

Meta-Active Annual Meeting 2024 and Jena LIGHT 2024 - Photonics meets AI

Preliminary program version 09.08.2024

Venue: Abbe Center of Photonics, Jena, Germany

Date: September 2-6, 2024

GER AUS Monday, 02.09.2024 Tuesday, 03.09.2024 Wednesday, 04.09.2024 Thursday, 05.09.2024 Friday, 06.09.2024

| local elements of Meta-Active meeting | | hybrid elements of Meta-Active meeting | | | | | | | |
|---------------------------------------|-------|---------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 08:30 | 16:30 | Meta-Active Welcome & Update | | Talk Session 5 (2D Material MS) Sarka Vavreckova Xuechen Jing Benjamin Laudert Zlata Fedorova Athira Kuppadaakkath | | Strategy meeting all PIs hybrid | Representative Voting all PhD students hybrid | Demetri Psaltis (EPFL, keynote) online Nonlinear Computation with Linear Optics | Yaron Bromberg (Jerusalem, keyn.) Quantum Communication and Computation with High-Dimensional Entangled Photons |
| 09:00 | 17:00 | Talk Session 1 (Nonlinear MS) Martin Miculka Laura Valencia Muyi Yang | | | | Coffee break 20' | | Clara Wanjura (MPL Erlangen) Fully Nonlinear Neuromorphic Computing with Linear Wave Scattering | Mauro Paternostro (Palermo) |
| 09:30 | 17:30 | | | | | Coffee break 20' | | | |
| 10:00 | 18:00 | Coffee break 20' | | Coffee break 20' | | Talk Session 7 (Tunable MS) Rahil Rezwan Ziwei Yang Maximilian Beddoe Shiu Hei Lam Sebastian Klimmer | | Coffee break & posters | Coffee break & posters |
| 10:30 | 18:30 | Talk Session 2 (Quantum MS) Jinliang Ren Saniya Shinde Carlo Panu Matthias Wurdack | | Talk Session 6 (Light Emitting & Lasing MS) Lukas Jäger Ayesheh Bashiri Dawei Liu Fengkai Wei Marijn Rikers | | | | J. Giesen & A. Breuer (FSU Jena) Einsum - A Formal Language for Tensor Expressions | Elena Goi (USST Shanghai) online Hybrid Nanoprinted Neural Networks |
| 11:00 | 19:00 | | | | | Coffee break 20' | | | |
| 11:30 | 19:30 | | | | | | | | |
| 12:00 | 20:00 | Lunch (Casino Beutenberg) | | | | Sina Saravi (FSU Jena) AI Photonics - Merging Disciplines | | Carlo Holly (Aachen) | Peter Bienstman (Ghent) Optical Computing with Silicon Photonic Reservoirs |
| 12:30 | 20:30 | | | Meta Active strategy lunch with all local PIs | | Lunch (Casino Beutenberg) | | Lunch (Casino Beutenberg) | Lunch (Casino Beutenberg) |
| 13:00 | 21:00 | Talk Session 3 (MS Devices & Applications 1) Sarah Dean Min Jiang Anna Fitriana Ning Lyu | | Meta-Active Networking lunch with all local doctoral candidates & postdocs | | | | | |
| 13:30 | 21:30 | | | Pizza Buffet | | Lunch (Casino Beutenberg) | | Lunch (Casino Beutenberg) | Lunch (Casino Beutenberg) |
| 14:00 | 22:00 | Coffee break 20' | | | | | | | |
| 14:30 | 22:30 | Talk Session 4 (MS Devices & Applications 2) Luyao Wang Wenyi Li Angela Barreda Shahban Ali Neuton Li | | Jena LIGHT opening (at 14:15) | | Wolfram Pernice (Heidelberg) | | Alexander Heinecke (Intel) | Birgit Stiller (MPL Erlangen) |
| 15:00 | | | | Carsten Rockstuhl (KIT) Machine Learning Enhanced Design of Meta-Atoms and Metasurfaces | | | | Jean-Pierre Seifert (TU Berlin) Neuromorphic Accelerators Based on Phase Change Materials in Silicon-Photonics1 | Janik Wolters (TU & DLR Berlin) |
| 15:30 | | | | Bhavin Shastri (Queen's CA) online Neuromorphic Photonic Computing: Applications, Classical to Quantum | | Stefanie Kroker (Braunschweig) | | | |
| 16:00 | | | | | | Coffee break & posters | | Coffee break | Farewell coffee & goodbye |
| 16:30 | | | | Coffee break | | Tatsuhiro Onodera (Cornell) Deep Physical Neural Networks: A Case Study with a 2D Programmable Photonic Chip | | Visit of photonics research labs Leibniz Institute of Photonic Technology IPHT | |
| 17:00 | | | | Humeyra Caglayan (Tampere) Imaging Applications through Learning-Enhanced Metasurface Optics | | | | | |
| 17:30 | | Lab tours & group meetings | | | | Aydogan Ozcan (UCLA, keynote) Programming Light Diffraction for Information Processing and Computational Imaging | | | |
| 18:00 | | | | Dragomir Neshev (ANU Canberra) Analog image processing with linear and nonlinear flat optics | | | | Mario Chemnitz (FSU Jena) Neuromorphic Computing with Nonlinear Dynamics in Single-mode Fibers | |
| 18:30 | | | | | | | | | |
| 19:00 | | | | BBQ, Beer & Posters We will enjoy a typical Thuringian barbeque while having a first look at the posters. | | Transfer to Botanical Garden | | | |
| 19:30:00 | | Informal Meta-Active Dinner (own expense) restaurant in city | | | | | | Pizza, Wine & Posters We will continue our discussions at the posters. | |
| ... | | | | | | Conference dinner | | | |
| 22:00 | | | | | | | | | |