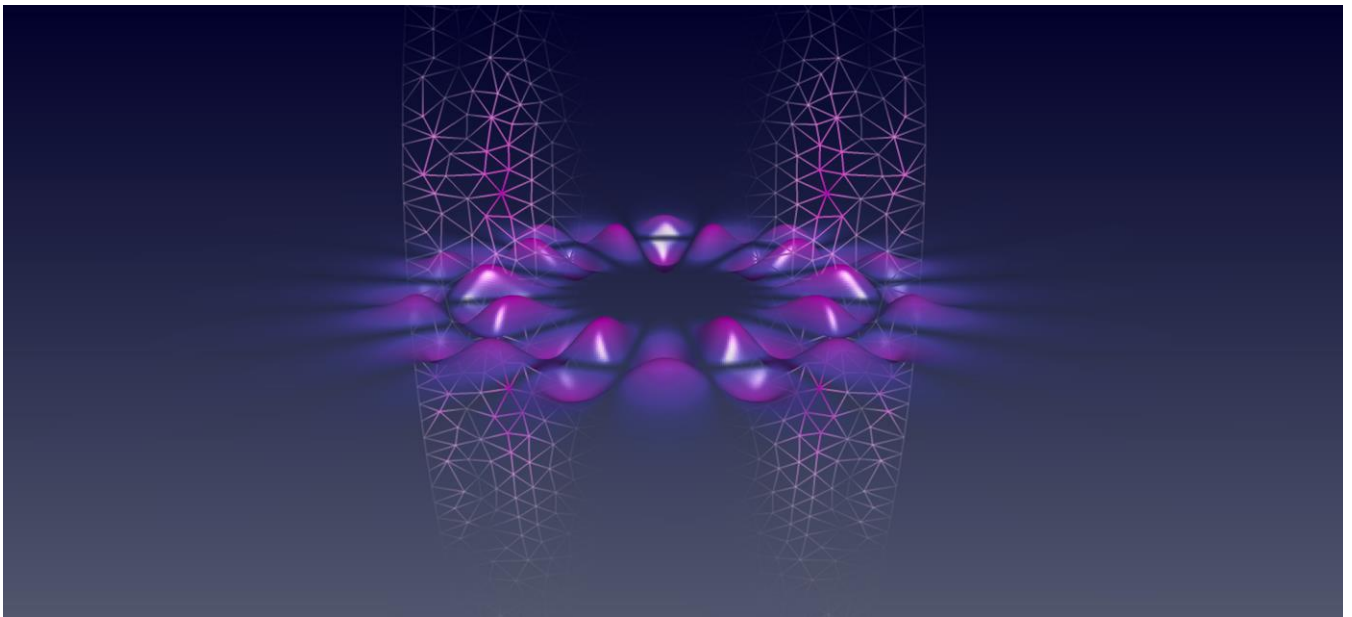


17th Annual Meeting Photonic Devices

AMPD2025



Date: 02-04 April 2025

Location: Zuse Institute Berlin, Germany

Venue

Zuse Institute Berlin
Takustraße 7
14195 Berlin
Germany



Organizers

The Annual Meeting Photonic Devices is organized by members
of the Computational Nano Optics group.
www.zib.de/cno

Wednesday

From	Speaker	Affiliation	Title
08:45	Coffee		
09:15	Sven Burger	Zuse Institute Berlin	Opening
09:30	Kurt Busch	Humboldt Universität zu Berlin	Atom-Surface Interactions: Theory and Computations
10:00	Mohsen Rahmani	Nottingham Trent University	Engineering optical metasurfaces for imaging and sensing applications
10:30	Jesper Mork	Technical University of Denmark	Semiconductor Nanolasers: Theory and Experiment
11:00	Gilles Renversez	Institut Fresnel, Université d'Aix-Marseille	Nonlinear slab: rigorous modelling of the scattering vector problem
11:15	Xuemei Gu	Friedrich Schiller University Jena	AI-driven discovery of quantum optics experiments with a physical graph representation
11:30	Lunch Break		
13:00	Olivier Martin	Swiss Federal Institute of Technology, Lausanne (EPFL)	Modelling nanophotonic structures with the surface integral equation technique
13:30	Bumki Min	Korea Advanced Institute of Science and Technology (KAIST)	Non-equilibrium Light-Matter Interactions in Photonic Temporal Crystals

