

Meeting of the ETH Board on 11/12 December 2019

26 new professors appointed at the two Federal Institutes of Technology

At its meeting of 11/12 December 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 26 professors and awarded the title of professor to three individuals. It also took note of the resignations of two professors and thanked them for their services.

Bern, 13 December 2019

Appointments at ETH Zurich

Dr Daniel Ahmed (*1983), currently Senior Scientist at ETH Zurich, as Assistant Professor of Acoustic Robotics for Life Sciences and Healthcare. Daniel Ahmed's research focuses on acoustics in micro/nanorobotic and microfluidic systems. His objective is to develop new technologies at the interface of biotechnology, biomedical engineering and medicine. In 2019 Daniel Ahmed was awarded an ERC Starting Grant to enable him to develop his promising approaches further. His appointment enables ETH Zurich to strengthen the links between the research fields of acoustics, robotics, fluid dynamics, lab-on-a-chip systems and mechanics.

Professor Andrea Alimonti (*1975), currently Full Professor at the Università di Padova, Italy, and at the Università della Svizzera italiana, Lugano, as Full Professor of Experimental Oncology and Translational Cancer Medicine. Andrea Alimonti's research, for which he was awarded with two ERC Grants, concentrates on the molecular mechanisms of tumour formation. His focus is on the influence of the tumour environment, the interaction of the various cells in tumour tissue and the influence of the immune system. By appointing Andrea Alimonti to a dual professorship with the Università della Svizzera italiana, ETH Zurich is filling a gap in the field of oncology and thus creating a link between clinical and basic research.

Professor Markus Bambach (*1976), currently Full Professor at the Brandenburgische Technische Universität Cottbus-Senftenberg, Germany, as Full Professor of Advanced Manufacturing. Markus Bambach's research strives to master new manufacturing technologies, from construction through to the end of the life cycle. To that end, he uses the seamless integration of data and processes based on information technologies. His research pays particular attention to additive production processes. With the appointment of Markus Bambach, ETH Zurich is strengthening the field of material, manufacturing and production technologies and promoting the transfer of knowledge and technology.

Professor Jürgen Biela (*1974), currently Associate Professor at ETH Zurich, as Full Professor of High Power Electronics. Jürgen Biela's work covers a number of topics of great social relevance, including the development of novel system components for the distribution and storage of energy, the efficient integration of renewable sources of energy, and electromobility. A further focus is on high-precision solid state pulse modulators for use in accelerator systems. Jürgen Biela makes an important contribution to teaching and research at ETH Zurich. He has also developed a significant international network and is committed to the transfer of knowledge and technology.

Professor Filippo Coletti (*1982), currently Associate Professor at the University of Minnesota, USA, as Associate Professor of Experimental Fluid Dynamics. Filippo Coletti's research focuses on experimental investigations into fundamental flow phenomena. His work has special relevance to environmental processes such as atmospheric precipitation and pollutant transport. Filippo Coletti also investigates biofluid mechanics problems that are important for respiration and the circulatory system. By appointing Filippo Coletti, ETH Zurich is strengthening the area of experimental fluid mechanics and linking fluid mechanics to other research fields such as energy technology and biotechnology.

Ryan Cotterell (*1988), currently a doctoral student and Lecturer at the University of Cambridge, United Kingdom, as Tenure Track Assistant Professor of Computer Science. Ryan Cotterell conducts research into human languages in order to gain scientific knowledge within the framework of linguistics, while also exploring the automated processing of human language for automated speech comprehension in the context of artificial intelligence. He is therefore active in a highly relevant, fast-growing area of research. The appointment of Ryan Cotterell enables the Department of Computer Science to strengthen its expertise in the field of machine learning and artificial intelligence, particularly in relation to speech comprehension applications.

Professor Georg Holländer (*1957), currently Full Professor at the University of Basel and Director of the Botnar Research Center for Child Health (BRCC) as well as Full Professor at Oxford University, United Kingdom, as Full Professor of Developmental Immunology. Georg Holländer has an excellent, internationally recognised scientific track record. He develops and combines concepts from molecular, cellular and organismic immunology. His research has a particular focus on thymus cells, which play a key role in immunological tolerance and defence. Georg Holländer will hold a dual professorship with the University of Basel. His international network and multidisciplinary approach will help him build important partnerships and boost the reputation of ETH Zurich.

