



Kompetenzzentrum  
Ultrapräzise  
Oberflächen-  
bearbeitung e.V.

## Organizational Details

## Workshop

March 08<sup>th</sup> - 09<sup>th</sup>, 2016

**Date:** 08 - 09 March 2016  
**Language:** English  
**Registration:** Please register by letter or fax using the attached form. Following this you will receive a confirmation.  
**Extended deadline:** February 29<sup>th</sup> 2016

**Attendance fee:** Lecturers: € 75 (1<sup>st</sup> person)  
 Members: € 75  
 Non-members: € 195  
 Please pay in advance after receiving the invoice.

**Accommodation:** For more information, please visit [www.upob.de/](http://www.upob.de/) → Veranstaltungen

**Get2gether:** 08 March 2016  
 Further information can be found on our website

**Conference Location:** For more information, please visit [www.upob.de/](http://www.upob.de/) → Veranstaltungen

**Contact:** CC UPOB e. V. c/o PTB  
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10<sup>th</sup> Workshop 2016



Expert Meeting  
Asphere Metrology

CC UPOB e.V.; c/o PTB

Heiko Klawitter  
Bundesallee 100  
38116 Braunschweig

Germany



## Sponsors



Thales Angerieux SAS  
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Please fax your registration to  
+49 531-592-69 5131

## Registration

- I hereby register for the 10<sup>th</sup> Workshop Asphere Metrology
- YES, I will attend the Get2gether on 08 March 2016
- YES, I will attend the PTB Company Tour before Workshop
- YES, I will attend the PTB Company Tour after Workshop
- Registration deadline: February 29<sup>th</sup> 2016

Affiliation, Institution: \_\_\_\_\_

Title, Family Name: \_\_\_\_\_

First Name: \_\_\_\_\_

Address: \_\_\_\_\_

Postal Code, City: \_\_\_\_\_

Country: \_\_\_\_\_

Phone, Fax: \_\_\_\_\_

E-Mail: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

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- NO, photos may NOT BE PUBLISHED by UPOB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 taken during this event will be shown only on our website or in our own publications of and reports on this event. These photos 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, the total amount is due. Cancellations must be made in writing. We would be glad to accept another participant as attendance fees are transferable.

## Background

To be able to produce and measure ever-improving top-quality products, technology providers and users of high-precision measurement technology are willing to face new challenges constantly. This is especially true in the field of asphere metrology. The asphere applications are widespread. However, it is difficult to produce and measure them precisely. This is revealed by today's practice, where sometimes large measurement uncertainties emerge.

In 2010 the CC UPOB e.V., i.e. the Competence Centre for Ultra-Precise Surface Figuring begun to bring together experts from industrial and research fields, as well as developers and users.

During our upcoming meeting the international actors will present their measurement devices, methods and last but not least, their results of the four newly produced samples which have been compared among the community.

Discussions on the specific presentations, contributions on measurement of free-form surfaces, comparability of measurements as well as discussions on future steps in general will complete the workshop.

The immense interest shown in our round robin "Asphere Metrology" was confirmed once again at the 8th High Level Expert Meeting (HLEM) - Asphere Metrology in March 2015. Due to the strong demand in the aftermath of this event, this workshop is held again in March 2016.

Accompanying the workshop, institutions from research and industry inform about the different technologies, systems, abilities as well as the latest developments.

## Agenda Day 1: Tuesday March 08<sup>th</sup> 2016

- 10:30 Early Registration
- 11:00 Company Tour 1  
Visit of Physikalisch-Technische Bundesanstalt (PTB) Laboratories  
Part I: Overview PTB Activities  
Part II: Atomic Clocks  
Part III: Mechanics and Acoustics
- 13:30 Conference Opening and Overview  
Frank Löffler; CC UPOB e.V.; Germany
- The Envisaged New St: Contributions from Precision Manufacturing and Dimensional Metrology  
Harald Bosse; Physikalisch-Technische Bundesanstalt; Germany
- Asphere Round Robin Result by UA3P-650HD  
Tomofumi Marishita; UA3P Development Team Panasonic Production Engineering Co.,Ltd.; Japan
- Measurements with the Tilted Wave Interferometer  
Alexander Brielke; Institut für Technische Optik (ITO) - University Stuttgart; Germany
- Point Measuring Methods and Interferometry Based Systems in Comparison;  
Andreas Beutler; Mahr GmbH; Germany
- Measurement Results with a Twyman-Green Interferometer of the HLEM Round Robin Asphere Test 2016  
Thomas Blümel; TRIOPTICS Berlin GmbH; Germany
- Line Scanning Interferometry in Combination with a Stitching Procedure for Asphere Metrology  
Sören Laubach; Physikalisch-Technische Bundesanstalt; Germany

After each lecture there will be the opportunity for a short discussion. For more detailed information please visit [www.upob.de](http://www.upob.de), you will receive more information about each session as well as additional information relating this event. You'll receive last minute information by visiting our website.

## Agenda Day 2: Wednesday March 09<sup>th</sup> 2016

- 09:00 Opening
- Intercomparison of Measurement Results  
Reyko Schachtschneider; Physikalisch-Technische Bundesanstalt; Germany
- Interferometric Metrology of Freeform Aspheres Using CGHs  
Frank Weidner; Dioptric GmbH; Germany
- Potentials and Limitations to Measure Freeforms with Different Systems  
Andreas Beutler; Mahr GmbH; Germany
- Proof of Concept for Manufacturing and Measuring of Freeforms  
Sven R. Kiontke; asphericon GmbH; Germany
- Metrological Freeform Artefact  
Gernot Blobel; Physikalisch-Technische Bundesanstalt; Germany
- FreeFORM – The New European Asphere Metrology Project  
Michael Schulz; Physikalisch-Technische Bundesanstalt; Germany
- Summary and Outlook  
Michael Schulz; Physikalisch-Technische Bundesanstalt; Germany
- Conference Closing
- 13:35 Company Tour 2: Visit of PTB Laboratories  
Visit I: Department Scientific Instrumentation **or**  
Visit II: Working Group Form and Wavefront Metrology

## Programme Committee

Jean-Michel Asfour; Dioptric GmbH  
Andreas Beutler; Mahr GmbH  
Frank Löffler; CC UPOB e.V.  
Rudolf Meeß; CC UPOB e.V.  
Gunter Schneider; Schneider GmbH + Co. KG  
Michael Schulz; PTB  
Oltmann Riemer; University of Bremen LFM