

Ramada Hotel, Jerusalem

www.isas.co.il/metrology2011

› **Pre Conference Workshop** May 22, 2011, 09:00-17:00
Interpreting Proficiency Testing Results

Daniel William Tholen

Price: 575 NIS.

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.