Professor Jonathan Home (*1979), currently Associate Professor at ETH Zurich, as Full Professor of Experimental Quantum Information. Jonathan Home's research explores the areas of quantum state engineering, simulation and information processing using trapped atomic ions. Applying the precise control offered by this technology, he investigates in particular the interactions between the quantum system and its environment. In only a few years, Jonathan Home has built up a laboratory that is already regarded as a world leader in the field of experimental ion trap quantum physics. In so doing, he has achieved high visibility in a very competitive field, thus also benefiting ETH Zurich.

Professor Andreas Moor (*1984), currently Assistant Professor at the University of Zurich, as Tenure Track Assistant Professor of Systems Physiology. Andreas Moor conducts research into how single cells collaborate within tissues to achieve their common physiological functions efficiently. His findings, which resulted in the award of an SNSF Eccellenza Professorial Fellowship in 2019, are bringing new insights in developmental biology, tissue organisation and oncology. This also contributes to a better understanding of diseases and will enable new therapeutic approaches to be developed. By appointing Andreas Moor, ETH Zurich is increasing its efforts to translate scientific results into clinical applications.

Professor Ursula Renold (*1961), currently Senior Scientist at the Swiss Economic Institute (KOF) at ETH Zurich, as Full Professor of Education Systems. During her many years' service as Director of the Federal Office for Professional Education and Technology, Ursula Renold has made a substantial contribution to the expansion of the professional education system and the universities of applied sciences. The main focus of her research is on comparative education systems and analysing the institutional framework conditions for education systems. Drawing on her experience in translational research, she has contributed to the evaluation and development of education systems in a number of countries. At ETH Zurich, Ursula Renold will be responsible for developing a Center on the Economics and Management of Education and Training Systems.

Professor Giovanni Sansavini (*1981), currently Tenure Track Assistant Professor at ETH Zurich, as Associate Professor of Reliability and Risk Engineering. Giovanni Sansavini's research explores risk evaluation, resilience and reliability in relation to complex, critical energy networks and infrastructures. His approach is not limited to the physical aspects of the networks, but also covers evaluating the performance of the operators. Giovanni Sansavini is one of the few scientists in the world who are researching critical infrastructures in the energy sector. His work strengthens the international reputation of ETH Zurich in a strategically important field.

Dr Sebastian Schemm (*1984), currently Senior Scientist at ETH Zurich, as Assistant Professor of Atmospheric Circulation. Sebastian Schemm's research focuses on the dynamics of atmospheric flows. He is particularly interested in low pressure areas and fronts, how they relate to each other and their role in the climate system. This work, which lies at the interface between weather and climate, is of great importance for gaining a better understanding of the climate system, especially the way in which atmospheric processes interact over different time scales. In 2019 Sebastian Schemm received an ERC Starting Grant for his scientific work. His appointment will substantially increase ETH Zurich's expertise in the field of atmospheric dynamics.

Professor Maria Schönbächler (*1969), currently Associate Professor at ETH Zurich, as Full Professor of Isotope Geochemistry. Maria Schönbächler researches the origin and development of our solar system and planet Earth. She uses geochemical methods to investigate the processes that occurred before, during and after the Earth's genesis. This includes the formation of the Earth and the solar system from the solar nebula, the Earth's early evolutionary stages and the development of the first continents. Maria Schönbächler was awarded an ERC Starting Grant for her internationally acclaimed work. In addition to conducting her excellent research, she is highly committed to teaching, performing her departmental management duties and promoting equal opportunities at ETH Zurich.

Dr Thomas Schutzius (*1986), currently Senior Scientist at ETH Zurich, as Assistant Professor of Multiphase Thermofluidics and Surface Nanoengineering. Thomas Schutzius conducts research into thermofluidics, surface science and surface engineering, as well as energy conversion processes. His work is based on studying the control and exploitation of surface and volume transport processes at the micro and nano level. He uses his results to develop innovative materials that improve the efficiency of water treatment and energy generation processes. In 2019 Thomas Schutzius received an ERC Starting Grant for his scientific work. In appointing Thomas Schutzius, ETH Zurich will be able to strengthen multidisciplinary cooperation between a number of strategic areas.

