

## MATHMET 2014 - International Workshop

## Program

Monday, 24/03/2014

PTB, Berlin, HvH-Building, Lecture Hall	PTB, Berlin, Siemens Building, Room 310
<b>Coffee 11:10 – 11:40</b>	
<p><b>09:00 – 09:10 OPENING</b> <b>Plenary Talks</b></p> <p>09:10 <u>A O'Hagan</u> (University of Sheffield, UK) <i>How to be uncertain (and how to be less uncertain)</i></p> <p>09:50 <u>N Fischer</u>, S Demeyer (LNE, France) <i>Kriging, a statistical tool to model spatial and temporal measurements and their associated uncertainties</i></p> <p>10:30 <u>S L R Ellison</u>, S Cowen, P Wilson (LGC Ltd., UK) <i>Modelling and measurement uncertainty for highly replicated biological measurements</i></p>	
<p><b>Session: Statistical Modeling I</b></p> <p>11:40 <u>G Wübbeler</u>, B Mickan, C Elster (PTB, Germany) <i>Bayesian inference of a linear mixed model for sonic nozzle calibration</i></p> <p>12:10 <u>V Witkovský</u> (Slovak Academy of Sciences, Slovakia), B Arendacká (PTB, Germany) <i>Henderson's iterative REML estimation under heteroscedasticity</i></p> <p>12:40 <u>M Reginatto</u>, B Wiegel, A Zimbal (PTB, Germany) <i>Analysis of low-level neutron measurements with <sup>3</sup>He spherical proportional counters</i></p>	<p><b>Session: Mathematical Modeling and Inverse Problems I</b></p> <p>11:40 <u>A Allard</u>, N Fischer, G Ebrard (LNE, France), P Harris, L Wright, C Matthews (NPL, UK) <i>A Bayesian framework for the measurement of thermal diffusivity</i></p> <p>12:10 <u>G Vicario</u>, S Ruffa (Politecnico di Torino, Italy), G Pistone (Collegio Carlo Alberto, Moncalieri, Torino, Italy) <i>Form error estimation in the assessment of product geometry via kriging prediction</i></p> <p>12:40 <u>S Eichstädt</u>, F Schmähling, G Wübbeler, C Elster (PTB, Germany), U Krüger (TechnoTeam GmbH, Germany) <i>An iterative solution to an inverse problem in spectrometry</i></p>
<b>Lunch 13:10 – 14:10</b>	
<p><b>Plenary Talks</b></p> <p>14:10 <u>E Ullmann</u> (University of Bath, UK) <i>Computational tools for PDEs with random coefficients</i></p> <p>14:50 <u>F Nobile</u> (EPF Lausanne, Switzerland) <i>Sampling based polynomial chaos approaches for uncertainty propagation</i></p>	
<b>Coffee 15:30 – 16:00</b>	
<p><b>Session: Measurement Uncertainty I</b></p> <p>16:00 <u>P M Harris</u>, C E Matthews, M G Cox, A B Forbes (NPL, UK) <i>Use of quantile functions to summarise the output of a Monte Carlo method for measurement uncertainty evaluation</i></p> <p>16:30 <u>B Arendacká</u>, A Täubner, C Elster (PTB, Germany) <i>Bayesian analysis of a reproducibility experiment</i></p> <p>17:00 <u>A M H van der Veen</u> (VSL, the Netherlands), A Possolo (NIST, USA) <i>Comparing the methods of the GUM Supplement 2 to evaluate the uncertainty associated with mixture compositions</i></p>	<p><b>Session: Uncertainty Quantification for Computationally Expensive Models I</b></p> <p>16:00 <u>S Schmelter</u>, A Fiebach, S Heidenreich, R Model, M Bär (PTB, Germany) <i>Numerical prediction of pipe flows with uncertain inflow conditions</i></p> <p>16:30 <u>C E Mathews</u>, T Esward, D Veal (NPL, UK) <i>Uncertainty analysis for digital imaging systems: a photogrammetry case study</i></p>

