

CSMS Conference - MICROSCOPY 2025

19 - 21 May 2025, Liberec, Czechia
Grandhotel Clarion Zlatý Lev

Monday 19th May 2025

8:00	Trip to the mountains / Glassworks (<i>expected arrival time 13:00</i>)
14:00	Registration of participants (<i>until 19:00</i>)
14:30	Member meeting of CSMS
16:00	Conference opening
16:20	Announcement of the winner of scholarship competition by CSMS
16:25	Hana Polášek-Sedláčková: Quantitative AI-based DNA fiber workflow to study replication stress
16:40	Announcement of the winner of scholarship competition by Thermo Fisher / CSMS
16:45	Petr Liška: Selective Anion Exchange in CsPbBr ₃ Low-Dimensional Systems via Focused Electron/Ion Beam Induced Deposition
17:00	Short Break
17:20	News in microscopy
18:40	Microscopy elevator pitch
19:00	Welcome party

Tuesday 20th May 2025

9:00	Plenary lecture Rainer Heinzman: Structured Illumination Microscopy
9:50	Session I – Life sciences (chairs: Marie Vancová and Josef Lazar)
9:50	Markéta Benešová: Surface-Enhanced Raman Spectroscopy (SERS) for Detection, Characterization and Identification of Microorganisms
10:05	Thermo Fisher Scientific Lukáš Kejík: Hydra Bio for advanced life science applications
10:20	Poster session + coffee break
11:00	Invited lecture Vladimíra Petráková: Detecting molecules in single-molecule microscopy images using probabilistic thresholding
11:30	Specion TBA
11:45	Kateřina Mrázová: Approach to Imaging Bacterial Cells Encapsulated in Alginate Hydrogel Using LV-STEM
12:00	Altium Kateřina Lónová: Nanolive
12:15	Miriam Unger : Multimodal Submicron O-PTIR: Advancing Life Science Applications with Simultaneous IR, Raman, and Fluorescence Microscopy
12:30	Lunch
13:30	Session II - Interdisciplinary sciences (chairs: Eliška Materna Mikmeková and Aleš Benda)
13:30	Invited lecture Filip Šroubek: Image Analysis in the Age of Deep Learning
14:00	AdvaScope Pavel Stejskal: TBA
14:15	Jan Příbyl: Correlative Microscopy Techniques Serving as Core Facility
14:30	Jan Schäfer: Microscopy, Characterization, and Mechanistic Studies at VSB-TUO: From Graphene to Fusion Plasmas
14:45	ZEISS Ivana Burianová: The Next Generation of Serial Block-Face Imaging
15:00	Poster session + coffee break

15:40	Session III: Material sciences (chairs: Mariana Klementová and Miroslav Šlouf)
15:40	Invited lecture Pavel Kejzlar: Application of Scanning Electron Microscopy for the Material Research at Technical University of Liberec
16:10	JEOL TBA
16:25	Ivo Kuběna: Structural changes in 3D printed L-PBF IN939 due to thermomechanical fatigue
16:40	Short break
17:00	Invited lecture Miroslav Cieslar: In-situ electron microscopy of nanoparticles
17:30	Lucia Bajtošová: In Situ and Ex Situ TEM Analysis of Al-Al ₂ Cu Heterogeneous Nanostructures: Insights into Phase Stability and Diffusion
17:45	Jan Michalička: Atomic resolution DPC-STEM imaging of magnetic signal in antiferromagnets and beyond
18:00	Break
19:00	Conference dinner and yCSMS social activities

Wednesday 21th May 2025

9:00	Workshops SVEN & Hana Polášek-Sedláčková: TBA yCSMS session
10:00	Announcement of the CSMS Award
10:05	Award CSMS lecture Tomáš Čížmár: Exploring brain with fibre optics
10:45	Announcement of the Best PhD thesis award - ZEISS
10:50	Miroslav Stiburek: Confocal microscopy through a multimode optical fibre
11:05	Session IV– Instrumentation and optics (chairs: Dušan Chorvát and Vladislav Krzyžánek)
11:05	Renishaw Josef Sedlmeier: Multi-modal correlative microscopy: simultaneous and colocalised Raman & SEM imaging
11:20	ZEISS Pavel Krist: LSM Lightfield 4D - Instant Volumetric High-Speed Imaging of Living Organisms
11:35	Poster session + coffee break
12:00	Invited lecture Ondrej Krivanek: Atomic-resolution SE imaging and other developments in instrumentation for electron microscopy
12:30	TESCAN Tomáš Borůvka: TESCAN MIRA XR: Accessible Ultra-High-Resolution SEM for Advanced Research
12:45	Miroslav Šlouf: Semi-automated processing of 4D-STEM diffraction data with open-source Python packages STEMDIFF and EDIFF
13:00	Michal Horák: Characterization of perovskite single-photon emitters and solar cells by 4D-STEM in an FIB-SEM
13:15	Conclusion
13:20	Lunch
14:00	Transfer to excursions and workshop
14:30	Excursions and workshop