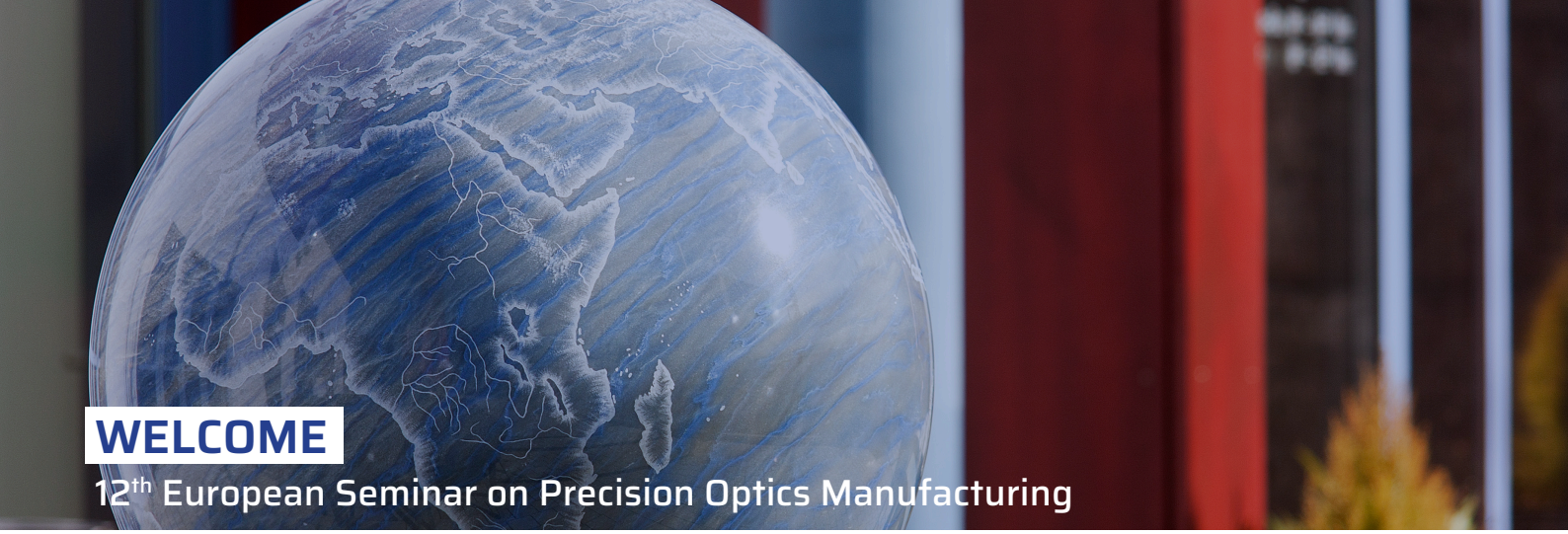
DEGGENDORF INSTITUTE OF TECHNOLOGY DIT

INVITATION

May 6th - May 7th 2025

12th European Seminar on Precision Optics Manufacturing



WELCOME

12th European Seminar on Precision Optics Manufacturing

DEGGENDORF INSTITUTE OF TECHNOLOGY DIT

EUROPEAN UNION
Investing in our Future
European Regional Development Fund

12th European Seminar on Precision Optics Manufacturing, May 6th - 7th 2025
Deggendorf Institute of Technology
Technology Campus Teisnach Optics, Germany

Main topics

- Manufacturing and measurement of optics from mm- to m-range and optical systems: Processes for grinding, polishing, centering, assembly, handling, surface modification, cleaning and coating of optics
- Standards in optics manufacturing. Design of optics, error budgeting, fusion of optical and mechanical design, strategies for optical design within mechanical tolerances. Optical design SW: experiences, current developments, license models & alternatives
- Advanced and next generation technologies in high precision manufacturing: Ultraprecision machining, kinetic abrasive polishing, additive manufacturing, molding, new and special materials, next generation of giant optics manufacturing and testing
- Smart fusion of manufacturing and measurement of optics: Lessons learned in industry and research institutes in environment, media control, process stability, measurement, data handling and data mining
- Internet of things: Data handling and security within the value chain from optical design to manufacturing process, optical systems and their integrity and vulnerabilities

