Meeting of the ETH Board on 10/11 July 2019

21 new professors appointed at the two Federal Institutes of Technology

Bern, 11 July 2019 – At its meeting of 10/11 July 2019 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 21 professors. It also took note of the resignations of 2 professors and thanked them for their services.

Appointments at ETH Zurich

Professor Florian Dörfler (*1982), currently Tenure Track Assistant Professor at ETH Zurich, as Associate Professor of Complex Systems Control. Florian Dörfler’s research interests lie in the analysis, control design and security of networked systems for controlling cyber-physical processes. His applications focus on robust smart grids and the associated optimisation of power flows. Florian Dörfler’s special field thus fits perfectly into the existing areas of teaching and research in the Department of Information Technology and Electrical Engineering and at ETH Zurich.

Professor Roger Gassert (*1976), currently Associate Professor at ETH Zurich, as Full Professor of Rehabilitation Engineering. Roger Gassert conducts research at the interface between engineering, neuroscience and movement science. He and his team develop mechatronic systems to explore the neuromechanical generation of movement and haptic perception and to perform quantitative evaluation of the movement quality and rehabilitation progress of people with sensorimotor deficits. Roger Gassert uses this interdisciplinary approach to forge links between research-based neuroscience and movement science, and application-based engineering science, as well as with hospitals.

Dr Robert Katzschmann (*1986), currently Chief Technology Officer in the private sector, as Tenure Track Assistant Professor of Robotics. Robert Katzschmann’s research focuses on the development of soft drive systems for robotics. This includes designing novel pneumatic and hydraulic drive concepts to enable soft, flexible interaction. He also studies the manufacture, modelling, control and integration of these drive systems into robot arms, robot hands, and swimming or walking robots. With the appointment of Robert Katzschmann, the Department of Mechanical and Process Engineering and the recently founded Center for Robotics are strengthening and expanding their leading international position in robotics.

Dr David Kaufmann (*1985), currently a post-doctoral student at the University of Bern, as Tenure Track Assistant Professor of Spatial Development and Urban Policy. David Kaufmann’s research focuses on the analysis of governance processes and policy formulation in cities and metropolitan regions. He is interested in locational policies in densely populated areas and in multi-level systems. At ETH Zurich he will launch research projects on densification strategies in spatial planning and on participative policy processes in cities. By appointing David Kaufmann, the Department of Civil, Environmental and Geomatic Engineering is strengthening its interdisciplinary research in the field of spatial and urban development.
Dr Ana Klimovic (*1991), currently a doctoral student at Stanford University, California, USA, as Tenure Track Assistant Professor of Computer Science and Engineering. Ana Klimovic conducts research in the area of computer architecture, cloud computing, computer systems and data centre architecture. Her work on distributed systems and cloud computing brings new methods to the traditional areas of computer architecture and systems. As an experienced teacher she is ideally placed to collaborate on the new master's programme in data science. The appointment of Ana Klimovic will significantly strengthen the Department of Computer Science’s teaching and research in the areas of data science and data centre architecture.

Dr Rasmus Kyng (*1988), currently a post-doctoral student at Harvard University, California, USA, as Tenure Track Assistant Professor of Theoretical Computer Science. Rasmus Kyng conducts research in the field of theoretical computer science, with a focus on algorithm theory and theoretical aspects of data science. In particular, he uses algorithms to solve special types of linear equation systems, which occur in many different scientific areas. His research is a textbook example of theoretical research that also has huge potential for contributing to practical breakthroughs in a variety of disciplines. By appointing Rasmus Kyng, the Department of Computer Science is strengthening research in the theory and practice of algorithms.

Dr Maria Lukatskaya (*1988), currently a post-doctoral student at the SLAC National Accelerator Laboratory in Menlo Park, California, USA, as Tenure Track Assistant Professor of Electrochemical Energy Systems. Maria Lukatskaya works in the areas of new materials and electrolytes for energy storage and conversion, as well as in electrochemistry, material synthesis and material characterisation. At ETH Zurich, she will investigate basic electrochemical processes in solutions and materials, and at the interfaces of electrodes and electrolytes, with the aim of creating superconcentrated electrolyte formulations for electrocatalytic fuel production and safe, efficient energy storage. The appointment of Maria Lukatskaya will strengthen ETH Zurich’s leading position in energy science and reinforce the field of electrical energy storage.

