

Speaker Bios

Sally Bruce

Ms. Sally Bruce is currently the Quality Manager for NIST Measurement Services: Calibrations and Standard Reference Materials. She previously served as the Chief of the National Voluntary Laboratory Accreditation Program (NVLAP) from 2006-2011. Her career at NIST, formerly NBS, has spanned 30 years and her responsibilities and experience is vast and includes generic technical and more specific engineering in the fields of electrical and mechanical, electromagnetics, vacuum technology, particle physics, thermodynamics and heats of combustion, and calibrations in the discipline of optical radiation both sources and detectors,

Ms. Bruce is the official NIST representative to the System Interamericana de Metrologia (SIM-Spanish for Inter-American Metrology System) Quality System Task Force (QSTF). SIM is the regional metrology organization for the Americas. The SIM QS TF is composed of representatives from the SIM countries that are signatories to the International Committee on Weights and Measures (Comité International des Poids et Mesures, or CIPM) Mutual Recognition Arrangement (MRA). The SIM QSTF reviews and determines the acceptance of each National Metrology Institute's (NMI) Quality System, a necessary step for final approval of NMI capabilities in the measurement areas under the CIPM MRA.

Her formal education began with an Associate in Arts Degree in Electromechanical Technology from Montgomery College in Maryland. She has since earned both Bachelor of Science and Master of Science degrees in Technology Management from the University of Maryland University College. She is also a certified professional in IT Management and Project Management. Ms. Bruce has also completed Leadership training at NIST.

David L. Duewer

David L. Duewer specializes in measurement quality assurance, multi-center studies, graphical communications, exploratory data analysis, and scheming up work for others to do. He is an advocate for research and development at the interfaces of chemistry, biology, measurement science, and statistics. He assisted Svante Wold and Bruce Kowalski at the birth of the Chemometrics Society in 1974. He conned the University of Washington into granting him a PhD in analytical chemistry in 1976. After proving to himself during a few PostDoc years that hands-on chemistry just wasn't his thing, he spent 11 years with Monsanto Agricultural Products – moving from process analytical through computer-assisted herbicide design to quantitative bioassay assessment. He established (with the enthusiastic help of others and the unwitting financial support of Monsanto) the North American Chapter of the International Chemometrics Society, NAMICS, in 1991. He soon thereafter joined the Chemical Science and Technology Laboratory at the National Institute of Standards and Technology. He currently is a

consulting data analyst in the Chemical Sciences Division. His responsibilities include supporting quality assurance programs for clinical and nutritional measurands, DNA technologies for forensic human identity, and the analysis of results from key comparisons and other studies sponsored by the Consultative Committee for the Amount of Substance: Metrology in Chemistry (and Biology).

Lisa R. Karam

Lisa R. Karam has been a research chemist at NBS/NIST since 1983 where her work has focused on the interaction of ionizing radiation in biological systems (primarily, proteins and DNA) and the application of radiation and radioactivity in industry and medicine (including radioendofullerenes and radiopharmaceuticals).

As leader of the Radioactivity Group at NIST from early 1998, Dr. Karam managed the development of standard radioactive sources and played a leading role in the Group's international interactions in radionuclide metrology. She has also had extensive interactions with leaders in the radiopharmaceutical, radiological and clinical industries, and other users of radioactive sources; she served for 18 months as Senior Technical Advisor for the Health Care Industry to the NIST Director during which she implemented high-level relationships between NIST and leaders in the industry. Chief of the Radiation Physics (formerly, Ionizing Radiation) Division at NIST since 2003, she is the primary liaison for the Division with the Department of Homeland Security on issues concerning radiation use and detection, radioactive calibration sources, and protocols and standards for radiation measurements [and has been the co-chair of White House's Office of Science and Technology Policy's (OSTP's) National Science and Technology Council (NSTC) Committee on Homeland and National Security Subcommittee on Standards (SoS) for CBRNE since 2008].

Dr. Karam is also the NIST representative to the Council on Ionizing Radiation Measurements and Standards (CIRMS), a not-for-profit organization of individuals, organizations and corporations from national and international government, academic and private industry sectors who identify strategic needs and directions for ionizing radiation measurements and standards. She is Chairman of the International Committee on Weights and Measures' (CIPM's) Consultative Committee on Ionizing Radiation (CCRI) Section II (measurement of radionuclides) and Chairman of the InterAmerican System of Metrology's (SIM's) Metrology Working Group on Ionizing Radiation Measurements.

Dr. Karam received her B.Sci. degree in Biology and Chemistry from Berry College (Georgia) in 1982, and her M.Sci. (1983) and Ph.D. (1985) degrees in Chemistry from The American University in Washington, DC. Her research interests are radioactivity and dosimetry measurements (particularly in nuclear medicine and radiation therapy), standards for medical imaging, and radiation/nuclear detection for security, environmental stewardship, and safety.

Antonio Possolo

Dr. Antonio Possolo is Chief of the Statistical Engineering Division, Information Technology Laboratory (ITL) at NIST.

Besides his current role in government, he has sixteen years of previous experience in industry (General Electric, Boeing), and nine years of academic experience (Princeton University, University of Washington in Seattle, University of Lisboa).

Dr. Possolo is committed to the development and application of probabilistic and statistical methods that contribute to advances in science and technology. His engagement in measurement science includes being a member of Working Group 1 of the Joint Committee for Guides in Metrology, and chair of the Technical Working Group on "Statistics and Uncertainty" of the "Sistema Interamericano de Metrologia" (SIM).

Antonio holds a Ph.D. in Statistics from Yale University.

Gregory F. Strouse

Mr. Strouse is the Group Leader of Thermodynamic Metrology, Sensor Science Division, Physical Measurement Laboratory (PML) at NIST. His areas of responsibility include the metrology areas of Temperature, Pressure, Vacuum and Humidity. Additionally, he is responsible for the administrative aspects of NIST calibration services.

He is the NIST delegate for the Consultative Committee for Thermometry (CCT), chair of CCT WG8 (responsible for approving Temperature and Humidity CMCs), a member of CCT WG7 (responsible for approving Key and Supplemental Comparisons) and the chair of CCT WGS (responsible for setting strategy for the CCT).

A world-class expert in contact thermometry, Mr. Strouse has led the activities of the NIST Platinum Resistance Thermometer Laboratory since 1989. Using these facilities, he extensively investigated and improved the performance of platinum resistance thermometers and the fixed-points used to calibrate them. Mr. Strouse has led the automation and refurbishment of the NIST Platinum Resistance Thermometer Laboratory, the Thermocouple Calibration Laboratory, and the Industrial Thermometer Calibration Laboratory. In other research, he improved the thermodynamic basis of the temperature scale through acoustic thermometry, developed new thermometer types based on sapphire dielectric resonators, and is working on nanoscale sensors (temperature, pressure and pressure).

Mr. Strouse is both a NVLAP lead and technical assessor as well as a technical resource. He also provides training in the realization, maintenance and dissemination of the International Temperature Scale of 1990 (ITS-90). He has been performing NVLAP assessments of laboratories since 2003. He is the

author of more than 70 papers on thermometry, 1 co-patent on dielectric thermometers, and 1 co-patent pending on nanoscale thermometers.