



# 8<sup>th</sup> HLEM 2017 - Asphere Metrology

## Detailed Programme

V.6.1

**1st  
Day**

Tuesday, 14 March 2017

Chair: Michael Schulz; Physikalisch-Technische Bundesanstalt; Germany

**12:00** Arrival / Registration, Lunch and Table Top Presentations

**13:00** Conference Opening, Overview and Outlook  
Frank Löffler; CC UPOB e.V.; Germany

### Session – Aspherical Surfaces

**13:15** Holistic Measurement of Aspheric Lenses by Model-Based Metrology; Rainer Tutsch; Technical University Braunschweig; Germany

**13:45** In Measurements we Trust - Decenter and Tilt of Aspheres  
Ulrike Fuchs; Asphericon GmbH; Germany

**14:15** Non-Contact Measurement of Aspheric Surfaces Based on Point Laser Interferometer; Xiaofei Diao; National Institute of Metrology; China

**14:45** Coffee Break and Table Top Presentations

**15:15** Frequency Scanning Interferometry for Measurement of Aspherical Surfaces; Pavel Psota; TOPTEC; Czech Republic

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Chair: Michael Schulz; Physikalisch-Technische Bundesanstalt; Germany

**15:45** Standardization in Asphere and Freeform Metrology  
Michael Schulz; Physikalisch-Technische Bundesanstalt; Germany

### Session – Moulded and Small Precision Optics

**16:15** Lessons Learned From the Optical Metrology of Moulded Aspheres for Cell Phone Cameras  
Xavier Colonna de Lega; Zygo Corporation / AMETEK Germany GmbH; Germany

**16:45** Component-Level Test of Moulded Freeform Optics for LED Beam Shaping Using Experimental Ray Tracing  
Tobias Binkele; Hochschule Bremen; Germany

**17:20** Closing

**19:00** Conference Dinner

**2nd Day** Wednesday, 15 March 2017 - **Morning**  
Chair: Gunter Schneider; Schneider GmbH & Co. KG; Germany

**9:00** Opening

**Session – In Situ- Measurements and Manufacturing**

**9:05** Deflectometric Acquisition of Large Optical Surfaces “DaOS”  
Using a New Physical Measurement Principle:  
Vignetting Field Stop Procedure  
Engelbert Hofbauer Technische Hochschule Deggendorf; Germany

**9:35** Challenges in Ultra-Precision High Performance Cutting  
Timo Dörgeloh; LFM University of Bremen; Germany

**10:05** Manufacturing of Freeform Optics Using Plasma Jet Machining  
Thomas Arnold; IOM Leipzig; Germany

**10:35** Coffee Break and Table Top Presentations

**Session – Freeform and Cylindrical Surfaces**

**11:05** Optical Measurement of Aspheres and Freeforms –  
Current Solutions and Challenges  
Stefan Mühlig; Mahr GmbH – Standort Jena; Germany

**11:35** Interferometric Testing of Strong Aspheres with Diffractive  
Fizeau Null Lenses (DFNL); Frank Weidner; Dioptic GmbH; Germany

**12:05** UA3P - Nano Measurement Accuracy on Asphere and Freeform  
Surfaces; Tomofumi Morishita; Panasonic Production Engineering Co.,Ltd.; Japan

**2nd Day** Wednesday, 15 March 2017 - **Afternoon**  
Chair: Jean-Michel Asfour; Dioptic GmbH; Germany

**12:35** Lunch and Table Top Presentations

**13:30** Freeform Metrology Using Subaperture Stitching Interferometry  
Jean-Pierre Lormeau; QED Technologies; United States

**14:00** Challenges in Metrology of Mirror Segments for X-Ray  
Telescopes; Anne-Catherine Probst; Hochschule Aschaffenburg; Germany

**14:30** Metrology of Mild Freeform and Cylinder Optics Based on a  
Scanning Interferometer  
Marc Wendel; Ametek GmbH - Business Division Luphos; Germany

**15:00** Characterization of Optical Components by Novel PTB-  
Technologies  
Bernhard Smandek; Physikalisch-Technische Bundesanstalt; Germany

**15:30** Summary and Outlook  
Jean-Michel Asfour; Dioptic GmbH; Germany

**15:40** **Conference Closing**

Departure