

Meeting of the ETH Board on 9/10 December 2020

## **18 new professors appointed at ETH Zurich and EPFL**

**At its meeting of 9/10 December 2020 and upon application of the President of ETH Zurich, Professor Joël Mesot, and the President of EPFL, Professor Martin Vetterli, the ETH Board appointed a total of 18 professors and awarded the title of professor to one individual. It also took note of the resignations of four professors and thanked them for their services.**

Bern/Zurich, 11 December 2020

### **Appointments at ETH Zurich**

**Dr Pierrick Bousseau** (\*1992), currently CNRS Research Fellow at the University of Paris-Saclay, France, as Assistant Professor of Mathematical Physics in the Department of Mathematics. Pierrick Bousseau conducts research in an area where algebraic geometry intersects with mathematical physics and symplectic geometry. He has a particular interest in enumerative geometry, which is concerned with counting geometric objects with given characteristics. Pierrick Bousseau has won several awards for his research. By appointing him, the Department of Mathematics is gaining a talented young mathematician with strong links to theoretical physics.

**Professor Benjamin Dillenburger** (\*1977), currently Assistant Professor at ETH Zurich, as Associate Professor of Digital Building Technologies in the Department of Architecture. Benjamin Dillenburger's work bears witness to his profound technological understanding. He challenges traditional paradigms of architectural production in order to open up new and innovative fields in construction. 3D architectural printing is one of his key areas of research. This innovative, award-winning researcher already makes a significant contribution to the interdepartmental research network which has been successfully established through the National Centre of Competence in Research – Digital Fabrication (NCCR DFab), and which is to be expanded and strengthened through the ETH+ initiative "Design++".

**Professor Rachel Grange** (\*1976), currently Assistant Professor at ETH Zurich, as Associate Professor of Photonics in the Department of Physics. Rachel Grange is an internationally successful researcher with an impressive record of achievement. Within a short period of time she has developed a broad and innovative research programme on nonlinear optics at the nano level, and is committed to investigating and applying the nonlinear properties of non-centrosymmetric nanomaterials. Her research projects have been awarded an ERC Starting Grant, which she received in 2016, followed by an ERC Proof of Concept Grant in 2019.

**Professor Dominik Hangartner** (\*1981), currently Associate Professor at ETH Zurich, as Full Professor of Public Policy in the Department of Humanities, Social and Political Sciences. Dominik Hangartner's innovative approach combines field research and statistics in order to investigate the effects of political institutions and integration tools on the lives of migrants and their host societies. He has received the National Latsis Prize and an ERC Starting Grant, among other awards, and also participates actively in setting up new bodies and providing education and training. His teaching makes a significant contribution to the department's international reputation as a centre of excellence for quantitative methods.

**Dr Jordon Hemingway** (\*1989), currently a post-doctoral student at Harvard University, Cambridge, USA, as Assistant Professor of Surface Earth Evolution in the Department of Earth Sciences. Jordon Hemingway's research has a focus on the long-term development of biogeochemical cycles on Earth, particularly the geological evolution of atmospheric carbon dioxide content and the accumulation of oxygen in the atmosphere. He develops and applies innovative, isotope-based tools that are essential for predicting how our climate system will react to anthropogenic influences. In 2020 he was awarded an ERC Starting Grant for his research projects.

**Professor Volodymyr M. Korkhov** (\*1980), currently Assistant Professor at ETH Zurich and Group Leader at the Paul Scherrer Institute (PSI), as Associate Professor of Structural Basis of Cellular Signalling in the Department of Biology. Professor Korkhov's research has a particular focus on integrative structural biology, in which both photon-based and electron-based methods are used to solve complex biological questions. His groundbreaking research results have been published in PNAS, Science, Nature and Science Advances, among other journals. Volodymyr M. Korkhov will continue to make use of his considerable skills and knowledge not only in his research at ETH Zurich and the PSI but also in his teaching at ETH Zurich.

**Professor Kathrin Lang** (\*1979), currently Associate Professor at the Technical University of Munich, Germany, as Full Professor of Chemical Biology in the Department of Chemistry and Applied Biosciences. Kathrin Lang's research, for which she received an ERC Consolidator Grant in December 2020, is in the interdisciplinary area of chemical biology. She makes use of concepts from organic chemistry to develop new tools for investigating fundamental biological processes. These can be used to control enzymatic activity or design new protein functions and protein therapeutics, for example. The appointment of Kathrin Lang gives the department an ideal opportunity to strengthen chemical biology as a research area and support the newly launched course of study in this subject.