Tuesday, 25/03/2014

PTB, Berlin, HvH-Building, Lecture Hall	PTB, Berlin, Siemens Building, Room 310
<b>Plenary Talks</b>	
09:00 <u>H Wagner</u> (Johannes Kepler University Linz, Austria) <i>Sparse Bayesian modeling with spike and slab priors</i>  09:40 <u>M G Cox</u> , P M Harris (NPL, UK) <i>Validating the applicability of the GUM</i>  10:20 <u>K Klauenberg</u> , M Walzel, C Elster (PTB, Germany) <i>Deriving informative prior distributions: Immunoassay analyses as an example</i>	
<b>Coffee 11:00 – 11:30</b>	
<b>Session: Interlaboratory Comparisons and Conformity Assessment I</b> 11:30 <u>A L Rukhin</u> (NIST, USA) <i>Estimating reference value and heterogeneity variance in meta-analysis</i>  12:00 <u>M Fischer</u> , M Petz, R Tutsch (TU Braunschweig, Germany) <i>Extreme value statistics in metrology – implications of using sample range in acceptance tests</i>  12:30 <u>O Bodnar</u> , A Link, C Elster (PTB, Germany) <i>Bayesian treatment of a random effects model for the analysis of key comparisons</i>	<b>Session: Mathematical Modeling and Inverse Problems II</b> 11:30 <u>A Barari</u> , S J Ahmadi (University of Ontario, Canada) <i>An approach to estimate the detailed deviation zone in coordinate metrology using harmonic functions properties</i>  12:00 <u>U Linkeová</u> (Czech Technical University Prague, Czech Republic), V Zelený (CMI, Czech Republic) <i>Decreasing measurement uncertainty of reference gauges</i>  12:30 <u>H Gross</u> , S Heidenreich, M Bär (PTB, Germany) <i>2D-Fourier transform of rough apertures to complement scatterometric modeling</i>
<b>Lunch 13:00 – 14:00</b>	
<b>Plenary Talks</b>	
14:00 <u>A Possolo</u> (NIST, USA), B Maher (University of Lancaster, UK) <i>Measuring palaeorainfall</i>  14:40 <u>I Lira</u> (Pontificia Universidad Católica de Chile, Chile), D Grientschnig (Boehler Edelstahl GmbH & Co KG, Austria) <i>Merging PDFs</i>	
<b>Coffee 15:20 – 15:50</b>	
<b>Session: Measurement Uncertainty II</b> 15:50 <u>L Pendrill</u> (SP, Sweden) <i>Measurement uncertainty expressed for discrete and ordinal scaling</i>  16:20 <u>A Barari</u> , F Kaji (University of Ontario, Canada) <i>Effect of stratified sampling strategy on uncertainty of coordinate metrology</i>  16:50 <u>R N Kacker</u> (NIST, USA) <i>Coverage probability in GUM, GUM-S1, VIM, and statistical inference</i>	<b>Session: Interlaboratory Comparisons and Conformity Assessment II</b> 15:50 <u>J A Dagata</u> , N Farkas, P Kavuri, A E Vladár, R N Kacker, W F Guthrie (NIST, USA), K Takahata, K Takahashi, K Ehara (NMIJ, Japan) <i>Metrological compatibility of nanoparticle size analysis</i>  16:20 <u>H D Minh</u> , I M Smith, P M Harris, A B Forbes (NPL, UK) <i>Generating numerical artefacts for validating coordinate metrology software</i>  16:50 <u>S Demeyer</u> , N Fischer (LNE, France) <i>Bayesian framework for proficiency tests using auxiliary information on laboratories</i>
<b>Dinner 18:00, HvH-Building</b>	

Wednesday, 26/03/2014

PTB, Berlin, HvH-Building, Lecture Hall	PTB, Berlin, Siemens Building, Room 310
<b>Plenary Talks</b>	
09:00 <u>F Pennecchi</u> , W Bich (INRIM, Italy) <i>Likelihood and posterior probability mass function for countings</i>  09:40 <u>J Meija</u> (NRC, Canada) <i>Recent developments in calibration approaches in chemistry</i>	
<b>Coffee 10:20 – 10:50</b>	
<b>Session: Statistical Modeling II</b> 10:50 <u>G Kok</u> , A M H van der Veen (VSL, the Netherlands), P M Harris, I M Smith (NPL, UK) <i>Bayesian analysis of a flow meter calibration problem</i>  11:20 <u>A Chunovkina</u> , N Burmistrova (VNIIM, Russia) <i>Bayesian estimation of measurement trueness and measurement precision</i>  11:50 <u>A Link</u> , O Bodnar, C Elster (PTB, Germany) <i>Comparison of a random effects model and a Birge ratio method for the adjustment of inconsistent data</i>	<b>Session: Uncertainty Quantification for Computationally Expensive Models II</b> 10:50 <u>L Wright</u> , E Barton (NPL, UK), A Allard, S Demeyer (LNE, France) <i>Uncertainty evaluation for measurement of thermophysical properties of layered materials</i>  11:20 <u>S Heidenreich</u> , H Gross, M-A Henn, C Elster, M Bär (PTB, Germany) <i>Stochastic collocation approach to the inverse problem in scatterometry</i>  11:50 <u>B Komander</u> , D Lorenz, M Fischer, M Petz, R Tutsch (TU Braunschweig, Germany) <i>Data fusion of surface normals and point coordinates for deflectometric measurements</i>
<b>Lunch 12:20 – 13:20</b>	
<b>Plenary Talks</b>	
13:20 <u>M Lopez</u> (CENAM, Mexico) <i>Time scales algorithms and clock prediction</i>  14:00 <u>M Rösslein</u> (EMPA, Switzerland), J T Elliott, M Salit, B Toman (NIST, USA) <i>The ultimate goal – achieving comparability in a nano-cytotoxicity assay measurements</i>	
<b>Closing Workshop 14:50</b>	