

Metrology for Digital Transformation

Online Sessions

23, 24 & 29 SEPTEMBER 2021

SmartCom



eurolab



EUROPEAN
METROLOGY
NETWORKS



Sascha Eichstädt chaired the session on *Machine learning and artificial intelligence*. He has been with the German National Metrology Institute since 2008, where he is leading the Department 'Metrology for digital transformation'. Sascha holds a PhD in theoretical physics and is interested in measurement uncertainty, signal processing, Internet of Things and sensor network metrology. He is the first elected convenor of the EURAMET working group Metrology for Digital Transformation under the Technical Committee for Interdisciplinary Metrology.

Yuhui Luo has been with the National Physical Laboratory (UK's National Metrology Institute) since 2017 as a senior researcher in the departments of Data Science. With a background in commercial experience in signal processing, telecommunications, and financial data analysis for futures trading her current interests include uncertainty measurement, machine learning and signal processing related applications.



Alessandro Corsini received his PhD in 1996 from Sapienza University in Rome, Italy. He is currently a full professor of Energy Conversion Systems at Sapienza University where he is active in the field of industrial and energy systems working on data-driven design solutions, noise reduction technologies, stall dynamics, control and fault monitoring. He has won several prizes for his work including the Donald Julius Groen Prize for best IMechE paper (2013), the ASME IGTI Fans and Blowers Technical Committee, Outstanding Service Award (2016) and ASME IGTI Fans and Blowers Technical Committee, Best Paper Award (2017).

Sebastian Heidenreich is head of the working group numerical methods at German's National Metrology Institute (PTB) and the Secretary of the [European Metrology Network on Mathematics and Statistics \(MATHMET\)](#). He coordinates the EMPIR projects [MATHMET](#) and [ATMOC](#). He received his PhD with honors from the Berlin Institute of Technology. His research interests include statistical inverse problems, dynamics of active fluids, and uncertainty quantification in computationally expensive systems.



Valerie Livina is a Chartered Mathematician of the Institute of Mathematics and its Application (CMath MIMA), Fellow of the Royal Statistical Society and a member of the European Geosciences Union. In 2012 she joined NPL as a Senior Research Scientist and has been a Principal Research Scientist at this NMI since 2020. Her interests include analysis of various geophysical datasets and instrumental sensor records in order to uncover new phenomena and better understand dynamical systems describing nature.

Metrology for Digital Transformation

Online Sessions

23, 24 & 29 SEPTEMBER 2021

SmartCom



eurolab



EUROPEAN
METROLOGY
NETWORKS



Vito Fericola chaired the session on *Digital technologies in industrial measurements*. He is serving on the Board of Directors and Executive Committee of ACCREDIA, the Italian National Accreditation Body, and the Board of Directors of INRIM, the Italian National Metrology Institute. Vito's scientific interests are in temperature and humidity standards. He is contact person for the [EURAMET Technical Committee for Thermometry](#) and past Convenor of the Humidity subcommittee. Vito is coordinating the EMPIR project on [Metrology for trace water in ultra-pure process gases](#).

Tanja Dorst studied mathematics at Saarland University and received her Master of Science degree in 2013. After that, she studied Mechanical Engineering at University of Applied Sciences in Saarbruecken and received her Bachelor of Engineering degree in 2017. Since July 2020 she has been working in the field of measurement uncertainties in data-based condition monitoring for industrial applications, such as electromechanical drive systems, at the Center for Mechatronics and Automation Technology ZeMA gGmbH.



In 1989 **Harald Bosse** attained a PhD in Physics and joined PTB shortly after in 1990. Since 2009 Harald Bosse has been the head of PTB's Division 5 Precision Engineering and was the [EURAMET TC-L](#) chair from 2015 to 2019. During this period he was also the EUSPEN president (2017-2019). His strong commitment to the European metrology is further evidenced through his engagement as acting chairperson for the [European Metrology Network for Advanced Manufacturing](#) as well as PTB's delegate to CIPM consultative committee for Length, where he is heading the discussion group on line scale metrology.

Metrology for Digital Transformation

Online Sessions

23, 24 & 29 SEPTEMBER 2021

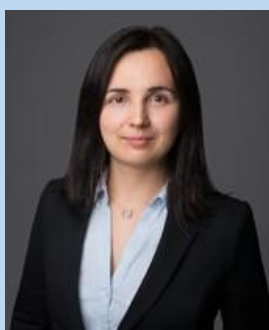
SmartCom



eurolab



EUROPEAN
METROLOGY
NETWORKS



Oksana Baer chaired the session on *Digital processes in the quality infrastructure*. She joined the Physikalisch-Technische Bundesanstalt (PTB) in Germany in January 2021. As member of the [EMPIR SmartCom](#) project team at PTB, she primarily took an active part in the development of the DCC implementation examples. Another focus lies in the development of user interface enabling metrological data exchange. Oksana holds a PhD in mechanical engineering, her research interests range from mechanical material modelling to the optimisation of manufacturing processes.

Daniel Hutzschenreuter has been a member of the Physikalisch-Technische Bundesanstalt (PTB) in Germany since 2015 and is PTB's contact for Department 9.4 Metrology for the Digital Transformation. His field of work is focused on the online validation of computational extensive evaluation algorithms and the development of universal data models for the digital transformation in metrology. On the international level, Daniel is actively supporting the EURAMET working group *Metrology for Digital Transformation* and the CIPM Task Group on the "Digital-SI".



Photo courtesy of PTB

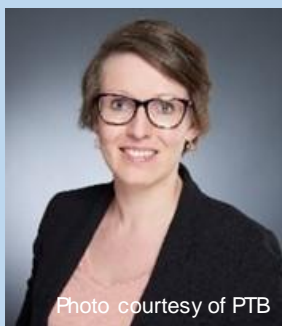


Photo courtesy of PTB

Wiebke Heeren's background is in medical physics related to hearing and she was a research audiologist at Advanced Bionics GmbH for four years before joining Physikalisch-Technische Bundesanstalt (PTB) in Germany in 2018.

Since that time Dr Heeren has been a member of the [EMPIR](#) project [SmartCom](#) where she took an active part in the development of the fundamental structure of the Digital Calibration Certificates (DCC). From 2020 she has been coordinating this project.



Ian Smith is a senior research scientist at the National Physical Laboratory (NPL) in the UK, having joined in 1998. His particular areas of interest are uncertainty evaluation, data analysis, and the development and testing of software for metrology applications. Ian is also a member of EURAMET Technical Committee for Interdisciplinary Metrology (TC-IM) project 1448 concerned with the development of digital calibration certificates.

Clifford Brown chaired the 'meet the experts' Q&A slot of the session *Digital processes in the quality infrastructure*. A physicist by training, he has worked in the field of metrology for over 12 years. Clifford is currently a PTB member, working on the EMPIR SmartCom project. His over 30 years of professional experience ranges from scientific academia to industry, on a range of research and commercial projects related to digital science.



Tuukka Mustapää has been working as a doctoral candidate at the Aalto University in Finland since 2018. His research is focusing on the data trustworthiness in IoT applications. In addition to his contributions in the EMPIR SmartCom project, Tuukka has been actively involved in other research activities related to the use of digital calibration certificates in industry.