

## Biological Physics Division Fachverband Biologische Physik (BP)

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### Overview of Invited Talks and Sessions

(Lecture Rooms: H 1028 and H 1058; Posters: A)

#### Plenary Talks related to BP

PV I	Mon	8:30– 9:15	H 0105	<b>Force and Function: Single Molecule Biophysics of Molecular Interactions</b> — ●HERMANN E. GAUB
PV IX	Tue	13:00–13:45	H 0105	<b>Nanoscopy with focused light</b> — ●STEFAN HELL
PV XX	Wed	20:00–21:00	Urania	<b>Musikalische Rhythmen und Algorithmen: Physiker auf anderen Wegen</b> — ●THEO GEISEL
PV XXVIII	Fri	8:30– 9:15	H 0105	<b>Nanocrystalline Junctions and Mesoscopic Solar Cells</b> — ●MICHAEL GRAETZEL

#### Invited Talks of BP sessions

BP 1.1	Mon	9:30–10:00	H 1028	<b>Light sheet-based fluorescence microscopy for quantitative biology</b> — ●ERNST H.K. STELZER
BP 7.1	Mon	14:30–15:00	H 1028	<b>Super-resolution imaging of small, fast moving cellular structures</b> — ●ALEXANDER ROHRBACH
BP 18.1	Tue	9:30–10:00	H 1028	<b>Multifaceted BAR-domain proteins to shape cell membranes</b> — COLINE PRÉVOST, MIJO SIMUNOVIC, HENRI-FRANÇOIS RENARD, EMMA EVERGREEN, HARVEY MCMAHON, LUDGER JOHANNES, JACQUES PROST, ANDREW CALLAN-JONES, ●PATRICIA BASSEREAU
BP 19.1	Tue	9:30–10:00	H 1058	<b>Emerging social behaviour during aggregation in Dictyostelium discoideum</b> — GIOVANNA DE PALO, DARVIN YI, THOMAS GREGOR, ●ROBERT ENDRES
BP 33.1	Wed	9:30–10:00	H 1058	<b>Feeling for cell function: Mechanical phenotyping at 100 cells/sec</b> — ●JOCHEN GUCK
BP 34.7	Wed	11:30–12:00	H 1028	<b>Efficiently extracting thermodynamics and kinetics from molecular simulation data at multiple thermodynamic states</b> — ●FRANK NOE
BP 35.1	Wed	15:00–15:30	H 1028	<b>Caged Hyperpolarized Xenon in Phospholipid Membranes for NMR Sensing Applications</b> — ●LEIF SCHRÖDER
BP 37.1	Wed	15:00–15:30	EW 202	<b>The cost of moving optimally</b> — ●DINANT KISTEMAKER
BP 41.1	Thu	9:30–10:00	H 1058	<b>Probing the downhill folding kinetics of Lambda repressor variants with optical tweezers</b> — ANN MUKHORTAVA, ANDREAS HARTMANN, ●MICHAEL SCHLIERF
BP 42.1	Thu	9:30–10:00	H 1028	<b>Microtubules adapt to mechanical stress through spontaneous intralattice repair</b> — LAURA SCHAEDEL, KARIN JOHN, JEREMIE GAILLARD, MAXENCE NACHURY, LAURENT BLANCHOIN, ●MANUEL THERY
BP 42.7	Thu	11:30–12:00	H 1028	<b>Cellular chirality arising from the self-organization of the actin cytoskeleton</b> — ●ALEXANDER BERSHADSKY
BP 44.1	Thu	15:00–15:30	H 1058	<b>Molecular Systems Engineering with DNA: Four pieces, one rule, and many possibilities.</b> — ●HENDRIK DIETZ
BP 49.1	Thu	16:45–17:15	H 1028	<b>Directional bias in the kinesin superfamily of molecular motors</b> — ●ROBERT CROSS

BP 52.1 Fri 9:30–10:00 H 1028 **Biophysics of light-activated ion transporters** — AREND VOGT, JONAS WIETEK, ●PETER HEGEMANN

### Invited talks of the joint symposium SYNPNP

See SYNPNP for the full program of the symposium.

SYNPNP 1.1 Tue 9:30–10:00 H 0105 **Connectomics: The dense reconstruction of neuronal circuits** — ●MORITZ HELMSTÄDTER

SYNPNP 1.2 Tue 10:00–10:30 H 0105 **Whole-brain imaging and analysis of network activity in behaving zebrafish** — ●MISHA AHRENS

SYNPNP 1.3 Tue 10:30–11:00 H 0105 **Circuit neurophysics: Theory and biophysics of information-flow through large-scale neuronal systems** — ●FRED WOLF

SYNPNP 1.4 Tue 11:15–11:45 H 0105 **Cognitive devices based on ion currents in oxide thin films** — ●STUART PARKIN

SYNPNP 1.5 Tue 11:45–12:15 H 0105 **Distributed neuro-physical interfaces: technology and "exciting" biophysics** — ●SHY SHOHAM

### Invited talks of the joint symposium SYPS

See SYPS for the full program of the symposium.