Professor James Mitchell (*1971), currently Associate Professor at Harvard School of Public Health, Boston, USA, as Full Professor of Healthy Ageing. James Mitchell explores specific aspects of biological ageing and uses scientific approaches to investigate how this process is influenced; he is also interested in age-related illnesses. His main focus is on preventing cancer, diabetes, obesity and other age-related illnesses by means of lifestyle changes, particularly dietary. The appointment of James Mitchell will strengthen interdepartmental links between the research fields of translational medicine, nutrition and health.

Dr Mrinmaya Sachan (*1987), currently a doctoral student at Carnegie Mellon University, Pittsburgh, USA, as Tenure Track Assistant Professor of Machine Learning and Natural Language Processing. Mrinmaya Sachan explores concepts and methods of machine learning for the comprehension of natural language. The potential uses of his work include tutorial systems designed to help students solve geometry and physics problems. Through his appointment, the Department of Computer Science is strengthening its expertise in computer science and education. Mrinmaya Sachan’s skill in natural language processing offers ETH Zurich further insights into artificial intelligence, which will have a major influence on education and training in the future.

Professor G. V. Shivashankar (*1968), currently Professor and Deputy Director of the Mechanobiology Institute of the National University of Singapore, as Full Professor of Mechanogenomics. G. V. Shivashankar’s research in mechanobiology uses multidisciplinary approaches to investigate how the genome architecture is mechanically regulated, thus determining the behaviour and long-term fate of cells. His appointment will strengthen the connection between ETH Zurich and the PSI. Important interactions and synergies will also arise with colleagues in the Department of Endocrinology, Diabetology and Clinical Nutrition at Zurich University Hospital as his research findings are translated into clinical practice.
Dr Siyu Tang (*1983), currently Research Group Leader at the Max Planck Institute for Intelligent Systems in Tübingen, Germany, as Tenure Track Assistant Professor of Computer Vision. Siyu Tang focuses on the development of computer-aided processes for the perception and digitalisation of people and their activities in complex and natural environments. She develops novel methods at the interface between numerical optimisation and machine learning, which help machines better understand the human form, movement and complex activity. By appointing Siyu Tang, the Department of Computer Science is increasing the expertise available to it in the field of computer vision.

Professor Caroline Uhler (*1983), currently Associate Professor at the Massachusetts Institute of Technology in Cambridge, USA, as Full Professor of Machine Learning, Statistics and Genomics. Her research investigates the basic principles and applications of graphical models, a class of statistical models for modelling high-dimensional data. Caroline Uhler’s research programme is a rare combination of in-depth mathematical analyses of these models, the development of efficient algorithms for big data problems, and the application of these methods in the biomedical sciences. Through the appointment of Caroline Uhler, the Department of Biosystems is ideally strengthening its expertise in the field of biomedical data science.

Dr Fisher Yu (*1987), currently a post-doctoral student at the University of California, Berkeley, USA, as Tenure Track Assistant Professor of Computer Vision. Fisher Yu conducts research on computer vision and machine learning. His work covers a wide spectrum, ranging from the basics of machine image and video analysis through to practical applications, such as in self-driving vehicles. His principal tools are neural networks, which he both applies and develops further. He strives to achieve the most universal representation of visual understanding. Fisher Yu's appointment will help ETH Zurich and the Department of Information Technology and Electrical Engineering to safeguard their leading role in computer vision and strengthen them in the area of machine learning.

Appointments at EPFL

Professor Grégoire Courtine (*1975), currently Associate Professor at EPFL, as Full Professor of Life Sciences. Grégoire Courtine is known throughout the world for his work in the field of neurorehabilitation. His research has made a significant contribution to the prospect of healing spinal cord injuries. This work makes use of precise stimulation and the plasticity of neural circuits in the spinal cord. In addition to seeking new scientific knowledge, Grégoire Courtine always pursues a clear clinical objective, thus giving cause for hope that a cure for paraplegic patients will eventually be found. His appointment strengthens EPFL’s international position in an area that attracts a great deal of interest.

Professor Jacques Fellay (*1974), currently Senior Scientist at EPFL and Associate Professor at the University of Lausanne, as Associate Professor of Life Sciences. Jacques Fellay is an internationally acclaimed scientist in the field of genetic influences on infectious diseases and the genetic interaction between host and virus. To date, his most important contributions have resulted from his investigations of genetic aspects of HIV infection and the impact of genetic variations on infectious diseases. Jacques Fellay's appointment will enable EPFL to strengthen its links with the University of Lausanne, and with the University Hospital in particular.

