

Meeting of the ETH Board on 9/10 March 2022

23 new professors appointed at the two Federal Institutes of Technology

At its meeting of 9/10 March 2022 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 10 women and 13 men as professors and awarded the title of professor to two individuals. It also took note of the resignations of 10 professors and thanked them for their services. In the last 12 months, the ETH Board has made a total of 29 new appointments for women and 32 for men; the proportion of women among these new appointments amounts to 47.5%.

Bern/Zurich, 10 March 2022

New appointments at ETH Zurich

Dr Margarita Boenig-Liptsin (*1986), currently Director and Lecturer at the University of California, Berkeley, USA, as Tenure Track Assistant Professor of Ethics, Technology and Society in the Department of Humanities, Social and Political Sciences. Margarita Boenig-Liptsin's research focuses on how the human condition is changing in an increasingly digital world, such as in relation to the significance of digital innovations for political planning or the consequences of algorithmic risk analysis. With this appointment, the department is gaining an original researcher and an experienced university teacher who addresses the ethical and social problems of information technology at the highest scientific level. Margarita Boenig-Liptsin will play an active part in setting up a Center for Ethics at ETH Zurich.

Professor Valerio Mante (*1976), currently Associate Professor at the University of Zurich and Lecturer at ETH Zurich, as Associate Professor of Neuroinformatics in the Department of Information Technology and Electrical Engineering. Valerio Mante's main interests lie in investigating the behavioural and neural mechanisms of learning and cognition, using experimental, computer-assisted techniques that draw on data science. As a highly regarded researcher with an impressive list of publications, he undertakes peer reviews for leading journals. His appointment strengthens the links between the Institute of Neuroinformatics and the relevant institutes of the University of Zurich and ETH Zurich. Valerio Mante will hold a dual professorship with the University of Zurich.

Professor Svitlana Mayboroda (*1981), currently Full Professor at the University of Minnesota, USA, as Full Professor of Mathematics in the Department of Mathematics. Svitlana Mayboroda conducts research in the field of analysis. She has produced numerous groundbreaking studies in the areas of partial differential equations, harmonic analysis and functional analysis. Svitlana Mayboroda is a Fellow of the American Mathematical Society and has won multiple international awards for her research. At present she is the director of a major international interdisciplinary project. She is not only regarded as a leading scientist in her field, but also has extensive experience as a university lecturer.

Professor Nadia Mazouz (*1970), currently Professor at the Philipps University of Marburg, Germany, as Full Professor of Practical Philosophy in the Department of Humanities, Social and Political Sciences. Nadia Mazouz focuses on constructive, practical philosophy, dealing with questions such as the ethics of war, the role of new military technologies, the problems of

democracy and the significance of new digital means of communication. Through her appointment, the department is gaining an original normative thinker who will nurture links with colleagues from the technical departments. To assist with this aim, she will help found and develop a new Center for Ethics at ETH Zurich.

Dr Davide Sgalaberna (*1986), currently Senior Scientist and Lecturer at ETH Zurich, as Assistant Professor of Particle Physics in the Department of Physics. Davide Sgalaberna's research is concerned with the search for a new source of CP symmetry violation. Strong CP asymmetry is the key to explaining the large imbalance between the amounts of matter and antimatter observed in the universe. His priority for the next five years is to develop a completely new design of scintillator-based particle detector, which, if successful, could represent a breakthrough for the entire field of particle physics. Davide Sgalaberna's project, for which he has already assembled a strong research team, is helping to create synergies and may be suitable for patenting.

Dr Wenchao Xu (*1988), currently Postdoctoral Associate at Massachusetts Institute of Technology (MIT), USA, as Tenure Track Assistant Professor of Experimental Quantum Engineering in the Department of Physics. Wenchao Xu's research is in the field of quantum engineering, with particular reference to controlling atoms by capturing them in optical tweezers. The appointment of Wenchao Xu will strengthen the Department of Physics and the Paul Scherrer Institute in important ways. This professorship, which is part of the ETH+ initiative "ETH Centre for Quantum Science and Technology", is an ideal complement to the newly developed ETH Zurich/PSI Quantum Computing Hub (founded in 2020) and forges another link between these two institutions.

