

HLEM 2025 – Programme Preview

Monday, March 24, 2025

- 15:00 **Laboratory Tour I – Topic: Surface Metrology in PTB**
 Visit of selected PTB Laboratories - Registration is required!
 Three different stops are planned on this sightseeing tour.
- 16:30 **End of Laboratory Tour I**
- 16:30 **Set Up of Industrial Exhibition** in PTB Seminar Center
- 18:30 **End of Set Up**
- 19:00 **Get Together in Restaurant** in City Center Braunschweig (Details TBD)
- 22:00 **End of Evening Event**

Tuesday, March 25, 2025

Session 1 – Additional Topics

- 9:00 **Welcome Coffee and Industrial Exhibition**
- 10:00 Welcome and Introduction to HLEM 2025
Harald Bosse, CC UPOB e.V., Germany
- Sphere Metrology: An Overview of the Interferometric Measurement of Silicon Spheres
Eva Kuhn, Physikalisch-Technische Bundesanstalt Braunschweig, Germany
- Active Control of Refractive Index of Air for Precision Optical Systems
*Ingo Ortlepp, Institute for Process Measurement and Sensor Technology
 Technische Universität Ilmenau, Germany*
- Measurement of Aspherical and Free-Form Surfaces using Ultrahigh Accurate 3-D
 Profilometer (UA3P)
Kentaro Uemura, Panasonic Production Engineering Co., Ltd., Japan
- Coffee Break, Industrial Exhibition and YSA-Posters**
- Simultaneous Measurement of Form and Alignment with Interferometry and Computer
 Generated Holograms
Jim Burge, President, Arizona Optical Metrology, LLC, USA
- Concept for Improving the Form Measurement Results of Aspheres and Freeform
 Surfaces in a Tilted-Wave Interferometer
Gregor Scholz, Physikalisch-Technische Bundesanstalt Braunschweig, Germany

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Tuesday, March 25, 2025

Session 2 – YSA - Young Scientist Award 2025

Young Scientist Award 2025 - Introduction

Moderator NN, CC UPOB e.V., Germany

Off-Axis Fast-Tool-Servo Diamond Turning of Customized Intraocular Lenses from Hydrophobic Acrylic Polymer

Wei Wang, Leibniz-Institut für Werkstofforientierte Technologien – IWT

Interferometrically Measured Topographies for Test Sphere Calibration

Tillman Neupert-Wentz, Physikalisch-Technische Bundesanstalt Braunschweig, Germany

Metrology of Micro-3D-Printed Polymer Structures – Surface Optimization for Steep Slope Detection

Stephanie Geißler, Institut für Technische Optik, University Stuttgart, Germany

13:30 **Lunch, Coffee Break, Industrial Exhibition and YSA-Posters**

Session 3 – Measurements I

14:30 Introduction to the Beginnings of Asphere Measurement Technology and Presentation of the HLEM 2025 Round Robin Samples, *Andreas Beutler, Mahr GmbH, Germany*

Combined Non-Contact Form and Centration Measurement of Precision Optical Elements *Marc Wendel, Ametek GmbH, BU Taylor Hobson, Germany*

A Multi-Sensor Optical Coordinate Measurement Machine for Measuring Freeform Optical Surface Form and External Reference Features

Mees Vanderbroeck, Dutch United Instruments B.V., The Netherlands

Coffee Break, Industrial Exhibition and YSA-Posters

Mid-Spatial Frequency Errors in Optical Surfaces

Donald A. Pearson II, Apre Instruments, LLC, USA

Measurement of Aspheric Lenses by V SPOT Technology

Ronald Kometer, Hofbauer Optik, Germany

Closing Remarks

Speaker NN, CC UPOB e.V., Germany

17:30 **End of Presentations**

19:00 **Conference Dinner in Restaurant Gastwerk Braunschweig**

22:00 **End of Evening Event**

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Wednesday, March 26, 2025

Session 4 – Measurements II

9:00 **Welcome Coffee and Industrial Exhibition**

9:30 Welcome and Short Overview

Speaker NN, CC UPOB e.V., Germany

Round Robin Measurements with Zygo Asphere+ Metrology System
Torsten Glaschke, Ametek Germany GmbH, Business Unit Zygo, Germany

Why White Light Interferometry for Optics Applications?

Joe Armstrong, Polytec GmbH, Germany

Coffee Break, Industrial Exhibition and YSA-Posters + YSA Voting

Round Robin Measurements for HLEM 2025

Michael Wagner,

Technologecampus Teisnach Optik Technische Hochschule Deggendorf, Germany

Round Robin Comparison Results of HLEM 2025

Ines Fortmeier, Physikalisch-Technische Bundesanstalt, Braunschweig, Germany

Young Scientist Award 2025 - Ceremony

Moderator NN, CC UPOB e.V., Germany

Presentation and Discussion of Possible Future HLEM Measurement Objects

Moderator NN, CC UPOB e.V., Germany

Conference Closing and Outlook

Speaker NN, CC UPOB e.V., Germany

13:15 **Light Lunch and Coffee to Go**

13:45 **Laboratory Tour II – Topic: National Metrology Institute PTB - Insights into the legal tasks** Visit of selected PTB laboratories - Registration is required!

Three different stops are planned on this sightseeing tour.

15:00 **End of Laboratory Tour II and Departure**