



1st Workshop

Metrology for long distance surveying

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

Biographical notes



www.ipq.pt

Metrology for long distance surveying

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OPENING SESSION

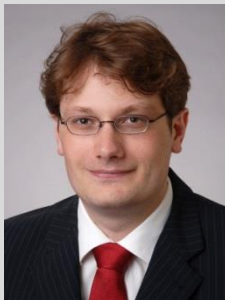


Jorge Marques dos Santos
President of Portuguese Institute for Quality (IPQ)
Portugal

J. Marques dos Santos is graduated in Chemical Engineering by the Engineering University of Oporto. He was Assistant of Mathematical Methods at the School of Economics of Oporto (1972 - 1982).

From 1974 to 1987, he was responsible for several areas in the industrial department of the Portuguese Society of Starch (COPAM) and has been CEO of COPAM from 1979 to 1987.

In 1987, he joined the Sonae Group as vice chairman of the executive committee of Sonae Investments. He has been administrator of *Modelo Continente SGPS* from 1992 to 1999. Before joining IPQ in 2004, Marques dos Santos was deputy director of the *Sonae Group*, responsible for Knowledge and Communication matters and Chairman of the Environment Forum.



Florian Pollinger
Physikalisch-Technische Bundesanstalt (PTB)
Germany
florian.pollinger@ptb.de

Florian Pollinger received his PhD in experimental physics in 2009 at the University of Würzburg, Germany. In 2009, he joined the PTB and started working in length metrology. His major research interest are absolute distance interferometry and the treatment of the index of refraction for long-distance measurements. Since 2010, he has been the head of the PTB working group 5.42 "Multi-wavelength interferometry in geodetic length" and since 2013, he has the pleasure of coordinating the EMRP JRP SIB60 "Metrology for long distance surveying". He is also participating in national and international standardization of verification procedures of surveying instrumentation.

Metrology for long distance surveying

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

INVITED SPEAKERS



Dominique Missiaen

CERN

Switzerland

dominique.missiaen@cern.ch

I am a survey engineer from the French school (*Ecole Supérieure des Géomètres et Topographes*). After a couple of years in different topographers offices (one mission in Burma, one mission in La Sorbonne in Paris), I joined CERN in 1987.

I was first in charge of the alignment of the pre-injector of the Large Electron Positron, which started to run in 89, and gradually I became responsible of the metrology of the LHC magnets during their assemblies while I was in charge of the development and the maintenance of the survey Oracle database.

I then became the deputy of the Survey and alignment group leader, mainly in charge of the alignment of the LHC components. Since 2009, I am the section leader of The "Large Scale Metrology", team which is in charge of the alignment and positioning of all accelerators and detectors components at CERN.



João Catalão

Department of Geographic Engineering, Geophysics and Energy, Faculty of Sciences of the University of Lisbon

Portugal

jcfemandes@fc.ul.pt

João Catalão received the "licenciatura" degree from University of Lisbon in 1986 and the PhD in Geographic Engineering from the Universidade de Lisboa in 1999.

He is currently Associate Professor on the Department of Geographic Engineering, Geophysics and Energy, University of Lisbon.

He has developed his scientific activity in the field of Geodesy and Remote Sensing. His research is focused on measuring and monitoring the deformation of the Earth's surface using multiple sensors (Distance meters, gravimeters, GNSS, InSAR). He has developed new approaches and algorithms for the integration of different geodetic measurements into a comprehensive 3D displacement model. At present, his primary interest involves meteorological applications of SAR and GNSS.



José Nuno Lima

LNEC,

Portugal

jnplima@lnec.pt

Laboratório Nacional de Engenharia Civil, Portugal

Graduated in Geographic Engineering, Faculty of Sciences and Technology of University of Coimbra (1986).

Research trainee in Geodesy Centre of Tropical Sciences Research Institute (1988 – 1992) – Master Degree

Assistant of Research in Geodesy Centre of Tropical Sciences Research Institute (1992 – 2001) – PhD Degree

Research Officer in Geodesy Centre of Tropical Sciences Research Institute (2001 – 2005).

Research Officer in Applied Geodesy Division of Concrete Dams Department of National Laboratory for Civil Engineering (2006 until present).

Specialist in geodetic monitoring with GNSS.