Promotions at ETH Zurich

Professor Mathieu Luisier (*1978), currently Associate Professor at ETH Zurich, as Full Professor of Computational Nanoelectronics in the Department of Information Technology and Electrical Engineering. Mathieu Luisier's research covers computer-assisted nanoelectronics, quantum transport, device physics and high-performance computing, among other topics. He developed a software programme called OMEN which is now regarded as the state-of-the-art quantum transport simulator for nanotransistors and other nanostructures. His outstanding work has won several awards, including an ERC Starting Grant in 2013. Mathieu Luisier also has an impressive list of publications to his name, as well as excellent skills as a supervisor.

Professor Bill Morandi (*1983), currently Associate Professor at ETH Zurich, as Full Professor of Synthetic Organic Chemistry in the Department of Chemistry and Applied Biosciences. Bill Morandi's work focuses on developing new concepts in catalysis for transforming widely available feedstocks such as polyols and hydrocarbons into polymers and other valuable building blocks for applications in medicine and materials science. He is a leading scientist in the field of homogeneous catalysis and has received numerous awards, including an ERC Starting Grant in 2017. At ETH Zurich he heads up the Laboratory of Organic Chemistry, is a departmental delegate and a member of the Professional Education Committee.

Professor Martin Vechev (*1977), currently Associate Professor at ETH Zurich, as Full Professor of Computer Science in the Department of Computer Science. Martin Vechev's main fields of research are Big Code, certified machine learning and programming languages for quantum computers. His achievements in a number of areas are globally regarded as groundbreaking. This internationally acclaimed scientist and his research group have carried out pioneering work, particularly in a new sub-area of artificial intelligence known as "learning from Big

Code". He has won a number of awards, including an ERC Starting Grant in 2015. In addition, he is a dedicated lecturer and supervisor who has developed several new course components.

Professor Loïc Pellissier (*1984), currently Tenure Track Assistant Professor at ETH Zurich and Group Leader at WSL, as Associate Professor of Ecosystems and Landscape Evolution in the Department of Environmental Systems Science. Loïc Pellissier's work focuses on landscape ecology and has a particular emphasis on investigating the interactions between landscape and organisms, as well as climate change. His publication list is impressive and his contributions have achieved wide recognition globally. In addition, his deep commitment to the scientific community is demonstrated by his willingness to organise events and serve on different committees. As a leading expert in landscape ecology, Loïc Pellissier is building excellent links with WSL.

New appointments at EPFL

Dr Ianina Altshuler (*1987), currently Postdoctoral Fellow at the Norwegian University of Life Sciences, Norway, as Tenure Track Assistant Professor of Environmental Engineering (Environmental Adaptation) in the School of Architecture, Civil and Environmental Engineering. Ianina Altshuler's research is concerned with the environmental adaptation strategies of microorganisms in the cryosphere in alpine and polar regions, with particular reference to global warming and ever-increasing temperature fluctuations. At EPFL she will develop her research further in order to make an important contribution to our understanding of ecological adaptation strategies in hostile environments. Her appointment will enhance the School's scientific influence and educational provision.

Dr Aleksandar Antanasijevic (*1987), currently Postdoctoral Researcher at Scripps Research, La Jolla, USA, as Tenure Track Assistant Professor of Life Sciences in the School of Life Sciences. Aleksandar Antanasijevic's principal research area is structural biology, with a particular focus on vaccines and immunisation. He has already made an important contribution to the preparation of immunogens for the production of polyclonal antisea. His interest and skills in cryo-electron microscopy are a perfect fit with the orientation of EPFL and the Dubochet Center for Imaging (DCI), which intend to develop this field further. This appointment will enable EPFL to continue its expansion in the key area of virology and infectious diseases.

Professor Pier Vittorio Aureli (*1973), currently Professor in Practice at Yale University, USA, Visiting Professor at EPFL and Co-Director of an architecture practice in Brussels, Belgium, as Associate Professor of Architectural and Environmental Theory in the School of Architecture, Civil and Environmental Engineering. Pier Vittorio Aureli's research explores the principles of architectural theory in the light of the latest social and political conditions, and examines the role of theory and its influence on architectural and environment-related design methods. Pier Vittorio Aureli is currently regarded as one of the world's most influential practitioners in the area of architectural and environmental theory. In making this appointment, the School and EPFL are seizing a unique opportunity to become indisputable leaders in this vital research field.