Dr Nicolas Flammarion (*1990), currently a post-doctoral student at the University of California, Berkeley, USA, as Tenure Track Assistant Professor of Computer Science and Communication Systems. Nicolas Flammarion is a brilliant young scientist whose highly acclaimed research is devoted to the design, analysis and optimisation of sampling procedures for machine learning. This topic is rapidly gaining in importance and is one of the strategic directions adopted by EPFL for its future development. By appointing Nicolas Flammarion, EPFL is further strengthening its research and teaching in the field of machine learning. Positive contributions to technology transfer can also be expected.
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**Professor Kathryn Hess Bellwald** (*1967), currently Associate Professor at EPFL, as Full Professor of Life Sciences and Mathematics. Kathryn Hess Bellwald is internationally recognised for her research on the theory of homotopy, category theory and algebraic topology. Her work has attracted particular interest for the way she uses methods of algebraic topology to achieve a better understanding of neurological processes. Through the appointment of Kathryn Hess Bellwald, EPFL is obtaining the expertise of an outstanding scientist who will in particular drive the development of new applications in structured data analysis as part of the **Blue Brain Project** over the next few years.

**Dr Anne-Marie Kermarrec** (*1970), currently Research Associate at EPFL and an entrepreneur, as Full Professor of Computer Science and Communication Systems. Anne-Marie Kermarrec is a renowned computer scientist with wide-ranging academic and business experience. Her research investigates large-scale distributed systems and more precisely P2P systems, epidemic algorithms, distributed infrastructures for machine learning and privacy-aware personalization systems. She has international recognition and has received prestigious awards for her work. By appointing Anne-Marie Kermarrec, EPFL is bolstering its activities and its international lead in large-scale distributed systems.

**Professor Negar Kiyavash** (*1976), currently Associate Professor at the Georgia Institute of Technology, Atlanta, USA, as Associate Professor of Business Analytics. Negar Kiyavash is an internationally recognised information theoretician. Her research focuses on data analysis, data security, discrete optimisation and causal inference. She has received particular acclaim for introducing the principle of directed information graphs (DIGs), which characterise the concept of causality in time series. Negar Kiyavash will undertake tasks at the interface of social science, business management and data science. She will make a significant contribution to EPFL’s research and teaching, particularly in the field of business analytics – both on the theoretical research as on the applications designated to enhance data-driven business decision-taking.

**Professor Jérôme Waser** (*1977), currently Associate Professor at EPFL, as Full Professor of Organic Chemistry. Jérôme Waser’s research focuses on unconventional organic synthons (structural entities inside a molecule to which a possible synthesis stage can be attributed). He has achieved significant advances in this field, such as the development of new catalytic processes for the introduction of alkyny1 groups. His scientific contributions have been awarded an ERC Starting Grant, among others. Jérôme Waser shows great potential in a multidisciplinary context and will continue to make an important contribution to EPFL’s standing in the area of organic synthesis.

**Dr Dimitri Wyss** (1989*), currently a post-doctoral student at Sorbonne University, Paris, as Tenure Track Assistant Professor of Mathematics. Dimitri Wyss is an innovative and creative young mathematician. He works principally in the area of mathematical physics and algebraic geometry. In addition, he uses methods derived from arithmetic geometry, topology and mathematical logic. His elegant, alternative proof of the fundamental lemma of the Langlands program surprised the mathematical community and attracted worldwide attention. With the appointment of Dimitri Wyss, EPFL is boosting research in the field of mathematical physics and strengthening this subject area’s important links with various other disciplines.

**Departures from ETH Zurich**

**Professor Martin Larsson** (*1982), currently Assistant Professor of Financial Mathematics, will leave ETH Zurich at the end of August 2019 in order to take up the post of Professor at Carnegie Mellon University, Pittsburgh, USA. Martin Larsson has been Assistant Professor at ETH Zurich since 2014. He has built up a very active, internationally visible research programme in the field of polynomial models. The practical relevance of his work is also reflected in cooperations with industry.
Professor Gerald Schwank (*1980), currently Assistant Professor of Stem Cells and Disease Biology, is to leave ETH Zurich at the end of July 2019 in order to take up a professorship in Translational Neuroscience at the University of Zurich. Gerald Schwank has been an Assistant Professor at ETH Zurich since 2014 and has built up an efficient research group which has achieved a number of initial successes. For example, it has succeeded in correcting gene mutations using a newly developed repair tool, in collaboration with researchers at Zurich Children’s Hospital.

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

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