

In cooperation with



The 4th International Conference on Metrology

Measurement and
Testing in the
Service of Society



The Israeli Metrological Society (IMS)

May 23-24, 2011
Jerusalem, Israel

First Announcement
and Call for Papers



www.isas.co.il/metrology2011

Dear Colleagues,

The 4th International Conference on Metrology, organized by the Israeli Metrological Society (IMS) in collaboration with NCSL International, CITAC and the Israel Analytical Chemistry Society, will take place in Jerusalem on May 23-24, 2011.

The goal of this international conference is to enable participants to share their experience and expertise in calibration, measurement and testing, develop fresh insights and meet colleagues from other countries. The conference is therefore being designed to facilitate fruitful interactions between laboratory managers, scientists who carry out calibrations and/or measurements, quality managers from industry including medical systems, policy makers and academicians. We are sure that such interaction will increase understanding between metrologists and their customers.

The conference theme is: "Measurement and Testing in the Service of Society." We will concentrate on the impact of measurements, calibrations and testing on all aspects of daily life, thus ensuring that the conference will have a strong practical focus.

It is my pleasure and privilege to invite you to take part in this 4th International Conference by submitting abstracts dealing with any area of metrology, to be an active partner in a challenging endeavor and to contribute to its success.

The conference will be held in Jerusalem, Israel's capital and heart of the world, the city that enchants and fascinates people of all religions and nationalities. Israel's unique atmosphere of a modern vibrant society living alongside the architecture, museums and sites of 3000 years of history since the time of King David is guaranteed to provide you with an unforgettable experience.

I look forward to welcoming you and your colleagues in Jerusalem in May.

Dr. Orna Dreazen

Chair, IMS and Conference

› Organizing Committee

Orna Dreazen, Nextar, Chair

Gila Elkobi, Isotop

Etty Feller, Sol-Gel Technologies

Berta Iosefzon, Teva

Boris Katz, Israel Electric

Ilya Kuselman, The National Physical

Laboratory of Israel (INPL)

Ilan Landesman, ISRAC - Israel

Laboratory Accreditation Authority

Alex Lepek, Newton Metrology

Sigalit Mudahy, Hadassah - Hebrew

University Medical Center

› **Topics**

- Trends in metrology
- Measurement methods and their validation
- Measurement and test (analytical) method transfer
- Use of measurement uncertainty by industry
- Uncertainty in electric measurements and testing
- Uncertainty arising from sampling - how to estimate
- Measurement uncertainty - discussing with the customer
- Metrological traceability
- Traceability of medical laboratories' results
- Issues raised between measuring and calibration laboratories
- Effect of quality results on the decision making process
- Conformity assessment
- Interlaboratory comparisons - what can be learned?
- Legal metrology
- Software for metrology
- Ethical problems in metrology
- Accreditation of measurement and calibration laboratories

› **Who Should Participate?**

- Laboratory managers and personnel • Quality managers from industry and laboratories
- Electrical engineers and electrical test engineers • Medical laboratory specialists
- Regulators • Researchers

› **Fields**

- Medical • Food • Calibration • Environmental quality • Anti-doping • Physics
- Agriculture • Chemistry • Microbiology • Energetics, Electricity, Power Electronics

Abstracts of 200-400 words are welcomed for oral and poster presentations. They should be submitted in WORD format to the secretariat before January 31, 2011

by email to: congress@isas.co.il

and by fax to: +972-2-6520558

Presenters will be notified of acceptance of their abstract by February 28, 2011.

› Plenum Lectures

Proposed Changes to the International System of Units (SI): Motivations and Consequences

Richard Davis, International Bureau of Weights and Measures (BIPM), France



Richard Davis was educated in the United States, receiving his Bachelor's degree in Physics from Brown University in 1967 and his Ph.D. in Solid State Physics from the University of Maryland in 1972. He went to the National Institute of Standards and Technology (NIST) as an NRC post-doc, where he joined a team that produced what remains the most accurate direct determination of the Faraday constant, the fundamental constant of electrochemistry. In due course he joined the mass group at NIST. He was NIST delegate to the Consultative Committee for Mass and Related Quantities (CCM). Before leaving NIST in 1990 to take a post at the International Bureau of Weights and Measures (BIPM), he worked with Mike Moldover's team in a measurement of Boltzmann's constant to unprecedented accuracy.