Metrology for long distance surveying

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

SESSION IIa SPEAKERS



Sergio Baselga
Universitat Politècnica de València
Spain
serbamo@cgf.upv.es

Sergio Baselga received degrees in Surveying Technical Engineering in 1998 and Geodetic and Cartographic Engineering in 2000 from the Universitat Politècnica de València in Spain, where he also obtained his PhD degree in 2003. He is currently an associate professor there, being his research mainly dedicated to adjustment theory and robust estimation, optimization in geodetic networks and GNSS algorithms, and deformation monitoring. He is currently a member of the editorial board of GPS Solutions and Journal of Surveying Engineering.



Florian Zimmermann
Institute of Geodesy and Geoinformation
University of Bonn
Germany
zimmermann@igg.uni.bonn.de

- 10/2004-08/2007 Apprenticeship in surveyor's office Kühnhausen, Dübbert, Semler in Cologne, Germany
- 10/2007-2011 Bachelor of Science at University of Bonn (Thesis: Comparison of the programs Bundler and Aurelo for automatic camera orientation)
- 10/2011-09/2013 Master of Science at University of Bonn (Thesis: Attitude estimation of a lightweight UAV)
- Since 10/2013 PhD-Student at the Institute of Geodesy and Geoinformation, workgroup GNSS and moving objects, Prof. Dr.-Ing. Heiner Kuhlmann
- Research interests: Kinematic GNSS-Applications, Precise Point Positioning, Multipath, Antenna Near-Field Effects.



Tobias Kersten
Leibniz University Hannover; Institut für Erdmessung
Germany (lower saxony)
kersten@ife.uni-hannover.de

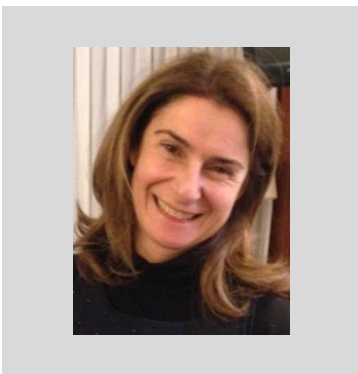
Biographical notes:

- study geodesy and geoinformation sciences in Berlin
- during study: member of archeological excavation team (2006 – Tell Fecheriye) in cooperation of TU Berlin and FU Berlin
- since 2009 geodesist and research assistant in the field of absolute GNSS antenna calibration; until 2014 PhD candidate (exam end of July 2014, Thesis: Determination of Code Phase Variations and their impact on positioning, navigation and time transfer)
- research interests: GNSS antennas, GNSS software development, Biases in GPS/GNSS, receiver technology, robotics.

Metrology for long distance surveying

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

SESSION IIB SPEAKERS



Teresa Fernández Pareja
Universidad Politécnica de Madrid
Spain
te_fer@topografia.upm.es

Master in Geodetic and Cartographic Engineering and Ph.D. in Geodesy for the Universidad Politécnica de Madrid, where I teach, among others, Metrological Control both in the Degree in Geomatics and Master in Geodetic Engineering.

In 2012, organization and management of Laboratorio de Control Metrológico in the UPM, with the aim of being accredited next year in calibration of geodetic equipment. Together with the academic activity, participation in several Spanish Archaeological Mission in Iraq, Jordan, UAE and Turkmenistan as responsible for cartographic-related issues.

Apart from that, Lieutenant in reserve, assigned to the Spanish Army Geographic Centre.



Markku Poutanen
Finnish Geodetic Institute
Finland
Markku.Poutanen@fgi.fi

Professor, Head of the Department of Geodesy and Geodynamics.
Special fields of research: Reference systems, height, crustal deformation, GNSS, baseline measurements.

Metrology for long distance surveying

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SESSION III SPEAKERS



Christian Grässer

Trimble AB

Sweden

Christian.Graesser@Trimble.se

University of Kaiserslautern
diploma degree in technical physics (1993)
degree in medical physics (1997)
PhD in laser physics – nonlinear optics (1998)
Carl-Zeiss Geodetic-Systems and Trimble Jena (1997-2004)
Manager R&D Lab team, Products: total stations Elta S and Elta C, Trimble S
Trimble AB Danderyd, Sweden (2004 – now)
Specialist in R&D doing research in laser sources, camera technology and system questions.
Technical leader for the Trimble V10 panoramic camera introduced 2013.
Personal
born 1965 in Germany, married, 3 kids, living in Vallentuna, Sweden.



Tuomas Hieta

Mittatekniikan keskus (MIKES),

Finland

Tuomas.Hieta@mikes.fi

Tuomas Hieta is a senior research scientist at MIKES. His work focuses on laser spectroscopy and instrumentation for industrial and environmental applications.
He co-founded a high-tech startup Optoseven Oy in 2014.



