



IUPAC/CITAC Workshop “Metrology, Quality and Conformity Assessment”
17-18 Jan 2023 in conjunction with Isranalytica, Tel Aviv, Israel, www.isranalytica.com

Tentative Program (draft)

17 Jan 2023, morning

Chair: Dr. Ilya Kuselman, Co-chair: Prof. Bernd Guettler

- Welcoming
 - IUPAC, Dr. Ilya Kuselman, Chair of IUPAC Subcommittee on Metrology in Chemistry
 - CITAC, Prof. Bernd Guettler, CITAC Chair
- Dr. Ilya Kuselman, Independent Consultant on Metrology, Israel. Uncertainty principle in conformity assessment of chemical composition of a substance or material.
- Dr. Francesca R. Pennechi, INRIM, Italy. Generalization of the JCGM approach to conformity assessment of a sample of products, materials, or objects.
- Dr. Tamar Gadrich, Braude College, Israel. Application of two-way ordinal analysis of variation for comparison of results of examination of organoleptic (sensory) properties of drinking water, sausage or other objects.
- Prof. G. Elvar Theodorsson, Linköping University, Sweden. Traceability in qualitative analysis.

17 Jan 2023, afternoon

Chair: Dr. Michela Sega

- Dr. Angelique Botha, NMISA, South Africa. Development of new standards for the production and use of reference materials.
- Mr. Steve Sidney, NLA – South Africa. A review of ISO 17043 standard for proficiency testing providers.

- Dr. Raphy Bar, Consultant, Israel. Considering the ICH concept of ‘total analytical error’ in validation of analytical procedures of pharmaceuticals.
- Dr. Michela Sega, INRIM, Italy. The impact of metrology on the quality of measurements for climate change studies

18 Jan 2023, morning

Participation in the ‘Meet the Regulator’ event.

18 Jan 2023, afternoon

Chair: Dr. Markus Obkircher

- Prof. Hongmei Li, NIM, People's Republic of China. Study of reference materials and establishment of the metrological traceability system for in vitro diagnostics
- Prof. Bernd Guetler, PTB, Germany. A metrology-based quality assurance system for clinical laboratories in Europe
- Dr. Markus Obkircher, Sigma-Aldrich, Switzerland. Ensuring Consumer Safety with Certified Reference Materials for Pesticide Testing in Cannabis.

Short Bio notes of the lecturers are below.

The Merck logo is displayed in a bold, blue, sans-serif font.



Dr. Ilya Kuselman, <https://orcid.org/0000-0002-5813-9051>, has received his PhD in inorganic chemistry from Kalinin State University, and DSc in analytical chemistry – from R&D Institute for Rare Metal Industry, Moscow, Russia. Since 1971 to 1990 Ilya has been a researcher and then Head of Metrology in Chemistry Division of All-Union R&D Institute of Non-ferrous Secondary Metals, Donetsk, Ukraine, former USSR. Since 1991 to 2014 he was a co-worker and further Director of the National Physical Laboratory of Israel. Now Ilya is Independent Consultant on Metrology. He has published above 200 papers on metrology and quality in analytical chemistry. Ilya is a member of the CITAC and ISO/TC 334, Titular member of the IUPAC Analytical Chemistry Division and Chair of the IUPAC Subcommittee on Metrology in Chemistry.



Prof. Bernd Güttler studied mineralogy and crystal physics at Leibniz University Hannover (Germany) and received his Ph.D. in 1988. He joined the University of Cambridge, (UK) in 1987 in the Department of Earth Sciences and later moved to the Cavendish Laboratories where he was working in the Interdisciplinary Research Centre for Superconductivity. He joined PTB in 1990 starting as a senior researcher in solid-state chemistry. He became first head of the Department for Metrology in Chemical Physics Chemistry in 2002, and then head of the Division for Chemical Physics and Explosion Protection in 2015. He represents Germany at the Consultative Committee for Chemistry and Biology of the Meter Convention (CCQM) since 2002, where he is head of the Working Group on the mole. In this capacity he framed the revised definition of the SI unit mole. He was also chair of the EURAMET Technical Committee for Chemistry (TC-MC) and is the current chair of CITAC.



Dr. Francesca Pennechi is a senior researcher at the Istituto Nazionale di Ricerca Metrologica (INRIM, Italy) and chair of the European Metrology Network for Mathematics and Statistics (EMN Mathmet). Her research activity focuses on mathematical and statistical methods for metrology, specifically, for uncertainty evaluation, regression analysis and modelling of conformity assessment. She is co-chair of the ENBIS Special Interest Group on Measurement Uncertainty and chair of the UNI/CT016/GL69 “Applicazione dei metodi statistici” of the Italian Standardization Body, member of the Eurachem/CITAC Measurement Uncertainty and Traceability Working Group and ISO/TC 69/SC 6/WG 7 Statistical methods to support measurement uncertainty evaluation.



