continuous chromatography and biocatalysis processes has been very well received, as has his work on the rational design of multi-enzyme systems. Sven Panke has an excellent international network and is very successful at attracting third-party funds from sources within Switzerland and throughout the world.

Professor Tanja Stadler (*1981), currently Tenure Track Assistant Professor at ETH Zurich, as Associate Professor of Computational Evolution. Tanja Stadler is a leading researcher in the field of phylogenetic dynamics. Using newly developed mathematical and bioinformatic methods, she has made a major contribution to enabling epidemiological parameters to be estimated directly from sequence data. Her successes include answering key questions regarding the development of biological species and the common evolution of pathogens and their host organisms. Tanja Stadler received an ERC Starting Grant for her work and has already been awarded a number of prestigious prizes, including the ETH Zurich Latsis Prize.

Professor Marco Stampanoni (*1974), currently Associate Professor at ETH Zurich, as Full Professor of X-ray Imaging. Marco Stampanoni has won international renown for developing imaging technologies using X-ray and synchrotron radiation. One example of his wide-ranging knowledge and innovative ability is the dedicated beamline for tomographic microscopy (TOMCAT) which he developed at the Swiss Light Source; this is now recognised as one of the most powerful tomographic beamlines in the world. It allows phenomena such as cerebral infarctions and the associated plastic response to be represented volumetrically and quantified. Marco Stampanoni has received a large number of international awards, most recently an ERC grant.

Dr Thomas Ward Crowther (*1986), currently Scientist at the Institute of Ecology (NIOO) in Wageningen, Netherlands, as Tenure Track Assistant Professor of Global Ecosystem Ecology. Thomas Crowther's research focuses on forest ecosystems and on ecological processes that structure species communities and ecosystems. He has a particular interest in the regulation of the forest carbon cycle by microbes in forest soils, and the effects of these mechanisms on the global carbon balance and long-term

climate change. With his highly interdisciplinary approach, Thomas Crowther makes important contributions to national and international initiatives in soil management and combating climate change.

Appointments at EPFL

Professor Emmanuel Abbe (*1980), currently Associate Professor at Princeton University, New Jersey, USA, as Full Professor of Mathematics. Emmanuel Abbe is regarded as one of the world's leading experts in data science, working at the interface of mathematics, information theory, statistics and theoretical computer science. His specialist area is stochastic block model analysis. The advances he has made are important to a number of other subject areas and have applications in human biology, genomics and the analysis of artificial neural networks, for example. Emmanuel Abbe has already received several prestigious awards, including the Latsis Prize from EPFL, his *alma mater*.

Dr Maria Colombo (*1989), currently a post-doctoral student at the University of Zurich and a research associate at ETH Zurich, as Tenure Track Assistant Professor of Mathematics. Maria Colombo is a very talented young researcher who has already attracted international attention for a number of articles in prestigious academic journals. Her areas of research are the analysis of partial differential equations and variational calculus, which is concerned with functionals (e.g. integrals involving an unknown function and its derivatives). She has attracted particular interest for making significant advances in the regulation of the transport equation, which describes the behaviour of particle systems in the presence of external force fields.

Dr Dusan Licina (*1986), currently a post-doctoral student at the University of California, Berkeley, USA, as Tenure Track Assistant Professor of Indoor Environmental Quality. Dusan Licina is a very promising young researcher who has already gained an outstanding international reputation. His research focuses on environmental and air quality in indoor spaces, and he investigates the behaviour and distribution of air flows and airborne particles along the human body as well as in the overall context of indoor spaces. He conducted one of his studies in the neonatal department of a maternity hospital. The aim was to protect premature infants from the effects of dirt particles as far as possible, e.g. by optimising the ventilation system.

Dr Sahand Jamal Rahi (*1982), currently Scientist at Rockefeller University, New York, USA, as Tenure Track Assistant Professor of Biophysics. Sahand Jamal Rahi is an innovative scientist with a multidisciplinary approach who shows great potential. In particular, he studies the behaviour of biological molecules such as DNA and proteins. His work makes use of findings from theoretical physics and statistics. One of his specialist areas is the calculation of the Casimir effect between metallic objects. At EPFL, Sahand Jamal Rahi will work closely with colleagues from the disciplines of physics, cell biology and molecular biology, and will contribute to the international positioning of the Institute in these subjects.

Dr Carmela Troncoso (*1982), currently Scientist at IMDEA Software Institute in Madrid, Spain, as Tenure Track Assistant Professor of Computer Science and Communication Systems. Carmela Troncoso is an up-and-coming specialist in IT security and the protection of privacy in information technology and communication systems. Her results have already attracted international attention. She is particularly interested in researching systems that allow privacy to be safeguarded. Among other things, she develops methods by which software engineers can integrate protection guarantees into their designs. Recently, Carmela Troncoso has been also been working on the protection and safe use of genetic data and the human genome.

