

Measuring by light 2025

Thursday 3 April 2025

Registration and coffee	8:45	9:15	Foyer	
Welcome word - Workshop Introduction	9:15	9:30		
Workshop	9:30	11:00	<p>Infrastructure & Mobility Workshop</p> <p><i>Signal Diversity for Reducing Dropouts and Speckle Noise</i> <i>Dr. Prof. Christian Rembe</i> <i>Technische Universität Clausthal, Germany</i></p> <p><i>Differential Laser Doppler Vibrometer Measurements Using Flyable Mirrors for The Vibration Assessment of Remote Structures</i> <i>Dr. Prof. Benjamin Halkon</i> <i>University of Technology Sydney (UTS), Australia</i></p> <p><i>Mitigating Speckle Noise in Train-borne Laser Doppler Vibrometer for Monitoring Rail Infrastructures</i> <i>Dr. Yuanchen Zeng</i> <i>Delft University of Technology, the Netherlands</i></p> <p>PANEL DISCUSSION <i>The panel discussion will bring together all speakers for an engaging session of Q&A and dialogue with the audience, fostering collaboration and idea exchange.</i></p>	TBA.
Coffee break	11:00	11:30	Foyer	
Demos	11:30	12:30	<p>Hands-on Infrastructure & Mobility:</p> <p>1. A demonstration of speckle noise in LDV signals when scanning different engineering surfaces at high velocity</p> <p>2. A demonstration of self-vibration noise compensation of LDV with a flyable mirror</p>	<p>Hands-on / Demos: Ommatidia LaVision Mitutoyo Spektra</p>
Lunch	12:30	13:30	Foyer	
Workshop	13:00	15:00	<p>Microsystems workshop</p> <p>General Introduction: <i>We'll start with a foundational overview of modal analysis and its significance in modern research.</i></p> <p>Measuring Thin (Graphene) Membranes: <i>Dive into cutting-edge research papers on mode shape imaging and the reconstruction of stress distributions in thin membranes, including microphone characterization.</i></p> <p>MEMS Characterization: <i>Gain practical insights into MEMS characterization, featuring valuable contributions from an industry expert to provide real-world perspectives.</i></p> <p>PANEL DISCUSSION <i>The panel discussion will bring together all speakers for an engaging session of Q&A and dialogue with the audience, fostering collaboration and idea exchange.</i></p>	<p>Composites workshop</p> <p>Design of Composite Materials and Structures <i>Prof. Otto Bergsma, TU Delft</i></p> <p>Opportunities in the Optical Inspection of Composites <i>Prof. Mathias Kersemans, University of Ghent, Belgium</i></p> <p>Aerospace Applications of Optical Inspection Technology <i>Prof. Krzysztof Dragan, Air Force Institute of Technology (AFIT), Poland</i></p> <p>PANEL DISCUSSION <i>The panel discussion will bring together all speakers for an engaging session of Q&A and dialogue with the audience, fostering collaboration and idea exchange.</i></p>
Demos	15:00	17:00	<p>Hands-on Microsystems:</p> <p>Live DEMO of MEMS with Polytec Vibrometer: <i>Experience a live demonstration using the Polytec vibrometer, including collaboration opportunities to use your own system during this exciting showcase.</i></p> <p>1. Ultra high frequent Surface Acoustic Wave measurement</p> <p>2. Measurement of MEMS resonator</p>	<p>Hands-on / Demos: Ommatidia LaVision Mitutoyo Spektra</p> <p>Hands-on Composites:</p> <p>1. Demonstration of Shearography Technology for Composite Inspection <i>this demonstration will showcase the application of shearography in detecting flaws and defects in composite materials.</i></p> <p>2. Demonstration of LDV Technology for Ultrasonic Inspection <i>Co-hosted by AFIT and TU Delft, this session will highlight the use of Laser Doppler Vibrometry (LDV) technology for ultrasonic inspection of composites.</i></p>
Farewell drink	16:00	17:00	Foyer	