3-5 September 2024

University of Warsaw Library, Warsaw, Poland

Program

Warsaw Summer School on Advanced Optical Imaging

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Program

Day 0, 2 SEPTEMBER 2024

	(OPTIONAL) Warsaw Sightseeing Tour

Day 1, 3 SEPTEMBER 2024

8:00	**Registration & Coffee & Cookies**
9:00	**Welcome Remarks**
9:10	**Optical imaging - physical basics** Maciej Wojtkowski
9:55	**Optical Coherence Tomography and the promise of virtual biopsy** Rainer A. Leitgeb
11:25	**Coffee break**
11:55	**Seeing anywhere in the brain through 100mm thin glass fibre** Tomáš Čižmár
13:25	**Lunch break**
14:10	**Poster session A**
15:10	**Physics of imaging in fluorescence microscopy** Jörg Enderlein
16:40	**Poster session B**
18:00	**Welcome Reception** Copernicus Science Center
21:00	**End of the day 1**

Day 2, 4 SEPTEMBER 2024

8:00	**Registration & Coffee & Cookies**
8:30	**Polarisation Sensitive OCT and Immuno-OCT, principles and clinical application in pulmonology and gastroenterology** Johannes F. de Boer
10:00	**OCT as a commercially available technology - considerations from an industry perspective** Michael Leitner
10:45	**Coffee break**
11:15	**Fluorescence in Tissue Diagnostics and Clinical Applications** Laura Marcu
12:45	**Conference photo**
12:55	**Lunch break**
13:45	**Chemometrics and Machine Learning in Raman Spectroscopy** Shuxia Guo
15:15	**Coffee break**
15:30	**Lifting Your Academic Career: Lessons from Olympic Weightlifting** Mateusz Szatkowski

16:30	**Coffee break**
16:45	**Metabolic Imaging for Sepsis Characterization of Kidney Tissue Using Two-Photon Excited Fluorescence Lifetime Microscopy** Stella Greiner
17:00	**A Novel Integration of 1P Confocal- and Multiphoton-FLIM in One System** Taravat Saeb Gilani
17:15	**1.7 MHz Fourier domain mode locked laser at 840 nm for retinal imaging** Marie Klufts
17:30	**Common path optical diffraction tomography for refractive index analysis of lipid droplets** Piotr Zdańkowski
17:45	**Super-Resolution Microscopy Based on the Inherent Fluctuations of Dye Molecules** Radek Lapkiewicz
18:00	**End of the day 2**

Day 4, 5 SEPTEMBER 2024

8:00	**Registration & Coffee & Cookies**
8:30	**Fiber optics couplers and lanterns for OCT and confocal endomicroscopy** Caroline Boudoux
9:15	**Lensless Digital Holographic Microscopy: Fundamental Principles & Applications** Maciej Trusiak
10:45	**Coffee break**
11:15	**Advances in Ptychography** Lars Lötgering
12:45	**Lunch break**
13:45	**Ultra High Resolution OCT for imaging the anterior eye segment** Kostadinka Bizheva
14:30	**Functional retinal imaging** Kostadinka Bizheva
15:15	**Coffee break**
15:45	**Special event: It Goes without Saying: Taking the Guesswork Out of Your PhD in Engineering** Caroline Boudoux
16:30	**Closing remarks** Maciej Wojtkowski

Day 5, 6 SEPTEMBER 2024

(OPTIONAL) Lab tours at ICTER – International Centre for Translational Eye Research

Organizers:

candela · ICTER International Centre for Translational Eye Research · IChF

Honorary patrons:

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Poster Session A

P1: Azimuthal backflow in light carrying orbital angular momentum. Bernard Gorzkowski

P3: OCT with Tunable Focus - Towards Quantification of Ocular Opacifications. Keerthana Soman

P5: Spatial Light Modulator based wavefront sensor with structured light. Kamil Kalinowski

P7: Mouse retina hemodynamics analysis using advanced optical imaging, estimating pulse wave frequency, phase and velocity. Wiktor Kulesza

P9: Design and development of a static Fourier transform spectrometer for microplastic detection in aquatic environments. Filip Łabaj

