

MATHMET 2016 - International Workshop
Berlin, 07 – 09 November 2016

Program

Monday, 07/11/2016

PTB, Berlin, HvH-Building, Lecture Hall	PTB, Berlin, Siemens Building, Room 310
<p>08:30 Registration 09:15 – 09:30 OPENING Plenary Talks 09:30 <u>B Toman</u>, M Nelson, K Lippa, M Bedner (NIST, USA) <i>Quantifying uncertainty of chemical measurements via Observation Equations</i> 10:10 <u>S Heidenreich</u>, H Gross, M Bär (PTB, Germany) <i>Uncertainty quantification for optical metrology</i></p>	
Coffee 10:50 – 11:20	
<p>Session: Compositional Data Analysis 11:20 A M H van der Veen (VSL, The Netherlands), P Stutzman (NIST, USA), E T Zalewska (VSL, The Netherlands), <u>A Possolo</u> (NIST, USA) <i>Chemical and mineralogical compositions - Data analysis and uncertainty evaluation</i> 11:50 <u>J Meija</u>, B Methven, R E Sturgeon (NRC, Canada) <i>Evaluating the uncertainty of calibration models in glow discharge mass spectrometry for metal purity determinations</i> 12:20 K G van den Boogaart (TU Bergakademie Freiberg, Germany), <u>R Tolosana Delgado</u>, A D Renno (Helmholtz-Zentrum Dresden, Germany) <i>Compositional calibration</i></p>	<p>Session: Uncertainty Quantification 11:20 <u>A Dienstfrey</u>, P Patrone (NIST, USA) <i>Uncertainty quantification, molecular dynamics, and the glass-transition temperature of aerospace polymers</i> 11:50 <u>A Weissenbrunner</u>, A Fiebach (PTB, Berlin) <i>Prediction of systematic errors of flow meters behind elbows</i> 12:20 <u>E Ametova</u> (Katholieke Universiteit Leuven, Belgium), M Ferrucci (Katholieke Universiteit Leuven, Belgium and NPL, UK), S Chilingaryan (Karlsruhe Institute of Technology, Germany), W Dewulf (Katholieke Universiteit Leuven, Belgium) <i>Quantification of the uncertainty due to the geometrical influence factors for dimensional measurements using computed tomography</i></p>
Lunch 12:50 – 14:00	
<p>Plenary Talks 14:00 <u>A Forbes</u>, K Jagan (NPL, UK) <i>Uncertainty analysis associated with repeatability and reproducibility studies</i> 14:40 <u>A van der Veen</u> (VSL, The Netherlands) <i>Evaluation of measurement uncertainty in fluid phase equilibrium calculations</i></p>	
Coffee 15:20 – 15:40	

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Session: Bayesian Data Analysis 15:40 <u>I Lira</u> (Pontificia Universidad Católica de Chile, Chile), D Grientschnig (Metrolytik, Austria) <i>Error-in-variables models in calibration</i> 16:10 <u>S L R Ellison</u> (LGC Limited, UK) <i>Study design and regression models for reference material commutability assessment</i> 16:40 <u>M Dierl</u> (PTB, Germany), T Eckhard, B Frei, M Klammer (Chromasens GmbH, Germany), S Eichstädt, C Elster (PTB, Germany) <i>Bayesian approach for improved estimation of reflectance spectra</i> 17:10 <u>N Giaquinto</u> , G M D'Aucelli (Politecnico di Bari, Italy) <i>Type A uncertainty evaluation and propagation in a Bayesian framework</i>	Session: Regression and Optimization 15:40 <u>M Cox</u> , A Dilo, P Harris (NPL, UK) <i>The solution of large structured non-linear least squares problems with an application to earth observation</i> 16:10 <u>D Hutzschenreuter</u> (PTB, Germany) <i>A customized SQP method for multiple-geometrical element fitting with large data sets from optical and CT measurements</i> 16:40 <u>K Jagan</u> , P Harris, A Forbes, M Cox (NPL, UK) <i>Adjustment procedures that minimise relative entropy</i> 17:10 J Gienger, S Heidenreich, J Neukammer (PTB, Germany) <i>Refractive index determination from spectral extinction cross sections of ensembles of spheres</i>
17:40 <u>M Bär</u> (MATHMET) <i>MATHMET: The European Centre for Mathematics and Statistics in Metrology</i>	
Closing day 1: 18:00	

