

Seminar on Computational Laser Systems (Measurement Systems Seminar/BIOLAS), SS 2025

Date: Monday, 3. DS., 11:10 – 12:40, BAR I88

Date	KW	Lecturer	Topic
07. April (LB)	15	Dr. Robert Kuschmierz	Introduction to Seminar & Presentation of Topics for Students
14. April	16	Jingchun Hua	Unsupervised fiber imaging enhancement using physics-based autoencoders (Defense of Diploma Thesis, TW)
15. April 9:30 Zoom (DKJC)	16	An Pan, Xi'an Institute of Optics and Precision Mechanics	Fourier ptychographic microscopy and its applications in pathology and remote imaging
21. April	17	–	No Seminar: Ostern / Easter
28. April	18	Zixuan Cai	Diffuser-based fiber endoscopy with end-to-end optimization by physic-informed neural networks (DA defense, TG)
05. May	19	Mirko Riede, IWS Dr. Caspar Hopfmann, TUD Yared Zena, IFW	Optical metrology in applied production research using the example of additive manufacturing by means of cladding (talk of 15 min) Ultra-compact deterministic sources of maximally entangled photon pairs for industrial environments (20 min) Enhanced Emission of GaAs Quantum Dots in Bend Nanomembranes (20 min)
12. May	20	Eric Lischinski Diksha Avhad	Use of Generative Adversarial Networks (GAN) to improve the semantic segmentation of agricultural reference plots based on digital orthophotos (DOP) (Defense DA, TW) USB3 Vision infrastructure (DA intermediate report, KS)
19. May	21	Veronika Volkova	Characterization of thermally modified multi-core fibers (DA defense, KI/RK)
22. May 14:00, BAR 17 (DKJC)	21	Prof Igor Meglinsky Aston University, UK	Orbital angular momentum in scattering media, tbd
26. May	22	Yiqun Zhang Ying Zhang	Multi-line-of-sight wavefront sensing based on single wavefront sensor Research on Wavefront Sensing Technology Based on Focal Plane Images and Its Applications
27. May 13:00 Zoom (DKJC)	22	Gavrielle Untracht Technical University of Denmark	Light tissue interaction for optical imaging towards translational imaging tools

02. June	23	-	No Seminar
03. June 9:20 Bar 17 (DK)	23	Isabel Allegro Jenoptik	Transitioning from academia into industry + Career Q&A
09. June	24	-	No Seminar: Pfingsten / Pentecost
16. June	25	Bowen Yang	Reference-less digital optical phase conjugation for multimode fibers (DA defense, QZ)
23. June	26	Dr. Lars Büttner	Laser Safety & Hazardous Substances Briefing (only for MST members) (<i>Munich conference</i>)
30. June	27	Xiaocheng Liang	Physical noise modeling and denoising with DL (SA defense, TW)
07. July	28	N.N.	(Student defenses) ?
14. July	29	N.N.	(Student defenses) ? – End of Semester –

The lectures have to be presented in English

External lecturers are shown in bold, in green are checks and in red are changes. Attention: The seminar plan can be subject to short-term changes, see Internet. The slides should be written in English (save the slides in the intranet). Organization: Dr. L. Büttner, BAR 28, Tel. 463-35314

Structure of the talks: 1) Scientific Question; 2) State of the art / literature survey; 3) Problem / Hurdles; 4) Hypotheses / Methods / Advantages and Disadvantages; 5) Transfer to real-world applications / Requirement for implementation in applications; 6) Vision