Joffray Guillory

Laboratoire Commun de Métrologie LNE-CNAM,

France

joffray.guillory@cnam.fr

Joffray Guillory received in 2009 his engineering degree in optical science with parallel expertise in electronics and computer science. The same year, he joined Orange Labs, Lannion, France, where he has been engaged as Ph.D. student in the development of Radio over Fiber (RoF) communication systems. He obtained his Ph.D. degree from the University of Paris-Est, France, in 2012. Since 2013, he is a post-doctoral researcher at Laboratoire Commun de Métrologie LNE-CNAM, Paris, France. His current research activities are in the field of the telemetry and of the spectroscopy where he develops absolute distance meters and systems for measuring concentrations of a few ppb, respectively.



Karl Meiners-Hagen

Physikalisch-Technische Bundesanstalt (PTB)

Germany

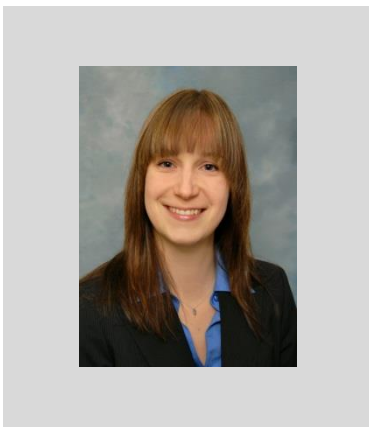
Karl.Meiners-Hagen@ptb.de

1983 - 1991: study of physics in Braunschweig, Germany,
1991 - 1997: PhD study in Braunschweig, Germany,
1997 - 2000: system analyst in Wolfsburg, Germany,
since 2000: researcher in PTB Braunschweig.

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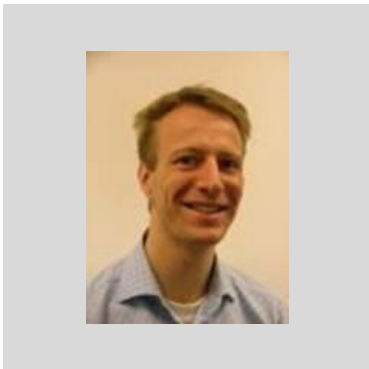
SESSION IV SPEAKERS



Jutta Mildner

Physikalisch-Technische Bundesanstalt (PTB)
Germany
jutta.mildner@ptb.de

2002 – 2008: Studying physics at University of Kassel, Germany
Diploma thesis on "Supercontinuum generation in photonic crystal fibers"
2008 – 2014: PhD on "Optimization of laser-induced breakdown spectroscopy in metals by femtosecond double pulses for the development of a high-resolution 3D-mapping technique"
Both done in the group of Prof. Thomas Baumert "Femtosecond Spectroscopy and Ultrafast Laser Control" at the Institute of Physics and Center of Interdisciplinary Science and Technology (CINSaT), University of Kassel, Germany
Since April 2014: Post-doctoral position at PTB in the group of Dr. Florian Pollinger "Multiwavelength Interferometry for Geodetic Lengths" within the EMRP joint research project SIB60 "Surveying".



Steven van den Berg

VSL
The Netherlands
svdberg@vsl.nl

Steven van den Berg is principle scientist at VSL, the national metrology institute of the Netherlands. He joined VSL after his PhD in physics at Leiden University in 2002 and has mainly worked in the field of optical frequency standards and frequency combs and since recently also in photometry/radiometry.
Last years he has focused on frequency comb applications like accurate long distance measurement in close collaboration with Delft University of Technology.

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POSTER SESSION

Julia Leute

Physikalisch-Technische Bundesanstalt (PTB)
Germany
julia.leute@ptb.de

Wolfgang Niemeier

Institut für Geodäsie und Photogrammetrie
Technische Universität Braunschweig
Germany
w.niemeier@tu-bs.de



Federation International des Geomètre (FIG): Chair of Working Group 6.1 "Deformation Measurements and Analysis". Present Activity in this function: Chair of Scientific Organizing Committee of the "Joint International Symposium on Deformation Monitoring", Hong Kong, Nov. 2011.

Deutscher Verein für Vermessungswesen (DVW):

- Chair of working group for internet-presentation „Kompetenzzentrum Ingenieur-vermessung“, www.cces.de

- Author of DVW-Technical Bulletin: „Ingenieurgeodätische Grundlagennetze“

Deutsche Geodätische Kommission (DGK):

- Member of Scientific Board; Member of section Ingenieurgeodäsie

- Chairing of working group „Recent Crustal Movements“

DIN-Committee 18709 „Ausgleichsrechnung und Statistik“

Member of Editorial Board: Journal of Applied Geodesy.