**Professor Annalisa Manera** (\*1974), currently Full Professor at the University of Michigan, USA, as Full Professor of Nuclear Safety and Multiphase Flows in the Department of Mechanical and Process Engineering. Annalisa Manera's research concentrates on metrology and simulation in thermo-fluid dynamics, with a specific focus on power reactor operations and safety analysis. Annalisa Manera is highly skilled at bridging the gap between experiment, simulation and theory, thus making an important contribution to nuclear safety in second and third generation light water reactors. Her appointment enables ETH Zurich to strengthen its competencies in nuclear engineering and further expand its links with the PSI.

**Professor Theodoros Rekatsinas** (\*1987), currently Assistant Professor at the University of Wisconsin-Madison, USA, as Tenure Track Assistant Professor of Computer Science in the Department of Computer Science. Theodoros Rekatsinas' research interests lie in the areas of databases, machine learning, data processing and data science, which he combines with new methods derived from artificial intelligence and machine learning. His work is an excellent fit with existing areas of teaching and research at ETH Zurich, especially in the Department of Computer Science, where he will make a significant contribution to the study of data science and databases.

**Dr Joaquim Serra** (\*1986), currently SNSF Ambizione Fellow at ETH Zurich, as Assistant Professor of Mathematics in the Department of Mathematics. Joaquim Serra's research focuses on elliptic partial differential equations. These mathematical equations describe many natural phenomena such as waves, heat, electric and gravitational potential, fluid dynamics and quantum mechanics. In 2020 this internationally acclaimed mathematician received both a prestigious EMS Prize from the European Mathematical Society and an ERC Starting Grant for his outstanding research results. By appointing Joaquim Serra, the Department of Mathematics is strengthening and expanding its position in the field of analysis.

**Dr Bjarne Steffen** (\*1982), currently Senior Researcher at ETH Zurich, as Assistant Professor of Climate Finance and Policy in the Department of Humanities, Social and Political Sciences. Bjarne Steffen's research explores questions related to the financing of new climate protection technologies. He has already published important papers in this field – for example, on the impact of financing costs on the competitiveness of renewable energy technologies. This very innovative researcher, who brings together the fields of public policy and climate finance, was awarded an ERC Starting Grant in 2020.

**Dr Patrick Steinegger** (\*1986), currently Group Leader at the PSI, as Tenure Track Assistant Professor of Radiochemistry in the Department of Chemistry and Applied Biosciences. Patrick Steinegger investigates the chemical properties of the transactinides – little-researched elements which are the heaviest in the periodic table. Thanks to his extensive network of contacts in Russia, Japan, Germany, the USA and China, Patrick Steinegger has access to large accelerators for his experiments with these elements, all of which are radioactive. Carrying out a wide range of multidisciplinary basic research into radiochemistry plays a vital role in enabling Switzerland to consolidate its knowledge of nuclear science.

**Dr Judit Szulágyi** (\*1987), currently Senior Researcher at the University of Zurich, as Assistant Professor of Computational Astrophysics in the Department of Physics. Judit Szulágyi's research focuses on the formation and development of planetary systems and moons, mainly using computer simulations. Her models are particularly noted for taking full account of hydrodynamics and radiation in these systems, as well as demonstrating very good spatial resolution. Judit Szulágyi won several science prizes while she was a student, and was one of the young scientists included on the Forbes "30 Under 30" list.

**Dr Elizabeth Tilley** (\*1979), latterly Senior Lecturer at the University of Malawi, as Associate Professor of Global Health Engineering in the Department of Mechanical and Process Engineering. Elizabeth Tilley's research interests arise from the need to find technical, yet socially workable, solutions to the complex challenges that marginalised people face every day in the southern hemisphere. Her focus is on sanitation management, which is one of the biggest under-researched factors hindering sustainable development in many poorer countries. By appointing Elizabeth Tilley, ETH Zurich is investing in the new field of global engineering science, which seeks to provide technical innovations to improve living conditions for everyone.

### Appointments at EPFL

**Professor Pascal Frossard**(\*1973), currently Associate Professor at EPFL, as Full Professor of Electrical Engineering and Electronics in the School of Engineering. Pascal Frossard is an internationally recognised expert in signal and image processing. He is particularly interested in applying this expertise to intelligent systems and biomedicine. Through his appointment, EPFL is strengthening its strategic research areas. Pascal Frossard's innovative research also combines different disciplines in the natural and engineering sciences and facilitates essential academic and industrial partnerships.

**Professor Matthias Grossglauser** (\*1969), currently Associate Professor at EPFL, as Full Professor of Computer Science and Communication Systems in the School of Computer and Communication Sciences. Matthias Grossglauser has made a wide range of contributions to basic research into networks, with a particular focus on data science in recent years. He has investigated problems in areas such as network alignment and has developed several algorithms. From 2016 to 2019 he was also director of the doctoral programme in computer and communication sciences at EPFL. Matthias Grossglauser's great dedication is valued by the department, EPFL, the scientific community and regulatory authorities.