Dr Benedikt Soja (*1988), currently Post-doctoral researcher at the NASA Jet Propulsion Laboratory in Pasadena, California, USA, as Tenure Track Assistant Professor of Space Geodesy. Benedikt Soja's research focuses on the high-precision determination of terrestrial reference frames. He is particularly interested in quasar interferometry and its interaction with other technologies in space geodesy, especially the increasingly important global satellite navigation systems. With the appointment of Benedikt Soja, ETH Zurich is founding Switzerland's only dedicated professorship in the field of space geodesy, thus establishing its position at an early stage in a subject area of increasing global significance.

Professor Christoph Studer (*1979), currently Assistant Professor at Cornell University, New York, USA, as Associate Professor of Integrated Information Processing. Christoph Studer's award-winning research takes place at the interface between algorithm development, theoretical principles of signal processing, and communication technologies, as well as digital integrated circuit technology. Such an integrated approach is very rare and has won him international recognition for his research, including in the communication technology industry. By appointing Christoph Studer, ETH Zurich is reinforcing its leading role in the field of digital circuit technology and signal processing.

Professor Outi Supponen (*1990), currently Assistant Professor of Experimental Fluid Mechanics at McGill University, Montreal, Canada, as Tenure Track Assistant Professor of Multiphase Fluid Dynamics. Outi Supponen's research focuses on experimental investigations of fundamental flow phenomena. Her research findings are of importance to numerous applications in biomedicine, material science and cleaning technologies, as well as for hydraulic machinery. By appointing Outi Supponen, ETH Zurich is strengthening the experimental fluid mechanics subject area and its links with other research fields in thermodynamics, energy technology and biomedical engineering.

Professor Laurent Vanbever (*1985), currently Tenure Track Assistant Professor at ETH Zurich, as Associate Professor of Networked Systems. Laurent Vanbever works in the field of computer networks, investigating key topics in the area of network configuration and network security. His internationally acclaimed research covers theoretical and practical aspects of the programmability of networks, Internet routing and the optimisation of network performance. He also develops tools for identifying network attacks and analysing their effects, as well as enabling networks to protect themselves. In 2016 the students of ETH Zurich awarded Laurent Vanbever the Golden Owl for excellence in teaching.

Dr Maksym Yarema (*1985), currently a post-doctoral student at ETH Zurich and Empa, as Assistant Professor of Nanoscale Memory Devices. Maksym Yarema specialises in developing methods for synthesising new semiconducting and metallic nanoparticles and integrating them into (opto)electronic and energy-related devices. His latest work focuses on phase-change memory devices made from nanoscale materials – a promising alternative to traditional silicon-based devices. He has received an ERC Starting Grant for this research. The appointment of Maksym Yarema enables ETH Zurich to expand its activities into new types of storage technologies and nanoelectronics.

Appointments at EPFL

Professor Nicolas Boumal (*1987), currently Tenure Track Assistant Professor at Princeton University, New Jersey, USA, as Tenure Track Assistant Professor of Mathematics. Nicolas Boumal is a talented and highly regarded young scientist. His research focuses on non-convex optimisation, which has particular applications in statistical estimates, inverse problems and automatic learning. Nicolas Boumal's work is both theoretical and application-based. His goal is to understand the mathematical structures behind the performance of non-convex optimisation algorithms. At EPFL, Nicolas Boumal will set up his own research group and collaborate with other researchers in a multidisciplinary manner.

Professor Bart Deplancke (*1975), currently Associate Professor at EPFL, as Full Professor of Life Sciences. Over the past few years, Bart Deplancke has established himself as an international leader in his specialist area. His work has made a significant contribution to understanding the way in which gene regulation enables fatty tissue to develop and controls its function. He has, for example, identified a previously unknown cell type that regulates adipogenesis. His highly regarded results also include new technologies for gene analysis at the single-cell level. Bart Deplancke makes a valuable contribution to teaching and research at EPFL. In addition, he strengthens its innovative capacity and expands the Federal Institute's national and international networks.

Dr Tanja Käser (*1982), currently Senior Data Scientist at the Swiss Data Science Center of ETH Zurich, as Tenure Track Assistant Professor of Computer Science and Communication Systems. A brilliant international researcher, her interdisciplinary research combines computer science with educational science. With the help of artificial intelligence, machine learning, the creation of new algorithms or data mining, Tanja Käser analyzes, models, and predicts the learning behavior of human beings to allow, for example, the customization of learning tools. The creation of her laboratory within the School of Computer and Computer Sciences will create synergy with existing units to produce a strong pole of educational science at EPFL. It will feed a growing field of research in which EPFL is becoming the key scientific player.

