

EOS

European Optical Society

Coherence for Europe

Program Overview

**EOS Topical Meeting
on Diffractive
Optics 2019**

**16. – 19. September 2019
Jena, Germany**



Sunday, 15 September

Monday, 16 September

Tuesday, 17 September

Wednesday, 18 September

Thursday, 19 September

Registration				8:30
THEORY & CONCEPTS I	AR & VR	NANOSTRUCTURES	APPLICATIONS II	
S. Burger: Spectral Expansion of the Scattering Response of Resonant Nanostructures	B. Kress: After 50 years in the making, have diffractives finally captured the attention of mainstream industry?	P. Genevet: Semiconductor Metasurfaces and applications	M. A. Golub: Non-paraxial design of diffractive optical elements and meta-surfaces	9:30
M. Yousefi: Simulation of microoptics under inhomogeneous illumination	B. H. Kleemann: A diffractive see-through waveguide AR/VR display with up to 100° horizontal Field of View	A. Talneau: Sub-wavelength Metamaterial for a Finely Tailored Coupling Coefficient within Waveguides Arrays	D. Fischer: Computer generated holography for lithography on curved surfaces	10:00
H. Zhong: A k-domain method for fast propagation of electromagnetic fields through graded-index media	C. H. Gan: Modelling and characterisation of two-dimensional pupil expansion with crossed gratings in an augmented-reality display	K. Nikolaev: A computational scheme for the characterization of 3D nano-structures using grazing-incidence X-ray fluorescence	S. Calvez: Towards high-speed tuning Cavity Resonator-Integrated Guided-mode Resonance Filters	10:20
L. Li: Scattering matrices and polarization properties of gratings in conical mounting and crossed gratings	S. Zhao: A geometric waveguide and a holographic film for the head-mounted display	P. Lalanne: Metalenses: field of view and aberration	S. Gharbi Ghebjagh: Multifocal complex-value phase zone plate for 3D focusing	10:40
Coffee Break				11:00
GRATINGS I	THEORY & CONCEPTS II	APPLICATIONS I	THEORY & CONCEPTS V	
U. Zeitner: Tailored diffraction by lithographically realized nano-structures	J. Jahns: Planar-integrated free-space optics – old concept, new applications	A. Erdmann: Understanding and Optimization of EUV Light Diffraction and Imaging for Lithography	L. Yang: From iterative Fourier transform algorithm (IFTA) to "ray mapping" and back	11:30
E. - K. Koussi: Resonant grating demonstration in the inner of a cylinder	S. Steiner: Design concept for AR lightguide devices	M. Kraus: Comparison of different concepts for compact cross-grating spectrometers	R. Shi: Connection of field solvers: microstructures and lenses	12:00
M. Burkhardt: Customized EUV-Gratings	Z. Wang: Numerical implementation of the homeomorphic Fourier transform and its application to physical-optics modeling	X. Wei: Ptychography with multiple wavelength illumination	K. Song: Customized Diffuser Design based on Freeform Lens Array	12:20
N. Ebizuka: Novel gratings of high dispersion and high efficiency II	J. Babington: Classical Optics, Rays and Waves: Duality from the Feynman Path Integral	H. Ichikawa: Diffractive optics encounters optical coherence tomography	Q. Song: Inverse design for wavelength selective thick diffractive optical element	12:40
Lunch				13:00

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GRATINGS II

T. Hakala:
Condensation and lasing phenomena in periodic nanoparticle lattices

J. Wüster:
Nano-structured diffraction gratings as polarizing beam splitters under vertical incidence

E. - K. Koussi:
Thermally Activated Resonant Grating using Vanadium Dioxide Synthesized by Pulsed Laser Deposition

E. Muslimov:
Advanced cross-disperser gratings design for LUVDIR-POLLUX spectropolarimeter

Coffee Break with Poster Session

GRATINGS III

K. Otaki:
High accurate measurement for the in-plane distortion of the semiconductor wafer

S. Kunath:
Systematic Optimization of a Lightguide Coupling Setup

F. Wyrowski:
Physical-optics analysis of lightguides for AR & MR glasses

THEORY & CONCEPTS III

P. Lalanne:
Light interaction with nanoresonators: mode volume and quasinormal mode expansion

F. Wyrowski:
On the importance of homeomorphic operations in physical and geometrical optics

D. Baladron-Zorita:
Physical-Optics Anatomy of the Gouy Phase

Z. Xi:
Retrieving the Size of Deep-subwavelength Objects via Tunable Spin-Orbit Interaction

THEORY & CONCEPTS IV

S. - T. Hung:
Concepts for modeling volume scatterers

A. Hännönen:
Geometric phase in polarization beating of light waves

S. Mao:
Optimal design of multilayer diffractive optical elements and its application in hybrid imaging system

SPONSORS

Sponsor Session:
HOLOEYE Photonics AG

Sponsor Session:
Sunny Optical Technology Group

Sponsor Session:
LighTrans International UG

Conference Excursion & Dinner at Landgrafen Restaurant

THEORY & CONCEPTS VI

S. Nie:
Design of a spatial shaped laser beam used for piston temperature field simulation

B. Asamoah:
Second harmonic generation in arrayed bull's eye structure

X. Yu:
Physical-optics evaluation of BSDF for microstructures

I. Bhattacharya:
Study of Intensity distributions in the far-field region of azimuthal Walsh filters

Closing Ceremony

14:00

14:30

14:50

15:10

15:30

16:00

16:20

16:40

19:00

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22:00

Welcome Reception & Registration at Villa Rosenthal

Poster Presentations

The posters will be displayed throughout the conference

L. Zeng:

Broad-beam scanning exposure for fabricating gratings of large size and low stray light

H. Partanen:

Wavefront folding interferometer used for spatial coherence measurement

H. Pesonen:

Effect of resonance gratings on temporal coherence of optical pulses

G. Widholz:

Effective medium beam shaper

D. C. Kim:

Adjoint-based Optimization for Diffractive Beam-Splitters

S. Mohamed:

Transmission and Lasing measurement of Si₃N₄ photonic crystal slab

L. Yang:

Optical design of light shaping element beyond the paraxial approximation