Tuesday, 08/11/2016

PTB, Berlin, HvH-Building, Lecture Hall	PTB, Berlin, Siemens Building, Room 310
Plenary Talks 09:00 <u>L R Pendrill</u> (SP, Sweden) <i>The metrology of decision risks and qualitative measurements</i> 09:40 <u>O Bodnar</u> , R Behrens, C Elster (PTB, Germany) <i>Bayesian inference for measurements of ionizing radiation under partial information</i>	
Coffee & Poster Session 10:20 – 11:20	
Session: Measurement Uncertainty and Interlaboratory Comparisons 11:20 <u>S Sidney</u> (National Laboratory Association, South Africa) <i>The challenge of implementing the GUM and its supplements</i> <i>The view from inside an industrial laboratory</i> 11:50 <u>A Chunovkina</u> , A Stepanov (VNIIM, Russia) <i>Influence of an outlier on confirmation of uncertainties declared by KC participants</i> 12:20 A Koepke, T Lafarge, B Toman, <u>A Possolo</u> (NIST, USA) <i>The NIST Consensus Builder</i>	Session: Mathematical Modeling I 11:20 <u>K G van den Boogaart</u> (TU Bergakademie Freiberg, Germany), A D Renno; R Tolosana-Delgado (Helmholtz-Zentrum Dresden, Germany) <i>Filtering lack of microhomogeneity in reference materials for microanalytical methods</i> 11:50 <u>A Fiebach</u> , E Schmeyer, S Schmelter (PTB, Germany) <i>Multiphase flow simulations in large pipes</i> 12:20 <u>M Fliess</u> (Ecole polytechnique, France), C Join (Université de Lorraine, France) <i>Metrology for time-varying quantities: A first look at some basic issues via time series</i>
Lunch 12:50 – 14:00	

Tuesday, 08/11/2016

PTB, Berlin, HvH-Building, Lecture Hall	PTB, Berlin, Siemens Building, Room 310
Plenary Talks	
14:00 <u>A Sandu</u> (Virginia Tech / NIST, USA) <i>Robust inference with nonlinear dynamical models using L1 and Huber norms</i> 14:40 <u>N Fischer</u> , C Yardin, L Leblond, B Savanier, M Sancandi, M Keller (LNE, France) <i>Bayesian approach to evaluate and use measurement devices' calibration function</i>	
Coffee 15:20 – 15:40	
Session: Data Analysis for Imaging 15:40 <u>A Arduino</u> (Politecnico di Torino, INRIM, Italy), O Bottauscio (INRIM, Italy), M Chiampi (Politecnico di Torino, Italy), F Pennechi, L Zilberti (INRIM, Italy) <i>Magnetic resonance-based EPT: Noise propagation in an ill-posed problem</i> 16:10 M Anton, <u>M Reginatto</u> , C Elster (PTB, Germany) <i>Assessment of CT image quality using Bayesian classification</i> 16:40 <u>G Wübbeler</u> , S Metzner, C Elster (PTB, Germany) <i>Quantitative magnetic resonance imaging: a regression approach</i> 17:10 <u>S Lou</u> , X Jiang, W Zeng, H Abdul-Rahman, P J Scott (University of Huddersfield, UK) <i>The use of morphological methods for the extraction of topographical features from complex additive manufactured surfaces</i>	Session: Statistical Modeling 15:40 <u>V Witkovský</u> (Slovak Academy of Sciences, Slovakia) <i>Methods and algorithms for computing the state-of-knowledge PDF and intervals by numerical inversion of the characteristic function</i> 16:10 <u>N Petersson</u> (SP, Sweden) <i>Invariant maximum likelihood difference scaling</i> 16:40 <u>B De Boeck</u> , N Sebaihi, M Coenegrachts, M Dobre, J Pétry (SMD, FPS Economy, Belgium) <i>Uncertainty evaluation of nanoparticle diameter measurements with AFM by modeling experimental data</i> 17:10 <u>G A Kyriazis</u> (INMETRO, Brazil) <i>Bayesian and least-squares approaches for estimating parameters of decay processes</i>
Dinner 18:00, HvH-Building	

Wednesday, 09/11/2016

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Session: Statistical Modeling II	
09:00 <u>P Harris</u> (NPL, UK), R Philip, J Tanner, A Thompson (University of Oxford, UK), S Robinson, L Wang (NPL, UK) <i>A compressive sensing approach to estimating ocean sound from shipping measured using an acoustic sensor network</i> 09:30 <u>P Wilson</u> (LGC, UK) <i>Modelling uncertainty in digital PCR measurement</i> 10:00 <u>K Klauenberg</u> , C Elster (PTB, Germany) <i>Sampling to assure future reliability</i>	Session: Mathematical Modeling II 09:00 <u>M Cundeva-Blajer</u> (University in Skopje, R. Macedonia) <i>3D finite element modelling for transient behaviour study in electrical energy metrology</i> 09:30 <u>W Zeng</u> , X Jiang, S Lou, H Abdul-Rahman, P Scott (University of Huddersfield, UK) <i>Complex structured surface characterisation by using PDE based adaptive nonlinear diffusion filter</i>
Coffee 10:30 – 11:00	
Plenary Talk	
11:00 <u>A O'Hagan</u> , (University of Sheffield, UK) <i>Frequentist behaviour of Bayesian inferences, and vice versa</i>	
Closing Workshop 11:40	