

## CSMS Conference - MICROSCOPY 2023

**5 - 7 June 2023, Olomouc**

*Auditorium of the Faculty of Law, Palacký University  
(17. listopadu 8, Olomouc)*

### Monday 5<sup>th</sup> June 2023

14:00	Meeting of the CSMS board
15:00	<b>Registration of participants</b> ( <i>until 19:00</i> )
15:30	<b>Member meeting of CSMS including election of new CSMS board</b>
17:30	<b>Conference opening</b>
17:40	<b>Announcement of the winner of the scholarship competition by Thermo Fisher / CSMS</b> Peter Kepič ( <i>talk in Session II</i> )
17:45	<b>Announcement of the winner of the scholarship competition by CSMS</b> Michal Franek ( <i>talk in Session I</i> )
17:50	<b>Announcement of the winners of the best CSMS dissertation sponsored by ZEISS</b>
17:50	Martina Grajciarová "Histological evaluation of surgical experiments in animal models"
18:10	Šárka Křížová "Chemical and physical properties of impact glasses: Traces of extraterrestrial components or an imprint of source rocks?"
18:30	<b>Announcement of CSMS award for merit in microscopy</b> Vladislav Krzyžánek "Lecture of the laureate"
19:00	<b>Welcome party</b>

### Tuesday 6<sup>th</sup> June 2023

9:00	<b>Plenary lecture</b> Martin Setvín "Combined AFM/STM: Challenges and Opportunities in Studying Complex Materials"
9:45	<b>Session I. - Biomedical sciences</b> (chairs: Marie Vancová and Pavel Hozák)
9:45	<b>Invited talk</b> Peter Mojzeš "Raman Microscopy of Cells and Tissues: Bioimaging Based on Inherent Molecular Contrast"
11:15	Eva Ďurinová "Formation and maturation of avian reovirus viral factories"
10:30	Michal Franek "Correlative super-resolution and electron microscopy analysis of cell replication and nucleolar structure in <i>A. thaliana</i> " ( <i>winner of the scholarship competition by CSMS</i> )
10:45	Tereza Juříková "Aspergillus fumigatus and Pseudomonas aeruginosa: friends or enemies?"
11:00	Aneta Křížová "Time-lapse Quantitative Phase Imaging for the Study of Cell Migration"
11:15	<b>Poster session + coffee break</b>

11:45	<b>Technology news I</b> (chairs: Jana Nebesářová and Vladislav Krzyžánek)
11:45	TESCAN / Michal Svoboda “New Generation TESCAN CLARA UHR SEM for fast, accurate and comprehensive nanoscale surface analysis of any material”
12:15	Carl Zeiss / Joerg Lindenau “Scanning Electron Microscopy in Live Sciences - a widening field of applications”
12:30	JEOL / Guillaume Brunetti “New FIB-SEM by JEOL”
12:45	Thermo Fisher Scientific / Daniela Slamková “Processing of life-science cryo-samples in Helios Hydra”
13:00	<b>Lunch</b>
14:00	<b>Session II. - Material sciences</b> (chairs: Petr Svora and Miroslav Šlouf)
14:00	<b>Invited talk</b> Miloslav Klinger “Electron crystallography with CrystBox: Low barriers for newcomers, advanced features for experts and high precision for everyone”
14:30	Peter Kepič “Observation of the crystalline phase transition and characterization of individual crystals in Sb <sub>2</sub> S <sub>3</sub> thin films and nanostructures for tunable metasurfaces” <i>(winner of the scholarship competition by Thermo Fisher / CSMS)</i>
14:45	Martin Kalbáč “2D materials for application in devices”
15:00	Ivo Kuběna “The influence of powder modification on printed microstructure of the VDM 699XA”
15:15	Josef Skopalík “Detection of Gd-Rhod liposomes diffusion and stability in model of dermal tissue and wound structure”
15:30	<b>Poster session + coffee break</b>
16:00	<b>Czech-Biolmaging session</b> (chair: Pavel Hozák)
16:00	Pavel Hozák “News from Czech-Biolmaging”
16:20	<b>Invited talk</b> Martin Mistrík ““Laser wars” at the cellular and subcellular level”
16:50	<b>Czech optical cluster session</b> (chair: Petr Příklad)
16:50	Petr Příklad “Introduction of the Czech optical cluster”
17:10	<b>Invited talk</b> Josef Kapitán “50 years of Raman optical activity - a rich history and a look into the future”
17:40	Break
19:00	<b>Social evening with banquet</b> (in Pevnost poznání)

### Wednesday 7<sup>th</sup> June 2023

9:00	<b>Session III. – Optics and Instrumentation</b> (chairs: Kamila Hrubanová and Dušan Chorvát)
9:00	<b>Invited talk</b> Michal Horák “Electron energy loss spectroscopy and its applications in nanophotonics illustrated mostly on gallium nanoparticles”
9:30	Dušan Chorvát “Advanced optical microscopy as a tool for visualisation of micro-plastics”
9:45	Miroslav Šlouf “4D-STEM/PNBD: Powder electron diffraction in SEM made fast and easy”
10:00	František Kitzberger “Utilization of advanced software features for better, faster, and less laborious segmentation of data from TEM and 3D-SEM”
10:15	Radek Dao “AFM-in-FIB/SEM: Advancements for in-situ sample analysis in batteries”
10:30	<b>Poster session + coffee break</b>

11:00	<b>Technology news II</b> (chairs: Jana Nebesářová and Vladislav Krzyžánek)
11:00	Carl Zeiss / Pavel Krist "The Fastest and Most Sensitive Confocal Microscopes with Superresolution for Life Cell Imaging"
11:15	HPST / Barbora Kobidová "Igniting new confocal Imaging Potential of Nikon AX/AX-R in a Combination with new Super-resolution Module NSPARC"
11:30	KRD / Jiří Vašák "IBIDI: 3D Cell Culture"
11:45	Pragolab / Martin Kopecký "Pushing the Boundaries: Latest Advances in High-End Microscopy Technology for Leica-Microsystems, Delong Instruments and Telight"
12:00	Specion, Leica Microsystems / Andreas Nowak "Discover how to use Freeze Fracture to Explore the Subcellular World"
12:15	SVEN BioLabs / Tomáš Pop "Live cell super resolution imaging based on spinning-disc and optical photon reassignment"
12:30	<b>Conclusion</b>
12:40	<b>Lunch</b>
13:45	<b>Excursions to local laboratories</b> <ul style="list-style-type: none"><li>• Czech Advanced Technology and Research Institute (CATRIN)</li><li>• Department of Optics, Faculty of Science, Palacký University</li><li>• Institute of Molecular and Translational Medicine, Faculty of Medicine and Dentistry, Palacký University</li></ul>