Metrology for long distance surveying

IPQ, Caparica | 9:00 | 21st November 2014

PROGRAMME

9:00 Reception
9:30 OPENING SESSION
  Jorge Marques dos Santos, President of IPQ
9:40 Introduction to EMRP JRP SIB60 “Metrology for long distance surveying”
  Florian Pollinger, PTB, Coordinator of JRP SIB60
9:55 SESSION I: Challenges of distance metrology in surveying
  Chairman: Wolfgang Niemeier, Technical University of Braunschweig
10:00 Geodetic and Alignment activities at CERN
  Dominique Missiaen, CERN
10:30 Measuring the earth surface deformation using SAR interferometry and GPS
  João Catalão Fernandes, FCUL
10:50 Short GNSS baseline with short-length session, what precision level can we expect?
  Nuno Lima, LNEC
11:10 BREAK AND POSTER SESSION
11:40 SESSION IIa: GNSS-based distance metrology – understanding uncertainty contributions
  Chairman: Sten Bergstrand, SP
11:45 Submillimetric GNSS distance determination: an account of the research at the Universitat Politècnica de València (UPV)
  Sergio Baselga, Luis García-Asenjo and Pascual Garrigues, Universitat Politècnica de València
12:05 Investigations on the influence of near-field effects and obstruction on the uncertainty of GNSS-based distance measurements
  Florian Zimmermann, University of Bonn
12:25 On the influence of the troposphere on GNSS-based distance metrology: modeling and experiments
  Steffen Schön, T. Krawinkel, T. Kersten, University of Hanover
12:45 LUNCH
13:45 SESSION IIb: GNSS-based distance metrology – towards standardized field characterisation
  Chairman: Florian Pollinger, PTB
13:50 Metrological Control of Global Navigation Satellite System (GNSS) Equipment
  Teresa F. Pareja, Miguel C. Cortés Calvo, Universidad Politècnica de Madrid
14:10 **A field test procedure to check GNSS antenna calibration parameters**  
Markku Poutanen, FGI

14:35 **SESSION III: Traceable electronic distance meters in air – towards novel standards for baseline calibration**  
*Chairman:* Jean-Pierre Wallerand, LNE-CNAM

14:55 **Electronic Distance Meter Technology inside Trimble’s Geospatial Instruments**  
*Christian Grässer,* Trimble

15:15 **Spectroscopic inline thermometry**  
*Tuomas Hieta,* MIKES

15:35 **A 1550 nm telemeter for outdoor application based on off-the-shelf components**  
*Joffray Guilory et al.,* LNE-CNAM

15:55 **A refractivity-compensated absolute distance interferometer as prospective novel primary standard for baseline calibrations**  
*Karl-Meiners-Hagen,* PTB

16:15 **BREAK AND POSTER SESSION**

16:45 **SESSION IV: Frequency-comb based distance metrology – fundamental technology for future application**  
*Chairman:* Florian Pollinger, PTB

16:50 **Heterodyne many-wavelength interferometry**  
*Jutta Mildner,* PTB

17:10 **Spectrally resolved frequency comb interferometry for long distance measurement**  
*Steven van den Berg,* VSL

17:30 **CLOSING SESSION**

**POSTER SESSION**

Common-clock experiments with GNSS-based distance meters  
*Julia Leute, Thomas Krawinkel, Andreas Bauchand Steffen Schön,* PTB, University of Hanover

Uncertainties of GNSS baselines related to ITRF  
*D. Tengen, C. Homann, W. Niemeier,* Technical University of Braunschweig

The INRIM experimental set-up to characterize the effect of the turbulence  
*M. Zucco, M. Astrua,* INRIM

A GPS–based local tie vector at the Onsala Space Observatory  
*Tong Ning, Rüdiger Haas, Gunnar Eigered,* Chalmers University of Technology

Elevation dependent deformation of the Onsala 20 m telescope  
*S. Bergstrand,* SP

High accuracy laser ranging and amplitude-to-phase coupling  
*Michel Lintz,* Observatoire de la Cote d’Azur