At the BIPM, he eventually became Director of the Mass Department and Executive Secretary of the CCM. He retired in 2010 but maintains close ties to the BIPM as a consultant. He has authored or co-authored many articles on various aspects of mass metrology and fundamental constants. He was elected a Fellow of the American Physical Society in 1992.

Legal Metrology

Alan Johnston, President, International Committee of Legal Metrology, Canada



Mr. Alan Johnston has over 35 years of Canadian federal government experience where he has held various and increasing senior managerial positions in areas as diverse as Statistics Canada and Consumer and Corporate Affairs Canada.

In April 1994, Mr. Johnston was appointed President of Measurement Canada, the federal agency responsible for the accuracy of trade measurement in Canada.

Measurement Canada administers both the *Weights and Measures Act* and the *Electricity and Gas Inspection Act*.

Mr. Johnston has represented Canada on the Comité Internationale de Métrologie Légale (CIML) since 1994 and has been a member of the Organisation Internationale de Métrologie Légale (OIML) Presidential Council since 2001. In 2005, Mr. Johnston began his six year term as President of the CIML. He is the first non-European to hold this position since its inception over fifty years ago.

Food Safety and Metrology

Prof. Franz Ulberth, Institute for Reference Materials and Measurements of the European Commission Joint Research Centre, Belgium



Franz Ulberth received his Ph.D. in Food Science and Biotechnology from the University of Applied Life Sciences in Vienna, Austria. In 1994 he was appointed professor in Food Chemistry at the same university. He has more than twenty years' experience in food safety related research and the application of metrological principles in chemistry. He joined the European Commission in 2002 to take up responsibility for the development of food and environmental reference materials at the JRC

Institute for Reference Materials and Measurements (IRMM) in Geel, Belgium. In 2007 he was appointed Head of the Food Safety and Quality Unit at the IRMM. He serves as a member of the TC 275 (Food Analysis) of CEN, the Organic Analysis Working Group of the CIPM Consultative Committee for Amount of Substance - Metrology in Chemistry and convenor of the Organic Analysis Sub-Committee of EURAMET-METCHEM. Prof. Ulberth has authored more than 100 technical and review articles published in international journals as well as several contributions to books. He is editor of the international journals *European Journal of Lipid Science* and *Technology and Food Chemistry*.

➤ **Pre Conference Workshop** May 22, 2011

Presented by: Daniel William Tholen

Interpreting PT Results

Goal: provide laboratories with tools to help them use PT for self assessment and improvement.

Topics

- Using our lab's results
- Using information contained in PT reports
- Cautions about interpretations:
 - Traceability of assigned values
 - Matrix
 - Performance specifications - fitness for what purpose
- What PT cannot do:
 - Basis of uncertainty estimates
 - Assure ongoing quality

Workshop structure

Brief presentation based on actual PT studies with group discussions on basic topics:

Assigned values: reference or consensus?

Performance criteria: fit-for-purpose or consensus?

Statistical methods (fundamental - individual, robust, outliers)

We will use examples from current PT, APLAC, IRMM studies

Participants will be invited to present studies they have been in, or to review how their laboratories use PT data.

Schedule

Session I

Introduction

Lecture on data analysis fundamentals:

Determining assigned value

Performance statistics

Performance evaluation

Basic tools

I. Use your lab's PT results to:

Assess bias

Assess performance of my measurement procedure

Assess performance of my measurement method

Verify uncertainty estimates

Track my performance, and assure acceptable performance in future PT

II. Use information in PT reports to:

Compare methods,

Verify performance claims for methods (reproducibility, repeatability, trueness)

Establish or investigate metrological traceability

Examples from current studies

Discussion

Session II

4 sample reports distributed to participants (different fields of measurement), to practice the basic tools;

Group discussion and presentation

Session III

Choosing an appropriate PT scheme

Creating a PT plan

Comments and discussion

Daniel William Tholen

Consultant and owner, Dan Tholen Statistical Consulting, USA



Daniel Tholen has had 30 years experience as a biostatistician, working for the US Centers for Disease Control and Prevention, the College of American Pathologists and the National Institute for Burn Medicine, now for his own company.