Dr. Tamar Gadrich is a Senior Lecturer at the Department of Industrial Engineering and Management, Braude College of Engineering in Karmiel, Israel. She holds a PhD in Statistics from the Technion – Israel Institute of Technology. Her current research interests are in applied probability and statistics.



Prof. Elvar Theodorsson was born in 1953 in Reykjavik, Iceland. He received his M.D. degree in 1978 from the University of Iceland and license as a specialist in clinical pathology (Clinical chemistry) in 1985. He gained his Ph.D. degree from the Department of Pharmacology, Karolinska Institute, Stockholm in 1983 and became an associate professor at the Karolinska Institute in 1986 and Professor of Neurochemistry at the University of Linköping in 1995. His main research interests include the neuroendocrinology of regulatory peptides and neurosteroids and applied metrology in Clinical chemistry.
<http://orcid.org/0000-0003-0756-7723>.



Dr. Michela Segà has received her PhD in Chemical Sciences from the University of Torino (Italy). She joined the Italian National Metrology Institute “Istituto Nazionale di Ricerca Metrologica” (INRiM) in 1998, where she currently is a senior researcher and serves as the Head of the Scientific Division “Applied Metrology and Engineering”. Her main research activities are related to metrology in chemistry, focused on gas analysis and organic analysis. She is the chairperson of the IMEKO TC8 - Traceability in metrology; and the past chairperson of CITAC. Michela Segà is the Italian Delegate in EURAMET, the Contact Person in the EURAMET TC on Metrology in Chemistry (chaired it from 2011 to 2015), and the Contact person in the Gas Analysis WG of the Consultative Committee for Amount of Substance - Metrology in Chemistry and Biology (CCQM). She was the Italian Delegate in Eurachem in 2014-2022. Michela is the co-author of about 40 publications in international and national journals.



Dr. Angelique Botha, <https://orcid.org/0000-0003-3987-359X>, is a chief metrologist in inorganic analysis at NMISA. Her research activities focus on the production of matrix reference materials for trace elements in food and environmental samples. She is currently Chair of ISO/TC 334. Angelique is also active in several working groups of the Consultative Committee for Amount of Substance: Metrology in Chemistry and Biology of the International Committee for Weights and Measures. Dr. Botha developed and for many years presented a course on the estimation of uncertainty of measurement for analytical chemists for the National Laboratory Association of South Africa. She is qualified by the South African National Accreditation System as a technical assessor for accreditation of reference material producers to ISO/IEC 17025 and ISO 17034, and proficiency testing providers – to ISO/IEC 17043. Dr. Botha also performs peer reviews for other international accreditation bodies.



Mr. Steve Sidney graduated with a Diploma in Electronic Engineering and actively involved in laboratory, as well as accreditation issues. Currently the Executive Director of the NLA-SA as well as Chairman of the multi-economy AB SADCAS, a full ILAC Member, based in Botswana. An active member of a number of organisations such as Eurolab, past Chair of ILAC's Laboratory Committee (LC), member of a number of other ILAC committees and currently Chair of the Financial and Audit Committee. Over the past 10 years he has also contributed to standards development including being a co-convenor during the review of ISO17025 and is currently co-convenor reviewing ISO/IEC 17043.



Dr. Raphael Bar has been a pharmaceutical consultant for the Pharma and bio-Pharma industries for the last thirteen years. Dr. Bar headed the Analytical R&D Laboratories at Teva Pharmaceuticals and the analytical QC Laboratory at Pharmos. He served in the Scientific Advisory Board of global PDA (USA) and is presently a board member of Israel PDA Chapter as well as a member of the organizing committee of the Israel Society for Analytical Chemistry.



Dr. Markus Obkircher is Director R&D heading Merck's Reference Materials and Proficiency Testing division with teams in the US and Switzerland. He is responsible for the in-house development of new analytical standards and certified reference materials under ISO/IEC 17025 and ISO 17034 double accreditation. Prior to this position he was R&D Manager in Buchs, Switzerland, with a strong focus on synthesis, characterization and certification of reference materials. He joined Merck/Sigma-Aldrich eight years ago after heading the development unit for a custom API manufacturer. He completed his post-doctoral studies at Harvard in Boston and his PhD thesis in Basel, and further holds an executive MBA degree from the University of Zurich.



Prof. Hongmei Li is a committee member of CIPM/CCQM, member of ISO reference material committee, Chairperson of APMP Food Safety Focus Group (FSFG), etc. She also serves as an editor in Chief of Accreditation and Quality Assurance. Her team has made breakthrough in: 1) the key technologies for separation and detection of pesticides, veterinary drugs and illicit drugs, supporting mutual recognition on Calibration and Measurement Capabilities (CMCs) for pure substances from China; 2) the measurement standards for biomarkers of major diseases including cardiovascular, cerebrovascular diseases, tumors etc., and for drugs of monoclonal antibodies and heparin in China. She has won 2 second prize of National Prize for Progress in Science and Technology. She took part in the development of more than 300 national certified reference materials and issued 210 papers and 4 monographs.