**Professor Tobias Schneider** (\*1979), currently Tenure Track Assistant Professor at EPFL, as Associate Professor of Mechanical Engineering in the School of Engineering. Tobias Schneider's area of interest covers fluid mechanics and turbulence research. His work looks in particular at the conditions and mechanisms that explain the transition from laminar to turbulent flow. By combining parallel processing power with newly developed algorithms based on dynamical systems theory, he has been able to produce new and innovative research results. Tobias Schneider was awarded an ERC Consolidator Grant in 2019.

**Professor David Suter** (\*1978), currently Tenure Track Assistant Professor at EPFL, as Associate Professor of Life Sciences in the School of Life Sciences. David Suter's research is making an important contribution to the branch of knowledge covering the regulation of gene expression and the function of transcription factors. He has chosen to specialise in the study of individual cells and is working on the optimisation of imaging systems so as to obtain information from living cells. This enables him to answer current biological questions in the area of gene expression. David Suter is well-regarded within the academic world for his high level of dedication as well as his research.

### Award of the title of Professor

**Professor Kristin Schirmer** (\*1967), currently Lecturer in the Department of Environmental Systems Science at ETH Zurich, Head of Department at Eawag and Adjunct Professor at EPFL, as Adjunct Professor at ETH Zurich. Her main research interests lie in aquatic ecotoxicology, and include the impact of chemicals or other stressors on fish and fish cells. Kristin Schirmer is globally recognised as a leading scientist in the field of ecotoxicology.

**Departure from ETH Zurich**

**Professor Markus Peter** (\*1957), currently Full Professor of Architecture and Construction in the Department of Architecture at ETH Zurich, is to retire at the end of July 2022. He was a visiting professor at ETH Zurich from 1993 to 1995 and became a full professor in 2002. Markus Peter is a very successful architect. Most of his work has arisen in conjunction with his successes in national and international competitions and with public invitations to tender. He has founded several architecture firms and is acknowledged as one of the architects who have raised the international profile of Swiss architecture.

**Departures from EPFL**

**Professor Anders Hagfeldt** (\*1964), currently Full Professor of Physical Chemistry in the School of Basic Sciences, is to leave EPFL at the end of December 2020 in order to become Vice-Chancellor of Uppsala University. Anders Hagfeldt's research in the field of renewable energies is of significant importance to the fight against climate change. His principal focus is on the conversion of solar energy. He has a particular interest in dye-sensitised and perovskite solar cells, and in the use of solar energy for producing hydrogen and reducing carbon dioxide. Anders Hagfeldt, who has worked at EPFL since 2014, has won a number of awards for his substantial contribution to research in the cutting-edge field of photovoltaic cells and photo-electrochemical energy conversion.

**Professor Douglas Hanahan** (\*1951), currently Full Professor of Life Sciences in the School of Life Sciences at EPFL, is to retire at the end of January 2021. Douglas Hanahan, who has worked at EPFL since 2009, has conducted internationally acclaimed research into the molecular and genetic bases of cancer. He successfully brought the Swiss Institute for Experimental Cancer Research (ISREC) under the umbrella of EPFL and paved the way for the Swiss Cancer Center Léman (SCCL), an initiative launched by EPFL, the Universities of Lausanne and Geneva, and Lausanne University Hospital. Douglas Hanahan has received numerous prizes, including two ERC Advanced Grants and a Lifetime Achievement Award in Cancer Research from the American Association for Cancer Research (AACR).

**Professor Luca Ortelli** (\*1956), currently Full Professor of Architecture and Design in the School of Architecture, Civil and Environmental Engineering at EPFL, is to retire at the end of July 2021. Luca Ortelli's research has a focus on collective living, urban and architectural renewal, Scandinavian architecture, and architecture and archaeology. At EPFL, where he has been a full professor since 1997, he was instrumental in setting up the School and its flagship programme "Projeter Ensemble" ["Design Together"]. Luca Ortelli has also been a very active member of numerous committees and editorial boards. He is an exceptionally popular lecturer and colleague who has made a major contribution to the reputation of architecture at EPFL.

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

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The ETH Board is the strategic management and supervisory body of the ETH Domain. The ETH Domain is made up of the two Federal Institutes of Technology, i.e. ETH Zurich and EPFL, as well as the four federal research institutes PSI, WSL, Empa and Eawag. The members of the ETH Board are appointed by the Swiss Federal Council. The ETH Board supervises the development plans of the institutions, is responsible for strategic management accounting and ensures coordination. It draws up the budget and the financial statements of the ETH Domain and coordinates the value maintenance and continued functionality of the properties. It is the authority responsible for appointments and represents the ETH Domain before the federal authorities. A staff assists the ETH Board in the preparation and implementation of its business.