SYPS 1.1 Wed 9:30–10:00 H 0105 **Anticipating and avoiding tipping points** — ●TIMOTHY M. LENTON

SYPS 1.2 Wed 10:00–10:30 H 0105 **Climate investment under uncertainty: the two degree target and the desire for dynamic consistency** — ●HERMANN HELD, DELF NEUBERSCH

SYPS 1.3 Wed 10:30–11:00 H 0105 **What are the resources required to fulfil human needs?** — ●JULIA STEINBERGER

SYPS 1.4 Wed 11:15–11:45 H 0105 **Design of Sustainable Supply Chains for Sustainable Cities** — ●ANNA NAGURNEY

SYPS 1.5 Wed 11:45–12:15 H 0105 **Ecological econophysics for degrowth** — ●SALVADOR PUEYO

### Sessions

BP 1.1–1.12 Mon 9:30–13:00 H 1028 **Imaging**

BP 2.1–2.13 Mon 9:30–13:00 H 1058 **Neurophysics I**

BP 3.1–3.9 Mon 9:30–12:15 BH-N 243 **Statistical Physics of Biological Systems I (joint DY/BP/ CPP)**

BP 4.1–4.12 Mon 9:30–12:45 C 130 **Colloids and Complex Liquids I (joint CPP/DY/BP)**

BP 5.1–5.12 Mon 9:30–13:00 C 243 **Nanoparticles and Composite Materials I (joint CPP/BP)**

BP 6.1–6.4 Mon 12:15–13:15 MA 001 **Networks: From Topology to Dynamics I (joint SOE/DY/BP)**

BP 7.1–7.9 Mon 14:30–17:15 H 1028 **Superresolution Optical Microscopy (focus session)**

BP 8.1–8.9 Mon 14:30–17:00 H 1058 **Neurophysics II**

BP 9.1–9.10 Mon 14:30–17:15 EB 202 **Biomaterials and Biopolymers I (joint BP/ CPP)**

BP 10.1–10.14 Mon 15:00–18:45 C 130 **Colloids and Complex Liquids II (joint CPP/DY/BP)**

BP 11.1–11.14 Mon 15:00–18:45 C 243 **Nanoparticles and Composite Materials II (joint CPP/BP)**

BP 12.1–12.3 Mon 15:00–15:45 MA 001 **Evolutionary Game Theory I (joint SOE/BP/DY)**

BP 13.1–13.15 Mon 17:30–19:30 Poster A **Posters: Imaging and Superresolution Optical Microscopy**

BP 14.1–14.12 Mon 17:30–19:30 Poster A **Posters: Neurophysics**

BP 15.1–15.12 Mon 17:30–19:30 Poster A **Posters: Multi-cellular systems**

BP 16.1–16.33 Mon 17:30–19:30 Poster A **Posters: Cell adhesion, mechanics and migration**

BP 17.1–17.22 Mon 17:30–19:30 Poster A **Posters: Protein structure and dynamics**

BP 18.1–18.10 Tue 9:30–12:30 H 1028 **Membranes and vesicles I (joint BP/ CPP)**

BP 19.1–19.11 Tue 9:30–12:45 H 1058 **Multi-cellular systems**

BP 20.1–20.11 Tue 9:30–12:30 BH-N 128 **Microswimmers, Active Liquids II (joint DY/BP/ CPP)**

BP 21.1–21.10 Tue 10:15–13:15 MA 001 **Complex Contagion Phenomena (focus session, joint SOE/DY/BP)**