Dr Sara Bonetti (*1987), currently Assistant Professor at the University of Wageningen, Netherlands, as Tenure Track Assistant Professor of Environmental Engineering (Watershed Areas) in the School of Architecture, Civil and Environmental Engineering. Sara Bonetti investigates processes in soil surfaces, ecology and water on a variety of spatial and temporal scales. Her work combines hydrological and geomorphological processes in particular, enabling her to gain a quantitative understanding of soil erosion and the development of land surfaces.

The appointment of this innovative researcher will promote cooperation with various institutions, including WSL, thus boosting the department's influence in this important field of research.

Dr Gabriele Manoli (*1985), currently Lecturer at University College London, United Kingdom, as Tenure Track Assistant Professor of Architecture (Sustainable Urban Systems and Climate Protection Strategies) in the School of Architecture, Civil and Environmental Engineering. Gabriele Manoli studies water supplies, energy exchange and the carbon cycle in urban and suburban systems. His interdisciplinary approach unites environmental technology, infrastructure and urban planning. At EPFL he will principally investigate the current worldwide trend towards urban densification and the effects of altering the urban climate (e.g. through greening measures). His appointment will strengthen the role of the School and EPFL in a research field of vital importance to society.

Dr Clément Pit-Claudel (*1991), currently Postdoctoral Researcher at Amazon in Seattle, USA, as Tenure Track Assistant Professor of Computer Science and Communication Systems in the School of Computer and Communication Sciences. The main emphasis of Clément Pit-Claudel's research is on programming languages, compilers, formal verification and systems engineering, to build trustworthy software and hardware systems and permanently root out large classes of malfunctions and vulnerabilities. Although still in the early stages of his career, he has collaborated with research institutions and industry and has already won numerous awards for his innovative research. His appointment will create important synergies in this future-oriented research field.

Professor Guillermina Ramirez-San Juan (*1986), currently Assistant Professor at Brandeis University, USA, as Tenure Track Assistant Professor of Physics in the School of Basic Sciences. Guillermina Ramirez-San Juan considers questions relating to the fundamental mechanisms affecting how cilia function – an area in which little research has been conducted so far. In her unique skill set, she is able to combine aspects of cell biomechanics and the use of model organisms with expertise in chemical biology and whole tissue imaging. Her research interests thus go beyond traditional biophysics to include the fields of materials science, mechanics and robotics. Guillermina Ramirez-San Juan will forge close links between the EPFL Center for Imaging and the Dubochet Center for Imaging (DCI).

Dr David Ruggiero (*1987), currently Design Engineer at Read Jones Christoffersen Ltd. in Toronto, Canada, as Tenure Track Assistant Professor of Structural Design and Engineering in the School of Architecture, Civil and Environmental Engineering. David Ruggiero's research aims to achieve a better understanding of the behaviour of reinforced concrete structures and structural elements made from cementitious materials. His achievements include developing a new theoretical model, known as the General Crack Component Model, which can be applied to a broad range of cementitious materials. He now intends to concentrate his efforts on sustainable materials and extending the life of infrastructures, while also contributing to multidisciplinary projects at EPFL.

Dr Alfredo Thiermann (*1987), currently Lecturer at Harvard University, USA, as Tenure Track Assistant Professor of Architectural History and Theory in the School of Architecture, Civil and Environmental Engineering. Alfredo Thiermann's research takes place at the intersection between architecture and different media, from sound installations and film scenography to private houses, public buildings and large-scale infrastructures. Another of his particular research interests is the transition from the industrial to the digital age. Thanks to his cross-sectoral vision of architecture, this innovative researcher will make a key contribution to the

School's strategic clusters in the areas of digital infrastructures and cities as well as sustainable territories.

Promotions at EPFL

Professor Rizlan Bernier-Latmani (*1972), currently Associate Professor at EPFL, as Full Professor of Environmental Microbiology in the School of Architecture, Civil and Environmental Engineering. Rizlan Bernier-Latmani's research explores the biological degradation of toxic metals and radionuclides by microorganisms. In her field experiments she uses concepts and techniques drawn from a wide variety of disciplines, such as microbiology, molecular biology, analytical chemistry (including X-ray spectroscopy) and geochemistry. In 2017 she was awarded an ERC Consolidator Grant for her research. Rizlan Bernier-Latmani is a role model for women in science, and encouraging the advancement of women is one of the causes to which she is committed at EPFL.