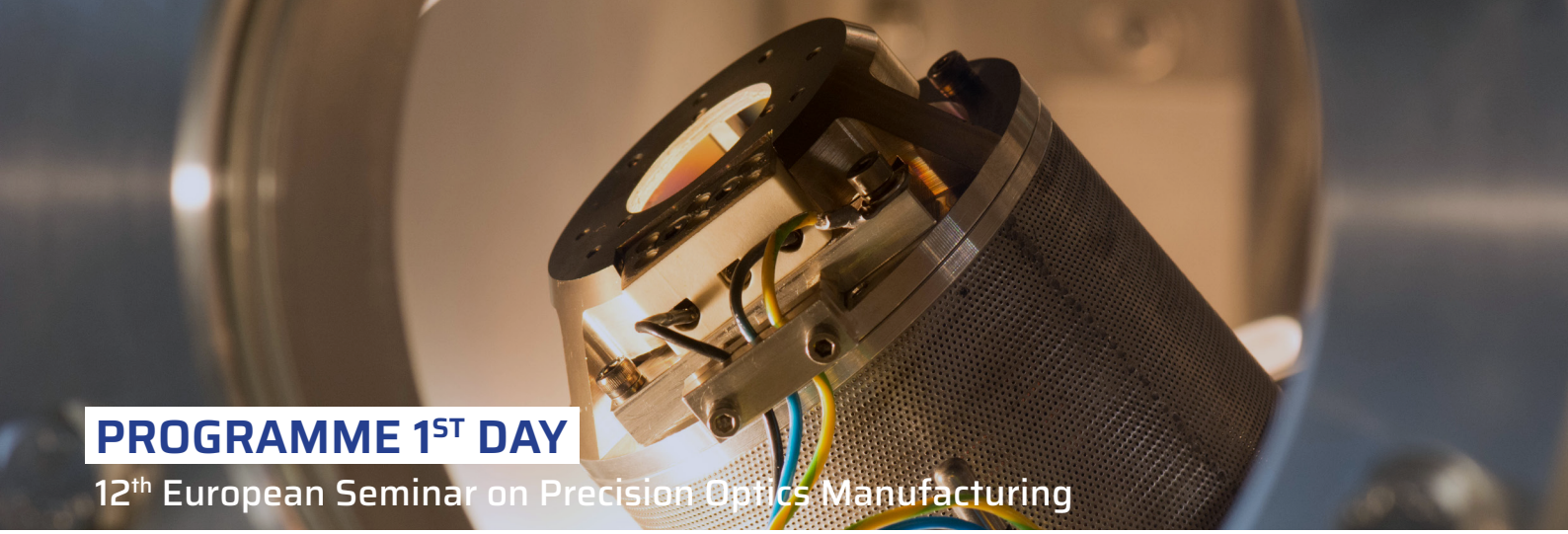
Conference language:
English

We are looking forward to meeting you at the 12th European Seminar on Precision Optics Manufacturing.

Yours sincerely,

Prof. Waldemar Berg

Prof. Dr. Gerald Fütterer



PROGRAMME 1ST DAY

12th European Seminar on Precision Optics Manufacturing

Chairs: Dr. Oliver Fähnle, PanDao GmbH
Prof. Dr. Gerald Fütterer, DIT
Prof. Dr. Ing. Christine Wünsche, DIT
Prof. Dr. Helge Thieß, DIT

1ST DAY, TUESDAY, MAY 6TH 2025

9:30 **CHECK-IN**

10:15 **WELCOME**

10:20 **SESSION 1 - NON-GLASS MATERIALS - NEW MATERIALS FOR OPTICAL APPLICATIONS**

Growth of Oxide- and Fluoride Crystals and Preparation of Photonic Components
Dr. Thomas Straubinger, Leibniz-Institut für Kristallzüchtung (IKZ), D

Extreme Lightweighted Ceramic Mirrors for Future Science and Earth Observation Missions
Matthias R. Kroedel, ECM Engineered Ceramic Materials GmbH, D

11:00 **SESSION 2 - METROLOGY AND SIMULATION**

Absolute position information to reduce uncertainty in flexible asphere and freeform metrology
Cristof Pruss, University of Stuttgart Institute of Applied Optics (ITO), D

Vignetting as a physical measuring principle for the characterization of aspheres
Dr. Engelbert Hofbauer, HOFBAUER OPTIK Mess- & Prüftechnik, D

Modeling and optical simulation of the V-spot sensor in Zemax OpticStudio
Michael Wagner, Deggendorf Institute of Technology, D

Translating Optical Design Specifications into Manufacturing Terminology: Bridging the Gap Between Designers and Manufacturers
Thomas Pickering, ANSYS Germany GmbH, D

12:30 **LUNCH**

13:30 - 17:30 **BAYERN PHOTONICS AND POSTER SESSION**

15:30 **COFFEE BREAK**

PROGRAMME 1ST + 2ND DAY

12th European Seminar on Precision Optics Manufacturing

17:30 **LAB TOUR**

18:30 **GET2GETHER - BAVARIAN EVENING**

2ND DAY, WEDNESDAY, MAY 7TH 2025

9:00 **SESSION 3 - GRINDING**

Ultra-precision grinding of MAX-phase-composites
Dennis Wilhelm, Manufacturing Technology Institute (MTI), RWTH Aachen, D

