



# 11 HLEM 2021 – Asphere Metrology Detailed Programme

**V2.1**

<b>DAY 1</b>	<b>Tuesday, 16 March 2021</b>	<b>Evening</b>
<b>Start: 10:00-11:00</b>	<b>1<sup>st</sup> Technical Check, Setup and Testing</b>	
<b>15:30-16:30</b>	<b>2<sup>nd</sup> Technical Check, Setup and Testing</b>	

<b>DAY 2</b>	<b>Wednesday, 17 March 2021</b> <i>Chair: Andreas Beutler; Mahr GmbH Göttingen; Germany</i>	<b>Morning</b>
<b>8:45</b>	<b>Opening of the Meeting Room and Technical Check</b>	
<b>9:30</b>	<b>Welcome to HLEM 2021 - Conference Opening, Overview and Outlook</b> <i>Frank Löffler; CC UPOB e.V.; Germany</i>	
<b>9:45</b>	<b>YSA 2021 – Young Scientist Award 2021 Introduction and Short Lectures of Nominated Young Scientists from Ultra-Precision Surface Engineering</b> <i>Moderation by Chair: Andreas Beutler; Mahr GmbH Göttingen; Germany and Nominated Speakers from Different Institutions</i>	
<b>10:15</b>	<b>Introduction to HLEM 2021 – Short Overview on Samples and Background of Measurements</b> <i>Jean-Michel Asfour; DIOPTIC GmbH; Germany</i>	



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DAY 2	<b>Wednesday, 17 March 2021</b> <b>Session - Centring of Optical Components</b> <i>Chair: Andreas Beutler; Mahr GmbH Göttingen; Germany</i>	Morning
10:30	<b>Centration Testing of Lenses - An Overview</b> <i>Felix Hahne; Trioptics GmbH; Germany</i>	
11:00	<b>Refreshment Break</b> <b>Breakout Rooms - YSA Poster / Technical Exhibition</b>	
11:45	<b>CGH Based Precision Test of the Inner Centration of a Biconvex Asphere</b> <i>Frank Weidner; Dioptic GmbH; Germany</i>	
12:10	<b>Centration Measurements by Trioptics</b> <i>Felix Hahne; Trioptics GmbH; Germany</i>	
12:35	<b>A new Approach to Shape and Centration Measurement on Aspheres with New V-SPOT Technology</b> <i>Engelbert Hofbauer and Ronald Kometer; Hofbauer-Optik Mess- und Prüftechnik; Germany</i>	
13:00	<b>Lunch Break</b> <b>Breakout Rooms - YSA Poster / Technical Exhibition</b>	



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DAY 2	Wednesday, 17 March 2021 <b>Session - Additional Topics</b> <i>Chair: : Jean-Michel Asfour; Dioptic GmbH; Germany</i>	Afternoon
13:00	<b>Lunch Break</b> Breakout Rooms - YSA Poster / Technical Exhibition	
14:00	<b>Optical Metrology Challenges in the Context of the ELT Programme</b> <i>Samuel Lévêque; ESO European Southern Observatory; Germany</i>	
14:25	<b>Referencing Topography Measurement Data of Optical Surfaces</b> <i>Andreas Müller; Metroshift; Germany</i>	
14:50	<b>Project 'Free-Form Measurement': Description of Standardized Measurement Procedures for Asphere Testing Using Pointwise Measurement Techniques</b> <i>Hanno Dierke; Technical University Braunschweig, Germany</i>	
15:15	<b>Ion Beam Finishing of Optical Aluminium Surfaces</b> <i>Thomas Arnold; Leibniz Institut für Oberflächenmodifizierung - IOM; Germany</i>	
15:35	<b>Refreshment Break</b> Breakout Rooms - YSA Poster / Technical Exhibition	



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15:35	<b>Refreshment Break</b> <b>Breakout Rooms - YSA Poster / Technical Exhibition</b>	
16:20	<b>Characterization of Transmissive Segmented Freeform Optics using Experimental Ray Tracing</b> <i>Tobias Binkele; Hochschule Bremen, Germany</i>	
16:45	<b>Absolute Interferometry for Asphere Metrology</b> <i>Jan Kredba, TOPTEC; Czech Republic</i>	
17:05	<b>Retrace Error Compensation in Absolute Interferometric Testing</b> <i>Marek Stašík, TOPTEC; Czech Republic</i>	
17:30	<b>Summary and Closing of First Day</b> <i>Session Chair</i>	



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DAY 3	Thursday, 18 March 2021 <b>Session - UP-Manufacturing Processes</b> <i>Chair: Oltmann Riemer;</i> <i>Leibniz-Institut für Werkstofforientierte Technologien - IWT; Germany</i>	Morning
9:00	<b>Opening of the Meeting Room and Technical Check</b>	
9:30	<b>Opening of Second Day</b> <i>Session Chair</i>	
9:35	<b>UP Manufacturing of Challenging Optical Functional Surfaces</b> <i>Kurt Haskic; LT Ultra-Precision Technology GmbH; Germany</i>	
10:00	<b>Manufacturing of Ultra Precision Surfaces in Hardened Steel</b> <i>Benjamin Bulla; son-x GmbH; Germany</i>	
10:25	<b>A Study of the Micro-Structure of Diamond Turned Surfaces and Generation of Diffraction Color</b> <i>Takeshi Hashimoto; AMETEK GmbH; Germany</i>	
10:50	<b>Refreshment Break</b> <b>Breakout Rooms - YSA Poster / Technical Exhibition</b>	



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DAY 3	<b>Thursday, 18 March 2021</b> <b>Session - Different Measuring Techniques</b> <i>Chair: Oltmann Riemer;</i> <i>Leibniz-Institut für Werkstofforientierte Technologien - IWT; Germany</i>	Morning
11:35	<b>Comparison of Interferometric- and Point Sensor Measurement of Complex Optics</b> <i>Tobias Schröter; Mahr GmbH; Germany</i>	
12:00	<b>Non-Contact 3D Form Measurement of Complex Geometries by a Multi-Wavelength Interferometer</b> <i>Marc Wendel; Taylor Hobson; Germany</i>	
12:25	<b>Round Robin Test by UA3P</b> <i>Tomofumi Morishita;</i> <i>Panasonic Production Engineering Co., Ltd; Japan</i>	
12:50	<b>NMF600 S Measurement Performance on UPOB Samples and Other Challenging Optics</b> <i>Rens Henselmans; Dutch United Instruments; The Netherlands</i>	
13:15	<b>Lunch Break</b> <b>Breakout Rooms - YSA Poster / Technical Exhibition</b>	



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14:15	<b>HLEM 2021 - Measurements at ITO</b> <i>Christof Pruss; University Stuttgart - ITO; Germany</i>	
14:40	<b>Comparison Requirements and Current Results</b> <i>Ines Fortmeier; Physikalisch-Technische Bundesanstalt; Germany</i>	
15:10	<b>Discussion on Comparison</b> <i>Moderation by Oltmann Riemer;</i> <i>Leibniz-Institut für Werkstofforientierte Technologien - IWT; Germany</i>	
15:25	<b>YSA 2021 – Young Scientist Award Ceremony</b> <i>Moderation by Oltmann Riemer;</i> <i>Leibniz-Institut für Werkstofforientierte Technologien - IWT; Germany</i>	
15:50	<b>Conference Closing and Outlook</b> <i>Session Chair</i>	
16:00	<b>End of Event</b>	