He is also a Technical Consultant, Lead Assessor, and Trainer, for the American Association for Laboratory Accreditation (A2LA) regarding Proficiency Testing Providers (ISO/IEC 17043) and for Reference Material Producers (ISO Guide 34), and statistical methods; a consultant for various governmental and private organizations involved with proficiency testing, reference material production, development of measurement methods, and laboratory accreditation; and a trainer in technical standards for PT, RM: statistical techniques, and measurement uncertainty.

Mr. Tholen also holds appointments as a Liaison from the International Laboratory Accreditation Cooperation (ILAC) to ISO Technical Committee 69 (Application of Statistical Methods) and a convener, ISO TC69/SC6/WG9 on the revision of ISO 13528: Statistical methods for Proficiency testing by inter laboratory comparison.

His standards development activity includes work for the:

- Asia Pacific Laboratory Accreditation Cooperation (APLAC) - Chairman, Proficiency Testing Committee, 2009-2010.
- ISO - Convener, CASCO Working Group 28 on Proficiency Testing for the revision of ISO/IEC Guide 43-1 and 43-2 as ISO/IEC 17043 Conformity assessment – general requirements for proficiency testing, completed 2010.
- Clinical and Laboratory Standards Institute (CLSI, formerly NCCLS) Member, Advisor, Chairman of various committees for development of consensus standards for medical laboratories, in the areas of method evaluation protocols and quality management systems.
- American Society for Testing and materials (ASTM) – standards for statistical techniques and method evaluation and conformity assessment
- CITAC – Member, admitted 2010.

› **General Information**

Venue: The conference will take place at the Ramada Hotel in Jerusalem.

Date: May 23-24, 2011

Language: The conference will be conducted in English.

Welcoming Reception: A welcoming reception will be held on Sunday evening, May 22 at 19:00.

Night Tour: On Monday, May 23 there will be a night tour of Jerusalem.

Exhibition: A commercial exhibition will take place within the framework of the conference. For further information please contact the Secretariat at meetings@isas.co.il

Advertising and Sponsorship: Please contact the Secretariat for space in the conference program and/or sponsorship of speakers, sessions and events.

Letters of Invitation: Upon request, the Secretariat will send a personal invitation to participate in the conference. It should be understood that such an invitation is only meant to help visitors raise funds or obtain a visa and does not represent commitment on the part of the organizers to provide financial support.

Certificate of Participation: Will be supplied to participants upon request.

Registration Fee: The registration fee of \$500 includes participation in sessions, conference kit, program, proceedings, lunches and coffee breaks, welcoming reception and night tour of Jerusalem. There is a reduced fee of \$400 for presenters (only one presenter per paper). Fees are valid until April 15, 2011, after which there will be a surcharge of \$50.

Pre Conference Workshop: \$150

Note: Special discount fees for groups can be arranged. Please contact congress@isas.co.il

Accompanying Persons' Fee of \$250 includes the welcoming reception, opening ceremony, night tour of Jerusalem and a daylong tour of Tel Aviv. Fee does not include attendance in program sessions.

Accommodations: Rooms are available at the Ramada Hotel for \$160 per night for a single room and \$190 for a double room. Price includes a full Israeli breakfast and 15% service charge. Official check-in time for hotels is 14:00 and check-out is 10:30. (Saturday check-in is approximately 22:00).

A deposit of one night charge must accompany all requests for accommodation. Full payment for hotel must be completed prior to your arrival. Therefore, 10 days before the conference your credit card will be automatically charged for any unpaid balance of your hotel accommodation. Participants who paid their deposit with a bank transfer or check are required to send the balance of outstanding accommodation charges to ISAS 10 days prior to arrival.

Cancellation Policy: Registration cancellations received before April 20, 2011 will be fully refunded less a \$60 processing charge. There will be a 50% refund for cancellations received between April 21 and May 15, 2011. No refund for cancellations received after May 15, 2011. Hotel cancellations received after May 15, 2011 may be charged one night's accommodation fee. Refunds will be processed one month after the conference.

Visas: All visitors to Israel are required to have a valid passport, and for some countries, a visa is required. For more information please contact your nearest embassy, consulate or local travel agency well in advance. It is the responsibility of the participant to obtain a visa if required.

Important Notes: ISAS International Seminars, and their agents, shall not be responsible for and shall be exempt from all liability in respect of any loss, damage, injury, accident, delay or inconvenience to any person, or his/her luggage or any other property for any reason whatsoever, for any tourist services provided. Personal travel and health insurance is recommended.