BP 22.1–22.23 Tue 14:00–16:00 Poster A **Posters: Cytoskeletal filaments**

BP 23.1–23.3 Tue 14:00–16:00 Poster A **Posters: Molecular Motors**

BP 24.1–24.16	Tue	14:00–16:00	Poster A	<b>Posters: Membranes and vesicles</b>
BP 25.1–25.9	Tue	14:00–16:00	Poster A	<b>Posters: DNA/RNA and related enzymes</b>
BP 26.1–26.15	Tue	14:00–16:00	Poster A	<b>Posters: Statistical Physics of Biological Systems</b>
BP 27.1–27.8	Tue	14:00–16:00	Poster A	<b>Posters: Complex Fluids and Soft Matter</b>
BP 28.1–28.6	Tue	14:00–16:00	Poster A	<b>Posters: Biomaterials and Biopolymers</b>
BP 29.1–29.4	Tue	14:00–16:00	Poster A	<b>Posters: Systems biology</b>
BP 30.1–30.2	Tue	14:00–16:00	Poster A	<b>Posters: Biotechnology and bioengineering</b>
BP 31.1–31.1	Tue	14:00–16:00	Poster A	<b>Posters: Modelling of non-linear dynamics in biological movement</b>
BP 32.1–32.9	Tue	14:00–16:15	MA 001	<b>Evolutionary Game Theory II (joint SOE/BP/DY)</b>
BP 33.1–33.12	Wed	9:30–13:15	H 1058	<b>Cell adhesion, mechanics and migration I (joint BP/CPP)</b>
BP 34.1–34.12	Wed	9:30–13:15	H 1028	<b>Statistical Physics of Biological Systems II (joint BP/DY/CPP)</b>
BP 35.1–35.12	Wed	15:00–18:30	H 1028	<b>Membranes and vesicles II (joint BP/CPP)</b>
BP 36.1–36.12	Wed	15:00–18:30	H 1058	<b>Cell adhesion, mechanics and migration II</b>
BP 37.1–37.5	Wed	15:00–16:30	EW 202	<b>Modelling of non-linear dynamics in biological movement (focus session)</b>
BP 38.1–38.9	Wed	15:00–18:00	C 130	<b>Electrolytes at Interfaces - Stern Layer (focus session, joint CPP/BP/O)</b>
BP 39.1–39.6	Wed	16:45–18:30	MA 001	<b>Physics of Sustainability and Human-Nature Interactions I (joint SOE/DY/jDPG/BP/AKE)</b>
BP 40	Wed	19:00–20:00	H 1058	<b>BP Mitgliederversammlung (Annual General Meeting of the Biological Physics Division)</b>
BP 41.1–41.11	Thu	9:30–13:00	H 1058	<b>Protein structure and dynamics I</b>
BP 42.1–42.11	Thu	9:30–13:00	H 1028	<b>Cytoskeletal filaments (joint BP/CPP)</b>
BP 43.1–43.5	Thu	12:00–13:15	MA 001	<b>Networks: From Topology to Dynamics II (joint SOE/DY/BP)</b>
BP 44.1–44.7	Thu	15:00–17:00	H 1058	<b>DNA/RNA and related enzymes</b>
BP 45.1–45.5	Thu	15:00–16:15	H 1028	<b>Systems biology</b>
BP 46.1–46.11	Thu	15:00–18:00	C 264	<b>Biomaterials and Biopolymers II (joint CPP/BP)</b>
BP 47.1–47.7	Thu	15:45–18:00	PC 203	<b>Microswimmers, Active Liquids I (joint CPP/BP/DY)</b>
BP 48.1–48.5	Thu	17:00–18:30	MA 001	<b>Physics of Sustainability and Human-Nature Interactions II (joint SOE/DY/jDPG/BP/AKE)</b>
BP 49.1–49.7	Thu	16:45–18:45	H 1028	<b>Molecular motors</b>
BP 50.1–50.5	Thu	17:30–18:45	H 1058	<b>Biotechnology and bioengineering</b>
BP 51.1–51.2	Thu	18:00–18:30	C 264	<b>Physics of Food (joint CPP/BP)</b>
BP 52.1–52.7	Fri	9:30–11:45	H 1028	<b>Protein structure and dynamics II</b>
BP 53.1–53.10	Fri	9:30–12:15	H 1058	<b>Complex Fluids and Soft Matter (joint BP/DY/CPP)</b>
BP 54.1–54.7	Fri	9:30–11:30	C 264	<b>Microswimmers, Active Liquids III (joint DY/BP/CPP)</b>
BP 55.1–55.12	Fri	9:30–12:45	BH-N 128	<b>Networks: From Topology to Dynamics II (joint DY/BP/SOE)</b>
BP 56.1–56.6	Fri	9:30–12:00	BH-N 334	<b>Ageing in Physical and Biological Systems (focus session, joint DY/BP)</b>

## BP Mitgliederversammlung (Annual General Meeting of the Biological Physics Division)

Mittwoch 19:00–20:00 H 1058

- Award of the EPL poster prizes for biological physics
- Report of the current speakers
- Election of new BP speaker and co-speaker(s)
- Lessons learned and spring meeting Regensburg 2016
- Miscellaneous