



FORUM-MD Workshop on Metrology for Complex Sensor Networks

Programme

Day 1 (11 Feb 2025), time in UTC

13:00 – 13:05

Opening of Workshop

13:05 – 13:30

**Challenges and Opportunities in Sensor Network Metrology
(EURAMET TC-IM 1551)**



Dr. Martin Koval, Czech Metrology Institute (CMI)

In 2015, Martin Koval graduated from the Faculty of Mechanical Engineering of the Slovak Technical University in Bratislava, where he received an engineering degree in the field of metrology. Subsequently, he obtained the title of doctor in the same field. Between 2012 and 2015, he worked at the Slovak Metrological Institute in the field of primary thermometry. Since 2015, he has been working at the Czech Metrological Institute, where he deals with software validation of metrological devices. Since 2018, it has also focused on digitalization applications in metrology.

He is a member of several working groups focused on software in legal metrology, such as WELMEC Working Group 7 Software and OIML Technical Committee TC5/SC2 Software, and working groups dealing with digitization in metrology such as EURAMET TC-IM M4D, OIML Digital Task Group and BIPM Forum on Metrology and Digitalization (FMD), where he heads the Task Group Harmonization DCC and DRMC.

13:30 – 13:55



EPM-FunSNM: from Generic Tools to Real-World Applications

Dr. Shahin Tabandeh, Valtion Teknillinen Tutkimuskeskus, Mittatekniikan Keskus (VTT MIKES)

Shahin Tabandeh coordinates the EPM 22DIT02 FunSNM project on sensor network metrology at VTT MIKES. He is a member of the BIPM Consultative Committee for Thermometry (CCT) and its Working Groups for Environment (CCT-WG-Env) and Humidity (CCT-WG-Hu), and the Digitalization Task Group (CCT-TG-Dig). Additionally, he serves as the EURAMET TC-T contact person and is an active member of the TC-T strategy working group, TC-T Humidity sub-committee, and TC-T Digitalization Task Group.

13:55 – 14:20



Metrology for Sensor Networks in Asia Pacific Metrology Programme's Focus Group on Digital Transformation

*Dr. Shan Cui, National Metrology Centre, Agency for Science, Technology and Research (NMC, A*STAR)*

Shan is the Head of the Acoustic, Chemical, and Temperature Metrology Cluster at A*STAR's National Metrology Centre (NMC). She joined NMC in October 2009 and has been instrumental in advancing research in data-driven metrology for sensing quality assurance in NMC. She was recognized as one of the Singapore's 100 Women in Tech in 2023. She is also the Chair of Asia Pacific Metrology Programme's Focus Group on Digital Transformation.

14:20 – 14:45



Pilot Metrology Cloud with IOT Sensor Network THB for SIM Region

M.Sc. Aldo Adrián García González, Centro Nacional de Metrología (CENAM)

Metrologist at the National Metrology Center of Mexico, in vibration and acoustics for 12 years, where Aldo has served as project coordinator for the industry. For the last 5 years he has participated in the working group number 14 of the Inter-American Metrology System in digital transformation, where he is responsible for the coordination of projects on IoT measurement systems, Integration of Digital Calibration Certificates and currently, cloud technologies and IoT implementation projects.

14:45 – 14:50

Closing of Day 1

13:00 – 13:05

Opening of Day 2

13:05 – 13:30

Innovative Metrology for Complex Sensor Networks: Insights from the CTBTO IMS Stations



Mr. Benoit Doury, Comprehensive nuclear Test Ban Treaty Organization (CTBTO)

Benoit Doury is an engineer at the Comprehensive nuclear Test Ban Treaty Organization, where he focuses on ensuring the quality and reliability of seismic and infrasound monitoring for the International Monitoring System. Since joining in 2012, he has been involved in advancing calibration methods and developing tools to support station performance and data integrity. His work emphasizes collaboration and innovation in managing complex sensor networks.

13:30 – 13:55

Sensor Networks in Future Cities



Dr. Barbara Jung, Physikalisch-Technische Bundesanstalt (PTB)

Barbara Jung is coordinating the thematic field "City of the Future" at PTB. In this field, the initiative "Smart Metrology Campus" conducts research about metrological questions arising in supply and monitoring networks of future cities, on campus and with external partners. Research topics include sensor networks metrology, metrological data infrastructures, data communication, human as a sensor and energy efficiency through digital twins.

13:55 – 14:20

Computational Reconstruction of Calorific Value on Gas Distribution Networks



Mr. Martin Stýblo, SIMONE Research Group

Born in 1970 in Prague, Czechoslovakia. Martin Stýblo received a degree in applied mathematics from the Czech Technical University, Faculty of Nuclear Sciences and Physical Engineering in 1993. He remained in academia for 4 years, and since 1997 has worked for the Czech gas company Transgas as a simulation systems analyst. Since 1999 he has been working for SIMONE Research Group.

His current activities include the development of computational core, project implementation, and company administration and finances. He is the author and / or co-author of more than 20 publications. Since 2022 member of PSIG Board of Directors (www.psig.org).

14:20 – 15:00

Panel Discussion:

Moderator: Dr. Sascha Eichstaedt, PTB

Panellists: Mr. Benoit Doury, CTBTO; Mr. Martin Stýblo SIMONE Research Group; Dr. Shahin Tabandeh, VTT MIKES

15:00 – 15:05

Closing of Workshop