P11: Non-invasive imaging through a dynamic scatterer in the photon counting regime. Adrian Makowski

P13: Interferometric speckle contrast optical spectroscopy. Klaudia Nowacka

P15: Towards environmentally stable laser for nonlinear imaging: ultrafast all-fiber Nd-doped oscillator at 928 nm. Mateusz Pielach

P17: Low-cost Full-Field Optical Coherence Tomography using a Raspberry-Pi. Taylor Sanderson

P19: Comparative analysis of multispectral imaging of T and B cells in murine spleen utilizing LDIR, FTIR, and OPTIR spectroscopy techniques. Artem Shydliukh

P21: 3D Super-resolution Optical Fluctuation Imaging with Temporal Focusing two-photon excitation. Pawel Szczypkowski

P23: Investigating Phase and Amplitude Noise in MEMS VCSEL-Based OCT Systems. Syed Ameer Hamza Zaidi

P25: Spectral Domain Visible Optical Coherence Tomography using Balanced Detection. Lucy Abbott

P27: Lensless polarizing holographic microscopy. Piotr Arcab

P29: Tunable four-wave mixing based light source for nonlinear imaging applications. Cássia Corso

P31: Color matching of two-photon stimuli projected by scanning laser. Mateusz Grochalski

P33: In Vivo Insights: Vitreous Dynamic Study Using SS-OCT System. Evangeline Priyadharshini Devaraj

P35: Autofocusing for numerical reconstruction in off-axis lensless digital holographic microscopy. Julia Dudek

P37: From Development to Detection: Dendritic Nanostructures in SERS for Advanced Biomolecular Analysis. Aradhana Dwivedi

P39: Investigation of novel methods for hyperspectral data analysis in multiphoton microscopy. Maciej Barna

P41: Fourier transform spectroscopy using broadband coherent light sources. Agata Kotulska

Poster Session B

P2: Nonlinear Phase Wrapping for Linear Information Forwarding. Glitta Rosalia Cheeran

P4: Mode field adapters improving the efficiency of fiber laser systems for nonlinear imaging. Agnieszka Jamrozik

P6: Luminance of two-photon stimuli. Oliwia Kaczkoś

P8: Efficient multiphoton microscopy with high-energy picosecond laser pulses. Katarzyna Kunio

P10: Metasurface Enhaced Lensless Endoscope. Amir Loucif

P12: STOC-T method with increased SNR for in vivo cellular-level imaging of the human retina. Marta Mikuła-Zdańkowska

P14: Colorimetric measurements obtained by spectrally corrected reading of RGB imaging system. Marcin Pelko

P16: SOA designs for MEMS-VCSEL based swept sources. Dixon Sajan

P18: Monitoring droplet dynamics of a levitated droplet. Sanath Shetty

P20: In-vivo analysis of the optical discontinuity zones at different accommodation demands. Keerthana Soman

P22: Expanding the toolbox of in cellulo transient absorption spectroscopy. Abha Valavalkar

P24: Material parameters study of 1060nm SG-DBR InGaAs/GaAs-based laser for optical coherence tomography. Syed Farhan Ali Naqvi

P26: Pixel Super Resolution in Lensless Digital In-Line Holographic Microscopy. Karolina Niedziela

P28: Digital in-line holographic microscopy in low photon budget conditions. Mikołaj Rogalski

P30: Dark adaptation for one- and two-photon visual stimuli. Magdalena Smolis

P32: Quantitative evaluation of tissue clearing and expansion using brightfield microscopy. Wiktoria Szymska

P34: Analysis and optimization of large area two-photon polymerization phase fabrication. Emilia Wdowiak

P36: Measuring Pulsatile Motion in Ocular Structures with Swept-Source OCT. Vasantha Kumar Kathirvelu

P38: Optimization-free, phase utilizing alignment method for multiple spectrometer-based OCT. Piotr Kasprzycki

P40: Quantitative estimation of total retinal arterial blood flow using real-time Doppler holography at 24,000 frames per second. Michael Atlan

P42: Advanced Light Microscopy Node Poland. Jędrzej Szymański