XXVI International Workshop on Optical Waveguide Theory and Numerical Modelling
Bad Sassendorf, Germany, April 13–14, 2018
XXVI International Workshop on Optical Wave & Waveguide Theory and Numerical Modelling

(contributors, affiliations)
≈ 65 participants,

- 45% student, 55% regular registrations,
- 95% academia/institutions, 5% commercial affiliation.
Submission timeline:
XXVI International Workshop on Optical Wave & Waveguide Theory and Numerical Modelling
Technical program:

- 62 scientific presentations,
- 8 oral sessions, 1 poster session,
- 10 ¾ h talks, 2 h posters,
- 4 h of coffee & lunch breaks (+ workshop dinner).
Last minute changes:

- Swap of papers O-4.1 and O-8.1.
- Cancellation of Poster P-20.
Technicalities:

- **Posters:**
  on display Friday, 8:30 – Saturday, 16:30,

- **Oral presentations:**
  upload in advance (check), contact chairs,
  15 min / 30 min *including discussion.*
Friday 09:00 – 10:15, Functional devices

09:00  D.N. Chigrin (invited),
       *Multiphysics simulations in nanophotonics*

09:30  L. Ebers, M. Hammer, J. Förstner,
       *Slab waveguide steps with rounded corners at oblique incidence*

09:45  N. Dhingra, J.C. Song, G.J. Saxena, E.K. Sharma,
       B.M.A. Rahman,
       *Germanium Telluride Phase Change Material based 1×2 Electro-Optic Switch*

10:00  A.E. Kaplan, A. Parini, G. Bellanca, P. Bassi, S. Trillo,
       *A Compact Wavelength Router Dynamically Reconfigurable through Destructive Interference*
Friday 10:45 – 12:00, Quantum optics / active devices

10:45  J. Münzberg, A. Vetter, F. Beutel, W. Hartmann, S. Ferrari, W. Pernice, C. Rockstuhl (invited),
Design of integrated quantum optical single-photon detectors

11:15  P.-I. Schneider, L. Zschiedrich, X. Garcia-Santiago, S. Burger,
Optimization of quantum optical devices with machine learning

11:30  F. Spallek, A. Buchleitner, T. Wellens,
Upconversion in optimized photonic multilayer structures

11:45  H. Lüder, M. Gerken,
FDTD modelling of nanostructured OLEDs: analysis of simulation parameters for accurate radiation patterns
Friday 13:00 – 14:30, Numerical methods


13:30  G. Granet, *Multidomain spectral method for optical-waveguide analysis*

13:45  H. Kleene, D. Schulz, *An Assessment of Faber Polynomial Expansions for the Time Domain Solution of Maxwell’s equations*

14:00  M.M.R. Elsawy, G. Renversez, *Vector solver for 2D highly nonlinear plasmonic waveguides: a rigorous analysis*

14:15  R. Kumar, A. Sharma, *Analysis of Absorption in the Absorbing Boundary Condition*
Friday 15:00 – 16:30, Waveguide theory

15:00  J. García de Abajo (invited),
       Quantum Physics with Plasmons in Graphene and other Atomic-Scale Systems

15:30  L. Cahill,
       Field Solutions for Large Area Graded-Index Waveguides

15:45  P. Kwieicen, I. Richter, V. Kuzmiak, J. Čtyroký,
       Magnetooptic Rigorous Coupled Wave Analysis – numerical investigation of nonreciprocal waveguiding structures

16:00  A.-L. Fehrembach, B. Gralak, A. Sentenac,
       Vectorial semi-analytical model for Fano resonances in guided mode resonance gratings

16:15  L. Yuan, Y.Y. Lu, Bound States in the Continuum Surrounded by Ultra-strong Resonances
Friday 16:30 – 18:30, Poster session

— Drinks available! —

Workshop dinner: All OWTNM-participants are cordially invited to the restaurant of the hotel Hof Hueck at 19:00.
Walking time ≈ 10 min, departure 18:40, courtyard in front of this building.
Friday 16:30 – 18:30, Poster session

— Drinks available! —

Workshop dinner: All OWTNM-participants are cordially invited to the restaurant of the hotel Hof Hueck at **19:00**.
Saturday 09:00 – 10:15, Plasmonics

09:00  A. Trügler (invited),
Plasmon and phonon polariton mapping in an electron microscope

09:30  M. Burda, P. Kwiecien, I. Richter,
Nonlocal resonant behavior in plasmonic nanostructures: analytical and numerical approaches

09:45  V. Myroshnychenko, N. Nishio, F.J. García de Abajo, J. Förstner, N. Yamamoto,
Nanoscale Imaging of Plasmon Modes of Metal Nanoparticles by Cathodoluminescence Spectroscopy

10:00  T. Weiss, E.A. Muljarov,
On the mechanisms of plasmon-enhanced chiroptical response
Saturday 10:15

Group photo!
Saturday 10:45 – 12:00, Nonlinear Photonics

10:45  K. Busch (invited),
Atom-Surface Interaction: Theory and Computations

11:15  W. Spiller,
The numerical investigation of colliding optical solitons as an all-optical-Gate using the Method of Lines (MoL)

11:30  V. Jandieri, R. Komeriki, D. Erni, W.C. Chew,
All-Optical Digital Amplification in Nonlinear Photonic Crystal Waveguides

11:45  I. Allayarov, S. Upendar, M.A. Schmidt, T. Weiss,
A New Definition for the Kerr Nonlinearity Parameter
Saturday 13:00 – 14:30, Biosensing and metamaterials

13:00  F. Michelotti (invited),
Theory and concepts for all-dielectric biosensing

13:30  M.Y. Azab, M.F.O. Hameed, A.M. Nasr, S.S.A. Obayya,
Multifunctional Plasmonic Photonic Crystal Fiber Biosensor

13:45  T. Repän, A. Novitsky, M. Willatzen, A. Lavrinenko,
Reversed phase propagation for hyperbolic surface waves

14:00  S.A. Hack, J.J.W. van der Vegt, W.L. Vos,
“Cartesian” light: Unconventional propagation of light in a 3D crystal of bandgap cavities

14:15  J. Čtyroký, P. Kwiecien, I. Richter, J.H. Schmid,
J. Gonzalo Wangüemert-Pérez, Í. Molina-Fernández,
A. Ortega-Moñux, P. Cheben, J. Litvik, M. Dado,
Design of Apodized and Chirped Bragg Gratings in Subwavelength Grating Metamaterial Waveguides
Saturday 15:00 – 16:15, Functional (nano-) photonics

15:00  S. Phang, A. Vukovic, F. Fotsa-Ngaffo, G. Gradoni, S.C. Creagh, P.D. Sewell, T. Benson (invited),
       Non-Hermitian Photonics from Parity-Time Symmetry to Pseudo-Hermitian Structures

15:30  D.S. Kumar, S.C. Creagh, S. Sujecki, T.M. Benson,
       Modelling capture of pump power in the core using deformed step index fibre

15:45  F. Negredo, M. Blaicher, A. Nesic, P. Kraft, J. Ott, W. Döfler,
       C. Koos, C. Rockstuhl,
       Efficient Optimization of the Trajectory of Photonic Wire Bonds

16:00  M.V. Cojocari, A.A. Basharin,
       Spatial separation of electric and magnetic field in toroidal metamaterial
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Thanks!
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Topical collection of *Optical and Quantum Electronics*, submission deadline: August 1, 2018.