Eric Lapierre (*1966), currently Lecturer at the Ecole nationale supérieure d'architecture de Marne-la-Vallée, France, as Associate Professor of Architecture. Eric Lapierre has achieved considerable international renown as an architect and critic. He is also well-known as a curator, having served as Chief Curator of the Lisbon Architecture Triennale 2019, for example. The residential and public buildings that Eric Lapierre designs at his own architecture firm attract widespread attention. His appointment will strengthen the training of architects at EPFL and boost the university's international reputation.

Dr Mike Seidel (*1965), currently Acting Head of Division at the Paul Scherrer Institute (PSI), as Full Professor of Physics. Mike Seidel is a recognised expert in the physics of particle accelerators and related technologies. He has gained international attention for various scientific projects and results, including some of the most recent ones at the Paul Scherrer Institute (PSI), the modernisation of the proton accelerator and the conceptual development of new applications at the Center for Proton Therapy. With the appointment of Mike Seidel, EPFL will strengthen its global position in the physics of particle accelerators and enhance its fruitful collaboration with PSI in this area.

Professor Henning Stahlberg (*1965), currently Full Professor at the University of Basel, as Full Professor of Physics. Henning Stahlberg is an international leader in the field of cryogenic electron microscopy. He contributed significantly to the development of this technology thanks to his expertise in all types of imaging, and he has also worked successfully on detectors and software for data processing and analysis. Henning Stahlberg is an outstanding scientist who knows how to run a scientific institution and forge links with practitioners in different fields of application. At EPFL he will continue to develop cryo-electron microscopy and direct the relevant centre, which is being set up in cooperation with the University of Lausanne. Henning Stahlberg will hold a dual professorship with the University of Lausanne.

Professor Jo Taillieu (*1971), currently Professor at the Universities of Ghent and Leuven, Belgium, and at EPFL, as Associate Professor of Architecture. Jo Taillieu is one of the best-known representatives of the new wave of Belgian architecture, which has made its mark on the European stage in recent years. As an advocate of critical architectural awareness and a proponent of social responsibility in architecture, and in his role as an architect and partner in a well-known firm, Jo Taillieu has attracted considerable attention in the world of architecture. His appointment enables EPFL to incorporate new approaches to original spatial design into its teaching.

Award of the title of “Professor” at ETH Zurich

Dr Dominik Brunner (*1967), currently Research Group Leader at Empa and Lecturer at ETH Zurich, as Adjunct Professor at ETH Zurich. Dominik Brunner is a recognised specialist in air pollution. His innovative research in atmospheric chemistry focuses in particular on the origin, retention and transport of anthropogenic emissions in the atmosphere.

Dr Peter Derlet (*1968), currently Senior Scientist at the Paul Scherrer Institute and Lecturer at ETH Zurich, as Adjunct Professor at ETH Zurich. Peter Derlet is an acclaimed researcher in the field of simulation and modelling of plasticity and structure in solid materials. His particular interest is nanocrystalline alloys and glasses.

Dr Salvador Pané i Vidal (*1980), currently Senior Scientist and Lecturer at ETH Zurich, as Adjunct Professor at ETH Zurich. Salvador Pané i Vidal is an internationally recognised scientist who carries out important research and teaching at ETH Zurich. He has already been awarded two ERC grants, and is currently working on combining chemistry and electrochemistry with small-format robotics.

Departure from ETH Zurich

Professor Alessandro Sisto (*1986), currently Assistant Professor of Mathematics at ETH Zurich, will leave ETH Zurich at the end of May 2020. Alessandro Sisto has been working at ETH Zurich since 2013, as a post-doctoral student to begin with, and in his present post since 2015. His specialist area is geometric group theory. He is leaving to take up an appointment at another university.

Departure from EPFL

Professor Bruno Marchand (*1955), currently Full Professor of Architecture at EPFL, is to retire on 1 August 2020. Bruno Marchand studied architecture at EPFL, where he went on to attain all the major milestones of his scientific career. He was appointed to his present post in 2009. Bruno Marchand's research focuses on various aspects of architectural theory and urban planning. In both teaching and research, Bruno Marchand has significantly contributed to EPFL's high standing in his specialist field.

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 both 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.