Wednesday

From	Speaker	Affiliation	Title
14:00	Klaus Jäger	Helmholtz-Zentrum Berlin für Materialien und Energie GmbH	Increasing PV energy yield and decreasing temperature via thermal management
14:15	Ivan Sekulic	JCMwave GmbH	Solving inverse problems with physics informed Bayesian optimization
14:30	Peter Petrik	HUN-REN Centre for Energy Research, Budapest	Modeling of low-dimensional, combinatorial and periodic plasmonic structures
14:45	Coffee Break		
15:45	Costanza Toninelli	CNR-INO, European Laboratory for Non-Linear Spectroscopy in Florence	Molecules in solids for photonic quantum technologies
16:15	Femius Koenderink	AMOLF, Amsterdam	Ultrafast real space and k-space microscopy of amplifying and lasing nanophotonic lattices
16:45	Alberto Paniate	INRiM, Torino	Substrate-driven modulation of photon pair generation in quantum optical metasurfaces
17:00	Maciej Napiórkowski	Wroclaw University of Science and Technology	Optimization of Few-Mode Nanostructured Optical Fibers Using Generative Inverse Design Networks
17:15	Poster Session		
	Pizza and drinks at Zuse Institute Berlin		
19:30	End of Day		

Wednesday Poster Session

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Nr.	Speaker	Affiliation	Title
1	August Joan Otto Röell	AMOLF, Amsterdam	Numerical Simulation and Design of High-Overtone Bulk Acoustic Resonators
2	Wenhua Zhao	Humboldt-Universität zu Berlin	Real-time surface plasmon polariton propagation in silver nanowires
3	Maciej Dems	Lodz University of Technology	Eliminating Temperature Nonuniformity in Gallium-Nitride One-Dimensional Laser Array
4	Jonas Schaible	Helmholtz-Zentrum Berlin für Materialien und Energie GmbH	A New Algorithm to Design PV with Arbitrary Color
5	Daniel Repp	Friedrich-Schiller-Universität Jena	Contour integration solution for Semiconductor-MaxwellBloch equations in 1D in the frequency domain
6	Paul Oleynik	Brandenburgische Technische Universität Cottbus-Senftenberg	Mie resonance-based hybrid metal-dielectric metasurface for optical switching
7	Kezheng Li	University of York	Metasurface-enhanced Fourier transform spectrometer for improving drug absorption in the fingerprint region
8	Jon Schlipf	Leibniz Institute for High Performance Microelectronics	CMOS-compatible near-field-coupled plasmonic titanium nitride nanotriangle arrays
9	Julius Kullig	Otto-von-Guericke Universität Magdeburg	Response strength computation for dielectric microcavities with an exceptional point
10	Guilherme Carraro Carella	Humboldt Universität zu Berlin	Surface response of metallic nanospheres probed by light, dipoles, and electrons
11	Paul Schlaugat	Humboldt Universität zu Berlin	Modeling of plasmons in graphene nanostructures
12	Surena Fatemi	Saarland University	Quantum photonics using color centers in a diamond membrane coupled to a photonic structure
13	Zoltan Sztranyovszky	University of Birmingham	Tunable ultra high index plasmonic metamaterials
14	Kilian Mark	Saarland University	Fabrication approach for all-diamond nano cavity structures in submicron membranes
15	Trevor Vrckovnik	Fraunhofer Institute for Applied Optics and Precision Engineering IOF	A Coupled Mode Theory Solver for Non-Linear Waveguide Simulations

Wednesday Poster Session

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Nr.	Speaker	Affiliation	Title
16	Vlad Medvedev	Fraunhofer-Institut für Integrierte Systeme und Bauelementetechnologie IISB	Metasurface Inverse Design via a PINN-enhanced cDCGAN
17	Lingraj Kumar	University of Florence	A Scalable and Portable Fibre-Integrated Single-Photon Source for Telecom Quantum Networks
18	Alexander Schomburg	Universität Potsdam	Thermal magneto(hydro)dynamics: a rectified electromagnetic force and its fluctuations
19	Kenneth Lütticke	Universität Potsdam	Tapping into a plasmonic hologram: modelling SNOM images of scratched metal films
20	Shiu Hei Lam	Friedrich Schiller University Jena	Polarization-to-Spatial Degree-of-Freedom Conversion with Near-100% Efficiency
21	Krzysztof Głowiński	University of Warsaw	Optimization of top-hat single-mode optical fiber using convolution neural network and generative inverse design
22	Géza Szántó	HUN-REN Centre for Energy Research, Budapest	Spectroscopic analysis of gold gratings using finite element models: a comparative study of 2D and 3D simulations with ellipsometric measurements
23	Anne Talneau	CNRS / C2N Centre de Nanosciences et de Nanotechnologies, Palaiseau	How far Propagating Topological Modes within 1D waveguide arrays are protected against fabrication errors?
24	Leonhard Lohr	Physikalisch-Technische Bundesanstalt (PTB), Berlin	Hybrid Metrology for Enhanced Nanoscale Grating Characterization using Soft X-ray Scattering and Fluorescence
25	Felix Binkowski	Zuse Institute Berlin	Efficient computation of waveguide modes based on AAA rational approximation
26	Poul-Erik Hansen	Danish National Metrology Institute	Recent progress in optical nanometrology for semiconductor Industry
27	Jacob Relle	Helmholtz-Zentrum Berlin für Materialien und Energie GmbH	Electronics of Nanotextured Perovskite Devices
28	Marinus Lehmann	Universität Potsdam	Light-induced frequency shifts in a quartz microbalance device
29	Dustin Siebert	Paderborn University	Design and optimization of topological resonators based on valley photonic crystals
30	Marie Braasch	Friedrich-Schiller-Universität Jena	Enhancing Optical Deep Neural Networks with Second-Harmonic Generation for Improved Classification Accuracy and Contrast