Award of the title of Professor

Professor Ignacio Pagonabarraga (*1966), currently Full Professor at the University of Barcelona, Spain, as Adjunct Professor at EPFL. Ignacio Pagonabarraga is an internationally recognised researcher and specialist in soft condensed matter. As Director of the *Centre Européen de Calcul Atomique et Moléculaire* (CECAM), which is based at EPFL, he makes important contributions in the field of computer-aided calculation. Ignacio Pagonabarraga is also very successful at attracting research funding from the EU.

Departures from ETH Zurich

Professor Dietmar Eberle (*1952), currently Full Professor of Architecture and Design, is to retire at the end of January 2018. Dietmar Eberle has occupied his present post at ETH Zurich since summer 1999. His research activity focuses on housing in its various facets. In 2000 he became head of the “*ETH Wohnforum – ETH CASE Centre for Research on Architecture, Society & the Built Environment*”. The latter’s interdisciplinary research and development projects unite the cultural studies perspective, a social sciences approach and concrete practical applications to form an overview. Dietmar Eberle also served on the governing body of the Department of Architecture for many years.

Professor Gérard Hertig (*1952), currently Full Professor of Law, is to retire at the end of January 2018. Gérard Hertig was appointed to his current post in autumn 1995. His particular focus is on the comparative analysis of companies and capital markets from a legal and economic perspective. Special weight is given to questions regarding patent law and problems to do with intellectual property. Gérard Hertig is highly committed to recognising and taking forward the concerns of ETH Zurich and its students. His practice-oriented approach and the international focus of his teaching and research, which has led him to visit prestigious universities as a guest professor on many occasions, are particularly valuable.

Professor Konrad Hungerbühler (*1952), currently Full Professor of Environmental and Safety Technology, is to retire at the end of January 2018. Konrad Hungerbühler joined ETH Zurich at the beginning of 1994 after a long career in industry. He has an interdisciplinary approach to research, with a focus on the integrated environmental and risk-oriented development and design of chemical products and processes. He models and studies the latter with particular reference to ecological efficiency and inherent safety. Case studies from industry are generally used as an implementation-oriented platform for his teaching. Konrad Hungerbühler has undertaken a number of key duties for ETH Zurich at institute, departmental and university level.

Professor Wolfgang Langhans (*1952), currently Full Professor of Physiology and Behaviour, is to retire at the end of January 2018. Wolfgang Langhans was appointed to ETH Zurich in 1988 and was promoted to Full Professor in 1992. The main focus of his research is the physiological regulation of food intake in livestock and its disruption in the event of disease. His work also focuses on functional disorders of immune cells during retrovirus infections. In the field of ethology and animal husbandry, he studies stress responses in animals and interactions between behaviour and the environment in which the animals are housed. Wolfgang Langhans undertook a great number of important duties relating to his specialist area at both national and international level and was instrumental in the founding process of the new Department of Health Sciences and Technology at ETH Zurich.

Professor A. Dieter Schlüter (*1952), currently Full Professor of Polymer Chemistry, is to retire at the end of January 2018. Dieter Schlüter was appointed to his present post in spring 2004. He is an internationally acclaimed synthetic chemist who demonstrates creativity both in manufacturing new polymers and in developing new methods of synthesis. In 2012, scientists led by Dieter Schlüter caused a minor sensation when they were the first to manufacture flat polymers that form a kind of molecular

carpet on a nanometre scale. In 2015 they provided direct evidence, concurrently with an independent American group, that synthetic two-dimensional polymers actually exist.

Professor Alexander Wokaun (*1952), currently Full Professor of Chemistry, is to retire at the end of 2017. Alexander Wokaun has been a Full Professor at ETH Zurich since 1994. He also serves as Deputy Director of the Paul Scherrer Institute at present. His research interests lie in the field of sustainable energy supply systems. He focuses in particular on catalytic processes of energy storage and the characterisation of functional materials using spectroscopic methods. One success which emerged from his research was the realisation of the HyPower fuel cell vehicle. Alexander Wokaun is an exceptionally committed university lecturer who has served on major bodies in the fields of sustainability and climate.

Departure from EPFL

Professor Heinrich Hofmann (*1953), currently Full Professor of Ceramic Powder Technology, is to retire at the end of February 2018. Heinrich Hofmann was appointed as Associate Professor at EPFL in 1993 following a successful career in industry. He was promoted to Full Professor in 1996. His area of research covers the synthesis and modification of mineral and metallic powders. His findings have industrial applications in important fields such as medicine, biology and electronics, including molecular imaging and nano security. Heinrich Hofmann has been actively involved at EPFL at various levels and has been a member of national and international bodies in the field of nanotechnologies.

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

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