



Kompetenzzentrum
Ultrapräzise
Oberflächen-
bearbeitung e.V.

CC UPOB e. V.
Heiko Klawitter
Bundesallee 100
38116 Braunschweig
Germany

Participating Institutions

		
		
		
		
		
		
		

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Organizational Details

Date: November 13th + 14th, 2013,
Language: English
Registration: Please register by letter or fax using the attached form. Following this you will receive a confirmation.
Registration deadline: November 4th, 2013
Attendance fee: Lecturers: € 150 (1st person)
 Members: € 150
 Non-members: € 525
 Please pay the fee in advance after receiving the invoice.
Accommodation: Recommended accommodation www.upob.de/ → Veranstaltungen
 Participants are kindly requested to book their room before October 29th, 2013
Get2gether: November 12th, 2013; Start at 19.00
 Please find details of venue online
Conference Dinner: November 13th, 2013; Start at 19.00
 Please find details of venue online
Conference Location: Please find details of venue online
www.upob.de/ → Veranstaltungen
Contact: CC UPOB e. V. c/o PTB
 Heiko Klawitter
 Bundesallee 100
 38116 Braunschweig
 Tel.: +49 531 - 592 - 5131
 Fax: +49 531 - 592 - 695131
info@upob.de; www.upob.de



HLEM

November 13th - 14th, 2013



6th High Level Expert
Meeting 2013



Expert Meeting
Asphere Metrology



6th High Level Expert Meeting 2013

In several preceding workshops and High Level Expert Meetings (HLEM), asphere and free-form metrology, supported by two round robin test measurements, was presented and discussed within the international community.

This year's HLEM is dedicated to the presentation, discussion and dissemination of new developments and recent scientific results in asphere and free-form metrology for reflective and transmissive surfaces.

Topics are:

- New methods and tools for the highly accurate measurement of aspheres
- Measurement of high end aspheres
- Calibration techniques for asphere metrology systems
- Metrology artefacts suitable for calibration

Other topics raised are:

- Measurement of off axis aspheres and free-form surfaces
- Design of aspheres with respect to manufacturing restrictions
- Structured analysis of manufacturing errors and resulting effects
- New fields of applications and new technologies
- Other topics relating to asphere and free-form metrology and manufacturing

Programme Committee

Dr. Thomas Arnold; Leibniz-Institut für Oberflächenmodifizierung e.V.
Dipl.-Phys. Jean-Michel Asfour; Dioptric GmbH
Dr. Axel Schindler; NTG GmbH & Co KG
Dipl.-Ing. Gunter Schneider; Schneider GmbH + Co. KG
Dipl.-Ing. [FH] Christian Schopf; TH Deggendorf
Dr. Michael Schulz; PTB

Agenda November 13th, 2013

- **Conference Opening and Overview**
Prof. Dr.-Ing. Frank Löffler; CC UPOB e.V.; Germany
- **General Information on Topic Compatibility**
Dr. Michael Schulz; PTB; Germany
- **Tactile and Contactless Measurement of an Optical Surface**; Prof. Dr.-Ing. Rolf Rascher; TH Deggendorf
- **Recent Developments in Subaperture Stitching Interferometry of Aspheres and Freeforms**
Dr. Andrew Kulawiec; QED; USA
- **Comparing Measurement Results: The Radius Issue**
Christoph Pruss; University Stuttgart ITO; Germany
- **Recent Technology for Asphere and Free-Form Measurement by UA3P**; Keisji Kubo; Panasonic Corporation; Japan
- **Measurement Applications for Ultra-Precision 3D Coordinate Metrology**; Hans Ott; IBS Precision Engineering; The Netherlands
- **Manufacturing of Aspheres, Acylinders and Free-Form Optics by Plasma Jet Machining**
Dr. Georg Böhm; IOM Germany
- **Measurement of Non-Standard Aspheres and Discontinuous Optics**; Dr. Gernot Berger; Liphos GmbH; Germany
- **Parallel Measurement on Free-Form Optics with Optical Surfaces on Both Sides**; Dr. Michael Quintan; Fries Research & Technology GmbH; Germany
- **Precision Measurement of Large Optical Surfaces**
Prof. Dr. Engelbert Hofbauer; TH Deggendorf; Germany
- **Tactile Probe Systems in Comparison with Optical Point Sensors for Measuring Optical Components**
Dr. Andreas Beutler; Mohr GmbH; Germany

After each lecture there will be the opportunity for a short discussion. For more detailed information please visit www.upob.de, you will receive more information about

Agenda November 14th, 2013

- **Measurement of Ultra Precise Aspheric Mirrors**
Dr. Frank Siewert; Hahn-Holtz Zentrum Berlin; Germany
- **Areal Absolute Form Measurement of Optical Surfaces using Phase Measuring Deflectometry and Shearing Interferometry**; Marc Sandner; BIAS - Bremen Institute for Applied Beam Technology; Germany
- **Characterization of Optical Performance and 3D Surface Reconstruction of Aspheres by Experimental Raytracing**
Prof. Dr. Friedrich Fleischmann; Jacobs University Bremen/Easy Precision; Germany
- **Quantitative Deflectometry Challenges Interferometry**
Evelyn Olesch; University Erlangen-Nuernberg; Germany
- **Testing High NA Cylinder Surfaces Using Special CGHs, Called Diffractive Transmission Cylinders (DTC)** Dr. Frank Weidner; DIOPTIC GmbH; Germany
- **Interferometric Null Tests of Aspherics in Reflected and Transmitted Light**; Dr. Klaus Mantel; MPI Erlangen; Germany
- **Calibration Methods to Increase the Measurement Precision of Interferometric Asphere Testing Using CGHs**
Dr. Frank Weidner; DIOPTIC GmbH; Germany
- **Metrology of High Precision Free-Form Mirrors with Advanced Computer-Generated-Holograms** Matthias Beier; Fraunhofer IOF; Germany
- **Capabilities of Ion Beam Figuring Technology for Asphere Manufacturing**; Dr. David Schäfer; NTG GmbH & Co. KG; Germany
- **Development of Aspherical Standard Specimens**
Gernot Blobel; PTB; Germany
- **Summary** Dr. Michael Schulz; PTB; Germany

each session as well as additional information relating this event. The present programme is preliminary. You'll receive the latest version of the detailed programme by visiting our website. [see above]

Please fax your registration to: +49 531-592-69 5131

Application

- I hereby register for 6th HLEM - Asphere Metrology
- YES, I will attend the Get2gether on November 12th evening
- YES, I will attend the Conference dinner on November 13th evening

Firm, Institution:

Title, Family Name, :
First Name

Address:

Postal Code, City:

Tel., Fax:

E-Mail:

Signature:

We would like to know how to deal with photos on which you can be seen. Please tick [explanation below].

- YES, photos may be published by UPOB
- NO, photos may NOT BE PUBLISHED by UPOB

The photos created during this event will be shown only on our website or in our own publications of and reports on this event. These images are not used commercially. Names will not be mentioned in connection with the images.

Cancellation up to 14 days prior the meeting will be charged 50% of the attendance fee.

Following that date or if the participant does not attend the meeting, we will charge the full amount. Cancellations must be made in writing. We would be glad to accept another participant as attendance fees are transferable.