Thursday

From	Speaker	Affiliation	Title
08:30	Katja Höflich	Ferdinand-Braun-Institut (FBH), Berlin	Double helical antennas for direct coupling to quantum emitters or plasmonic waveguides
09:00	Tim Liedl	Ludwig-Maximilians-Universität München	DNA-assembly for photonics, plasmonics and biosensing
09:30	Marcel Schubert	University of Cologne	Microscopic lasers as biointegrated sensors
09:45	Wojciech Rudno-Rudziński	Wrocław University of Science and Technology	Telecom wavelength emitting InAs quantum dots grown on silicon
10:00	Coffee Break		
10:45	Philippe Lalanne	Université de Bordeaux	Modeling resonant optics: from individual resonators to disordered metasurfaces
11:15	Jean-Michel Gérard	Université Grenoble Alpes	Isolated color centers in silicon as deterministic single photon sources for integrated quantum photonics
11:45	Fridtjof Betz	Zuse Institute Berlin	On resonances in periodic systems
12:00	Gino Wegner	Humboldt Universität zu Berlin	Continuum framework in plasmonic systems
12:15	Lunch Break		

Thursday

From	Speaker	Affiliation	Title
13:45	Giuseppe Leo	Université Paris Cité	Nonlinear light structuring with optical metasurfaces
14:15	Thomas Pertsch	Friedrich Schiller University Jena	Tunable light-matter interaction in metasurfaces for space-momentum-time control of light
14:45	Christos Tserkezis	University of Southern Denmark, Odense	Semi-analytic implementation of quantum effects in plasmonic nanoparticle-on-mirror architectures
15:00	Günter Kewes	Humboldt Universität zu Berlin	The Refractive Index Neglects Resonant Near-Fields
15:15	Departure to Allied Museum		
16:00	Activity		Visit Allied Museum https://www.alliiertenmuseum.de/
18:30	Workshop Dinner		Restaurant NEA OLYMPIA, Unter den Eichen 88, 12205 Berlin (Everyone pays for themselves)

Friday

From	Speaker	Affiliation	Title
09:00	Haejun Chung	Hanyang University	Inverse Design in Photonics: Challenges and Breakthrough
09:30	Andrey Evlyukhin	Leibniz Universität Hannover	Secondary multipole decomposition for electromagnetic resonances of multicomponent structures
10:00	Thorsten Feichtner	University of Wuerzburg	Electrical Modulation of Single Plasmonic Nano-Rod Resonance
10:15	Jan David Fischbach	Karlsruher Institut für Technologie	AAA rational approximation of the optical response of multi-input, multi-output systems
10:30	Coffee Break		
11:15	Rémi Carminati	Institut Langevin, Paris	Light scattering from a random time-varying medium
11:45	Sergei Gladyshev	University of Graz	Polarization-independent high-Q state mediated by the transverse Kerker effect
12:00	Daniel Grom	Otto-von-Guericke Universität Magdeburg	Perturbations to coupled optical microrings at higher-order exceptional points: A graph-theoretical perspective
12:15	Ruming Zhang	Technical University of Berlin	The perfectly matched layers and the application to scattering problems with periodic layers
12:30	Lunch Break		

Friday

From	Speaker	Affiliation	Title
14:00	Costantino De Angelis	University of Brescia	Analog computing with nonlinear flat optics
14:30	Tim Schröder	Humboldt Universität zu Berlin	Diamond Nanophotonic Spin-Photon Interfaces
15:00	Anna Tasolamprou	National and Kapodistrian University of Athens	THz graphene-based metasurfaces for wave manipulation
15:30	Bernd Bodermann	Physikalisch-Technische Bundesanstalt (PTB), Berlin	A new approach for model-based optical bidirectional measurements
15:45	TBC		
16:00	Closing Remarks		
16:15	End of Workshop		

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