Professor Raffaella Buonsanti (*1981), currently Tenure Track Assistant Professor at EPFL, as Associate Professor of Chemical Engineering in the School of Basic Sciences. Raffaella Buonsanti conducts research in the field of colloid chemistry. At EPFL she founded the Laboratory of Nanochemistry for Energy and heads a research programme aimed at finding innovative approaches to the controlled synthesis of nanomaterials with novel properties. Her research takes place at the intersection of materials chemistry and catalysis, and pursues a sustainability approach. Raffaella Buonsanti is regarded as an ambitious and forward-thinking researcher. She has already received several awards, including an ERC Starting Grant in 2017.

Professor Gaétan de Rassenfosse (*1983), currently Tenure Track Assistant Professor at EPFL, as Associate Professor of Science and Technology Policy at the College of Management of Technology. Gaétan de Rassenfosse's research is in the field of innovation economics, which he combines with legal and policy perspectives. His areas of interest include intellectual property rights, the measurement of intangible capital and economic tools to foster the knowledge economy. His results have set new standards in the measurement of innovation and have contributed to bringing economic insights to patent policy. Gaétan de Rassenfosse is also a highly-valued university lecturer and supervisor, involved in research outreach activities and takes on numerous commitments to the benefit of EPFL.

Professor Wendy Queen (*1981), currently Tenure Track Assistant Professor at EPFL, as Associate Professor of Chemical Engineering in the School of Basic Sciences. Wendy Queen's research focuses on the development of metal-organic frameworks (MOFs) for environmental applications. She adopts a collaborative approach aimed at helping to solve some of the important problems faced by society. Wendy Queen has shown herself to be an up-and-coming researcher in this fiercely competitive research area, and her research has made a key contribution to a fast-growing field of study. Her work at EPFL has already resulted in six patents. In addition, she is a popular university lecturer who actively strives to communicate her research findings to a wider audience.

Award of the title of Professor

Dr Aldo Antognini (*1976), currently Lecturer and Senior Scientist in the Department of Physics at ETH Zurich and Scientist in the Laboratory for Particle Physics at the Paul Scherrer Institute, as Adjunct Professor at ETH Zurich. Aldo Antognini is an internationally acclaimed researcher in the field of low energy nuclear and particle physics. In 2017 he was awarded an ERC Consolidator Grant. He takes a very active role in teaching in the Department of Physics, and is a well-regarded university lecturer and supervisor.

Dr Daniele Passerone (*1970), currently Lecturer in the Department of Information Technology and Electrical Engineering at ETH Zurich and Group Leader at Empa, as Adjunct Professor at ETH Zurich. Daniele Passerone is an expert in materials modelling based on density functional theory (DFT), one of the most efficient methods of simulating the electronic properties of solid-state crystals. He has a long list of successful publications to his name and receives consistently positive evaluations for his teaching.

Retirements/departures from ETH Zurich

Professor Karl-Heinz Altmann (*1957), currently Full Professor of Pharmaceutical Biology in the Department of Chemistry and Applied Biosciences, will retire at the end of July 2022. Karl-Heinz Altmann joined ETH Zurich as a full professor in 2013. He has won multiple awards for his research, which has been devoted to the synthesis of biologically active natural products and to medicinal chemistry. During his time in the private sector he was already regarded as an international expert on the exploration and profiling of active molecules derived from nature. In addition to his work as a successful teacher and supervisor at ETH Zurich, he has served as head of department, held various positions at the Swiss Chemical Society and was co-founder of a biotechnology company – an ETH Zurich spin-off.

Professor Jürg Dual (*1957), currently Full Professor of Mechanics and Experimental Dynamics in the Department of Mechanical and Process Engineering, is to retire at the end of July 2022. Jürg Dual joined ETH Zurich as an assistant professor in 1990 and has been a full professor since 1998. His research focuses on wave propagation and vibrations in solids, as well as microsystem and nanosystem technology and gravitation. This renowned researcher has recently been working on snow mechanics in collaboration with the WSL Institute for Snow and Avalanche Research SLF. He has won multiple awards for his research and is a member of numerous committees. Jürg Dual has made an outstanding contribution to ETH Zurich thanks to his conscientious assistance with the tasks of the institution.