Maximo E. Zucco

National Institute of Metrological Research, INRIM
Italy
m.zucco@inrim.it



Massimo Zucco is a researcher at the mechanical division of INRIM where he works on the realization of the definition of the meter using stabilized lasers and optical combs, on interferometry for long distances and hyperspectral imaging.

Tong Ning

Onsala Space observatory, Sweden | Deutsches GeoForschungszentrum (GFZ)
Germany
tong.ning@chalmers.se



Visiting Scientist, September 2014–present

Department of GPS/Galileo Earth Observation, Deutsches GeoForschungszentrum (GFZ), Potsdam, Germany.

Researcher, June 2012–June 2014, Onsala Space Observatory, Göteborg, Sweden.

Ph.D. in Electrical Engineering, September 2007–June 2012. Chalmers University of Technology, Gothenburg, Sweden. Master of Science in Telecommunication, January 2006–June 2007. University of Gävle, Gävle, Sweden

Research topic: remote sensing of the atmosphere using space geodetic techniques.

Sten Bergstrand

SP Technical Research Institute of Sweden
Sweden
Sten.Bergstrand@sp.se



Sten Bergstrand is working at the Length group at the Department of Measurement Technology at SP, which is the Swedish National Metrology Institute. He received a PhD at Chalmers University of Technology, Sweden, in 2006 with main focus on GPS measurements of horizontal components of glacial isostatic adjustment. Dr Bergstrand is the Swedish representative to Euramet TC-Length and chair of the International Earth Rotation Service working group on Site Survey and Co-location.

Metrology for long distance surveying

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POSTER SESSION



Michel Lintz

**CNRS (laboratoire ARTEMIS) and Observatoire de la Cote d'Azur
Nice, FRANCE**

Michel.Lintz@oca.eu

Has been involved in laser measurements of atomic physics data, at ENS Paris. Presently, at Laboratories ARTEMIS, in Nice, works with laser stabilization and high resolution laser ranging.

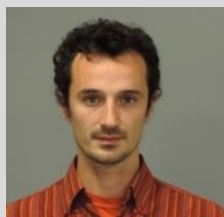


Radek Smid

**Institute of Scientific Instruments of the ASCR, v.v.i.
Czech Republic**

smid@sibbrno.cz

Radek Smid was born in Novy Jicin, Czech Republic, in 1980. He received the Master degree in physics and Ph.D. degree in plasma physics with the thesis "The study of RF low pressure glow discharges" from Masaryk University, Brno, Czech Republic, in 2003 and in 2010 respectively. He has been employee of Institute of Scientific Instruments of Academy of Sciences, Brno since 2006. His research has covered design and precise monitoring of displacement of Fabry-Perot cavities, external cavity repetition rate multiplication, laser frequency noise suppression on unbalanced fiber interferometer and application of the optical frequency comb in sub-nanometer interferometry.



Adam Lešundák

**Institute of Scientific Instruments of the ASCR, v. v. i.
Czech Republic**

lesundak@ISIBrno.Cz

Adam Lešundák is a Ph.D. student in the Department of Optics at Palacky University Olomouc and his subject is stabilization of lasers. He studied physics at Masaryk University Brno where he received his master degree in 2012. Since 2011 he has been working in the Department of Coherent Optics at Institute of Scientific Instruments of The ASCR. His research experiences include technology of silicon solar cells, laser spectroscopy and femtosecond frequency comb distance measurements. He received EMRP researcher mobility grant aimed at problematic of frequency comb mode selection, which took place at VSL in 2014."

Tengfei Wu

**Beijing Changcheng institute of Metrology & Measurement
China**

wutengfei@cimm.com.cn

Ph.D of Optical Engineer

Research Interests:

1. Absolute Distance Metrology by using the femtosecond optical frequency comb
2. Absolute optical frequency metrology based on the Ti:sapphire optical frequency comb.



Aleksei Liubzhyn,

**NSC "Institute of Metrology"
Scientific and Research Laboratory of the Length and Size
UKRAINE**

aleksei.liubzhyn@gmail.com

Junior Researcher

Executive Secretary of COOMET TC 1.5 "Length and Angle.



MINISTÉRIO DA ECONOMIA



Rua António Gião, 2, 2829-513 Caparica | Portugal | Tel +351 212 948 136 Fax +351 212 948 223 www.ipq.pt