Conference Secretariat:

ISAS International Seminars

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Tel: +972-2-6520574, Fax: +972-2-6520558

Email: congress@isas.co.il

Website: www.isas.co.il/metrology2011

> **Tours**

Exclusively for conference participants and accompanying persons

Tour #1: The North – Caesarea, Haifa & Acre May 22

Depart Jerusalem north to King Herod's ancient United Nations World Heritage Roman port city of Caesarea. Tour the ancient port, Hippodrome and Crusader buildings and experience the museum and film that take you back 2000 years. Pass Zichron Yaakov and hear about the vineyards and city that Baron Rothschild built nearly 100 years ago. Tour Haifa, pass the Carmel Mountains, Stella Maris and Bahai Gardens and exit Haifa north towards Acre. Break for lunch. Visit Crusader sites and UNESCO World Heritage site of the underground city. Tour ancient port city and marketplace.

Price \$150



Tour #2: Jerusalem Wednesday, May 25

Depart hotel to the Old City of Jerusalem and tour by foot Mt. Zion, King David's Tomb, the Room of the Last-Supper, Dormition Church, Zion Gate, and three Old City Quarters - Armenian, Jewish and Christian. Visit the Cardo (reconstructed main street of Byzantine Jerusalem from the 6th century), the Western Wall, Via Dolorosa, Church of the Tomb, and exit the Old City via Jaffa Gate to the bus.

Price \$120





Tour #3: Nazareth, Tiberias & Capernaum Thursday, May 26

Depart Jerusalem. Highlights: Nazareth (Church of the Annunciation and the Church of Saint Joseph), the ruins at Capernaum, Tabgha and the Church of the Multiplication of the Loaves and the Fishes, Tiberias and the Sea of Galilee.
Price \$160



Tour #4: Masada, Qumran, Dead Sea Friday, May 27

Depart Jerusalem and descend through the beautiful scenery of the Judean Desert to the lowest point on Earth - the Dead Sea. Drive along the sea, pass by Qumran where the Dead Sea Scrolls were found and continue to Masada (the ancient fortress built by Herod the Great in the 1st Century B.C.E.) which was the last Jewish stronghold during the revolt against the Romans. Ascend Masada by cable car, take in the magnificent views in all directions and tour the fascinating excavations. Bring water, hat, walking shoes, bathing suit & towel (there may be time for a dip in the Dead Sea).

Price \$130



Note:

- All tours depart conference venue hotel at 08:00
- All itineraries are subject to change and require a minimum of 15 participants per tour
- Lunch and entrance fees not included
- For additional tours and extensions, please contact the Secretariat.

› **Registration Form** Metrology 2011

To register on line: www.isas.co.il/metrology2011

Please type or print in block letters and return to:

ISAS International Seminars, POB 34001, Jerusalem 91340, Israel

Tel: +972-2-6520574, Fax: +972-2-6520558, email: register@isas.co.il

Surname: _____ First Name: _____

email: _____

Place of Work: _____

Mailing Address: Home Work _____

City: _____ Country: _____

Postal Code: _____ Tel: _____

No accommodation required

Please reserve a single room double room* at the Ramada Hotel

check in date _____ check out date _____ # of nights _____

I will share my room with * _____

* It is the sole responsibility of the participants to find a roommate.

In the absence of a roommate, single occupancy price will be charged.

Conference Registration \$ _____

Pre Conference Workshop \$ _____

Accompanying person (Name) _____ \$ _____

Hotel Accommodations \$ _____

Tour1: The North-Caesarea, Haifa, Acre _____ seat(s) \$ _____

Tour2: Jerusalem _____ seat(s) \$ _____

Tour3: Nazareth, Tiberias, Capernaum _____ seat(s) \$ _____

Tour4: Masada, Qumran, Dead Sea _____ seat(s) \$ _____

Total \$ _____

Payment must accompany registration form

Enclosed is a check payable to ISAS International Seminars.

Bank transfer to: ISAS International Seminars Ltd.

Bank Leumi, Branch #687, Account Number 9400/41

19 King David St., Jerusalem, Israel

Charge my credit card: VISA DINERS M/C AMEX

Card number: _____

Expiry Date: _____ Signature: _____

With your signature you authorize ISAS to charge your credit card for the balance of your account 10 days prior to your arrival for services ordered.