Professor Wilhelm Gruissem (*1952), currently Full Professor of Plant Biotechnology in the Department of Biology, is to retire at the end of July 2022. Wilhelm Gruissem joined ETH Zurich as a full professor in 2000. His research investigates biochemical synthesis routes and the molecules that play a part in controlling plant growth and chloroplast development. His aim is to contribute to nutritional quality and food safety in ways that cannot be achieved using conventional breeding strategies. He is a globally acclaimed award-winning researcher with an impressive publication record. The book he published in the year 2000 is now regarded as the standard text. He has made valuable contributions both to ETH Zurich itself and to Zurich as a research centre.

Professor Sarah Isabelle Hofer (*1985), currently Tenure Track Assistant Professor of Learning and Teaching in the Department of Humanities, Social and Political Sciences, is to leave ETH Zurich at the end of March 2022. Sarah Hofer's main focus is on STEM subjects in secondary and higher education. She investigates how intelligence, previous knowledge, gender and other individual characteristics interact with knowledge evaluation and teaching methods. She is leaving to take up a post at Ludwig Maximilian University, Munich.

Professor Thomas Rösgen (*1957), currently Full Professor of Fluid Dynamics in the Department of Mechanical and Process Engineering, is to retire at the end of July 2022. Thomas Rösgen joined ETH Zurich as a full professor in 1997. His work has involved developing

imaging technologies and analytical methods for flow measurement techniques. These have led to applications used in the aerospace sector and in fundamental flow mechanics research. Since 2001 he has headed the Institute of Fluid Dynamics in the Department of Mechanical and Process Engineering. From 2005 to 2007 he was the department's Director of Studies, a role in which he had a marked impact thanks to his visionary teaching and monitoring work.

Professor Markus Rothacher (*1957), currently Full Professor of Mathematical and Physical Geodesy in the Department of Civil, Environmental and Geomatic Engineering, is to retire at the end of July 2022. Markus Rothacher joined ETH Zurich as a full professor in 2009. His research focuses on the development and exploitation of global satellite navigation systems. In the 1990s he made a vital contribution to the development of a software programme now used by over 700 institutions around the world for analysing data from the Global Navigation Satellite System (GNSS). Internationally, Markus Rothacher is one of the top scientists in his field. He has won numerous plaudits for his excellent teaching and dedication.

Professor Didier Sornette (*1957), currently Full Professor of Entrepreneurial Risks in the Department of Management, Technology and Economics, is to retire at the end of July 2022. Didier Sornette joined ETH Zurich as a full professor in 2005. His research investigates the predictability and control of crises and extreme events in complex systems. Didier Sornette is one of the world's best-known risk researchers and has received numerous awards. In addition to his much-valued work as a lecturer he has made other substantial, long-term contributions to the benefit of the department and ETH Zurich as a whole, including serving as a member of the Research Commission and on the Scientific Board of the SCOR Corporate Foundation for Science.

Professor Lothar Thiele (*1957), currently Full Professor of Technical Computer Science in the Department of Information Technology and Electrical Engineering, is to retire at the end of July 2022. Lothar Thiele joined ETH Zurich as a full professor in 1994. His research interests cover models, methods and software tools for designing embedded systems in real time, cyberphysical systems, sensor networks, bioinspired optimisation techniques, and the Internet of Things. He is an internationally acclaimed researcher who has won numerous prizes and serves on various committees, as well as being a popular and highly regarded university lecturer. Both the department and ETH Zurich have benefited significantly from his service in a variety of capacities.

Professor Bernhard Wehrli (*1957), currently Full Professor of Aquatic Chemistry in the Department of Environmental Systems Science, is to retire at the end of July 2022. Bernhard Wehrli joined ETH Zurich as an assistant professor in 1991, since when he has also worked at Eawag. He has been a full professor since 2001. His research activities focus on the biogeochemistry of inland waters, nutrient and carbon cycles, redox processes and greenhouse gas emissions. Bernhard Wehrli has held a variety of offices in the course of his successful career, including serving on Eawag's Board of Management and as a member of the Research Council of the Swiss National Science Foundation (SNSF). He may fairly be described as someone who builds bridges not only between disciplines but also within the ETH Domain.

Departure from EPFL

Professor Philip Moll (*1984), currently Tenure Track Assistant Professor of Materials Science in the School of Engineering, is to leave EPFL at the end of May 2022. Philip Moll is an ambitious scientist in the field of quantum materials, with a particular focus on the study of inorganic materials. At EPFL he heads up the Laboratory for Quantum Materials. He is leaving

to become a director at the Max Planck Institute for the Structure and Dynamics of Matter in Hamburg.

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.