High-precision machining of optical components - Importance of the coolant supply
Bernhard Welle, Turbo-Separator AG, CH

Subsurface Damage Characterization in Fused Silica: Influence of Surface Quality Assessed by Optical Coherence Topography
Dennis Thelemann, EAH Jena, D

Ultra-precision grinding of large optics on the UPG 1000 CNC
Dr. Lars Schönemann, OptoTech, D

10:30 **COFFEE BREAK**

11:30 **SESSION 4 - POLISHING, AUTOMATION AND ASSEMBLY**

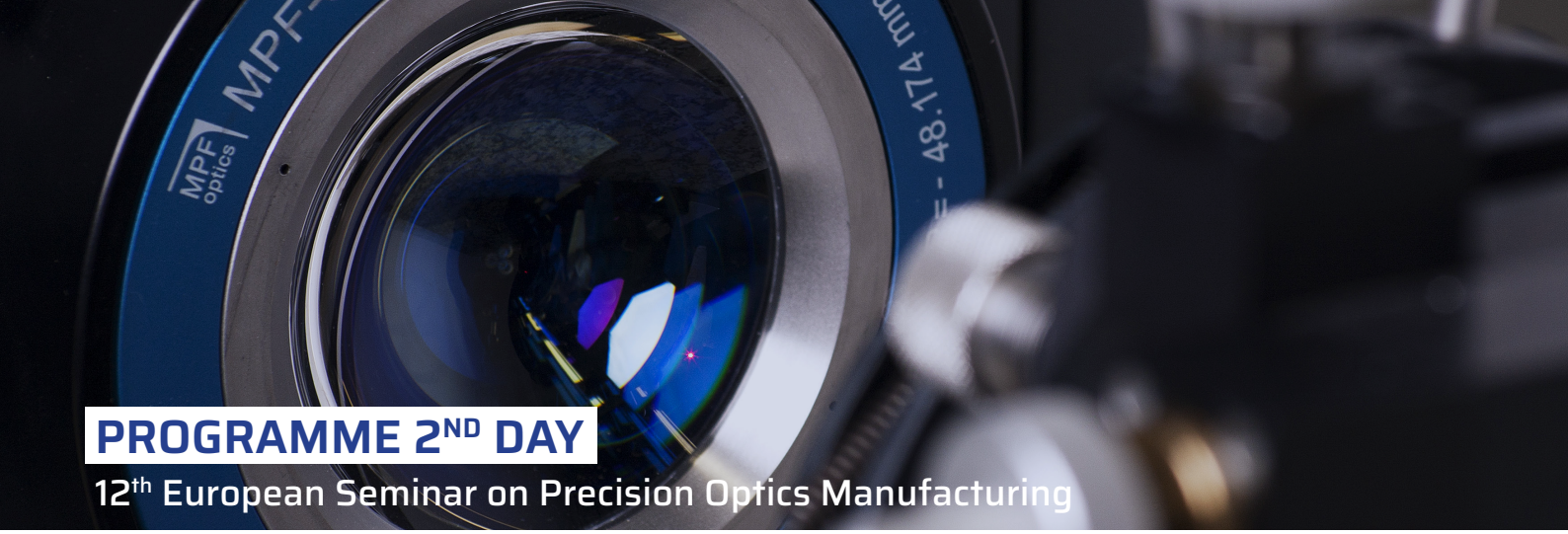
Advancements in Optics Manufacturing: Five-Dimensional Bonding of Multi-Element Assemblies within a Single Barrel
Dr. Patrik Langehanenberg, Trioptics, D

Investigation of Slurry Aggregation Effects on CMP Process with Electrical Power Sensor Utilization
Farouq Abbas, Technische Universität Ilmenau, D

Integration of sensors in manufacturing processes - SensAPro
Michael Benisch, Deggendorf Institute of Technology, D

Optimization of Optical Surfaces For High Energy Beam Delivery And Beam Shaping Micro-Optics
Dirk Hauschild, Focuslight Technologies Inc., D

13:00 **LUNCH**



PROGRAMME 2ND DAY

12th European Seminar on Precision Optics Manufacturing

14:00 **SESSION 5 - NEXT GENERATION MANUFACTURING**

Determination of SSD depth applying atmospheric plasma jet and ion beam
Heike Müller, Leibniz-institute of Surface Engineering (IOM), D

Laser polishing - a way to influence glass surfaces
Susanne Kasch, Günter Köhler Institute for Joining Technology and Materials Testing (ifw Jena), D

Laser-based manufacturing of fused silica optics
Emrah Uluz, Fraunhofer Institute for Laser Technology ILT, D

Stability of masking materials for pattern transfer of lithographic masks into fused silica by atmospheric pressure plasma jet etching
Robert Heinke, Leibniz-institute of Surface Engineering (IOM), D

15:30 **END OF THE SEMINAR**