

Biological Physics Division Fachverband Biologische Physik (BP)

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Overview of Invited Talks and Sessions

(Lecture halls BAR Schö, TOE 317, and BAR 0106; Poster P1 and P2/EG)

Invited Talks

BP 1.7	Mon	11:15–11:45	BAR Schö	Cell-free expression of membrane proteins and control of their spatial organization in synthetic lipid membranes — ●JAN STEINKÜHLER
BP 2.1	Mon	9:30–10:00	TOE 317	Emergent properties in motile active matter — ●ROLAND G. WINKLER
BP 3.5	Mon	10:30–11:00	BAR 0106	Resolving gating and allosteric modulation in ion channels through simulations and small-angle neutron scattering — ●ERIK LINDAHL
BP 5.1	Mon	15:00–15:30	TOE 317	Repurposing nucleic acids as high-resolution force sensors: From fundamental mechanotransduction to translational biophysics — ●KHALID SALAITA
BP 6.5	Mon	16:15–16:45	BAR 0106	Mechanical and electrical properties of bacterial biofilms modulate antibiotic tolerance — ●BERENIKE MAIER
BP 8.5	Tue	10:45–11:15	BAR Schö	Microtubule Lattice Dynamics — SUBHAM BISWAS, RAHUL GROVER, CORDULA REUTHER, MONA GRÜNEWALD, STEFAN DIEZ, ●LAURA SCHAEDEL
BP 10.1	Tue	9:30–10:00	BAR 0106	Protein evolution in sequence landscapes: from data to models and back — ●MARTIN WEIGT
BP 12.4	Wed	10:15–10:45	TOE 317	Materials properties of bacterial biofilms. — ●CÉCILE M. BIDAN
BP 13.1	Wed	9:30–10:00	BAR 0106	Biological signal processes across scales — ●STEFFEN RULANDS
BP 16.1	Wed	11:15–11:45	BAR 0106	Systems biophysics of bacterial response to cell wall-targeting antibiotics — REBECCA BROUWERS, SHARAREH TAVADDOD, LEONARDO MANCINI, JACOB BIBOY, ELIZABETH TATHAM, PIETRO CICUTA, WALDEMAR VOLLMER, ●ROSALIND ALLEN
BP 21.7	Thu	11:15–11:45	BAR Schö	Visualizing the inner life of microbes — ●ULRIKE ENDESFELDER
BP 22.5	Thu	10:30–11:00	TOE 317	Statistical Physics of Spatially Organized Catalytic Particles — ●ULRICH GERLAND
BP 23.1	Thu	9:30–10:00	BAR 0106	Conformational dynamics of SARS-CoV-2 spike protein modulates the binding affinity to ACE2 — FIDAN SUMBUL, CLAIRE VALOTTEAU, PRITHWIDIP SAHA, IGNACIO FERNANDEZ, ANNALISA MEOLA, EDUARD BAQUERO, DOROTA KOSTRZ, JAMES R PORTMAN, FRANÇOIS STRANSKY, PABLO GUARDADO CALVO, CHARLIE GOSSE, TERENCE STRICK, FELIX REY, ●FELIX RICO
BP 26.1	Thu	15:00–15:30	TOE 317	Decoding Molecular Plasticity in the Dark Proteome of the Nuclear Transport Machinery — ●EDWARD LEMKE
BP 30.1	Fri	9:30–10:00	TOE 317	Experiments on Active Polymer-Like Worms — ●ANTOINE DEBLAIS, DANIEL BONN, SANDER WOUTERSEN
BP 32.1	Fri	12:15–13:00	HSZ 03	The physical regulation of brain development — ●KRISTIAN FRANZE

Invited Talks of the joint Symposium Dynamics of Opinion Formation – From Quorum Sensing to Polarization (SYOF)

See SYOF for the full program of the symposium.

SYOF 1.1	Mon	9:30–10:00	HSZ 01	Towards understanding of the social hysteresis – insights from statistical physics — ●KATARZYNA SZNAJD-WERON
SYOF 1.2	Mon	10:00–10:30	HSZ 01	Polarization in attitude distributions from surveys and models of continuous opinion dynamics — ●JAN LORENZ, MARTIN GESTEFELD
SYOF 1.3	Mon	10:30–11:00	HSZ 01	Collective patterns and stable misunderstandings in networks striving for consensus without a common value system — ●JOHANNES FALK, EDWIN EICHLER, KATJA WINDT, MARC-THORSTEN HÜTT
SYOF 1.4	Mon	11:15–11:45	HSZ 01	A yet undetected cognitive bias, revealed by opinion dynamics simulations — ●GUILLAUME DEFFUANT
SYOF 1.5	Mon	11:45–12:15	HSZ 01	Extreme switches in kinetic exchange models of opinion. — ●PARONGAMA SEN, KATHAKALI BISWAS

Invited Talks of the joint Symposium SKM Dissertation Prize 2023 (SYSD)

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	9:30–10:00	HSZ 04	Diffusion of antibodies in solution: from individual proteins to phase separation domains — ●ANITA GIRELI
SYSD 1.2	Mon	10:00–10:30	HSZ 04	Intermediate Filament Mechanics Across Scales — ●ANNA V. SCHEPERS
SYSD 1.3	Mon	10:30–11:00	HSZ 04	Ultrafast Probing and Coherent Vibrational Control of a Surface Structural Phase Transition — ●JAN GERRIT HORSTMANN
SYSD 1.4	Mon	11:00–11:30	HSZ 04	Electro-active metasurfaces employing metal-to-insulator phase transitions — ●JULIAN KARST
SYSD 1.5	Mon	11:30–12:00	HSZ 04	The role of unconventional symmetries in the dynamics of many-body systems — ●PABLO SALA

Invited Talks of the joint Symposium Physics of Fluctuating Paths (SYFP)

See SYFP for the full program of the symposium.

SYFP 1.1	Tue	9:30–10:00	HSZ 01	Time at which a stochastic process achieves its maximum — ●SATYA MAJUMDAR
SYFP 1.2	Tue	10:00–10:30	HSZ 01	Fluctuations and molecule-spanning dynamics of single Hsp90 proteins on timescales from nanoseconds to days — ●THORSTEN HUGEL
SYFP 1.3	Tue	10:30–11:00	HSZ 01	Path reweighting for Langevin dynamics — ●BETTINA KELLER
SYFP 1.4	Tue	11:15–11:45	HSZ 01	Out-of-equilibrium dynamics of trapped Brownian particles — ●RAUL A. RICA
SYFP 1.5	Tue	11:45–12:15	HSZ 01	Thermodynamics of Clocks — ●PATRICK PIETZONKA

Invited Talks of the joint Symposium Topology in Quantum and Classical Physics – From Topological Insulators to Active Matter (SYQC)

See SYQC for the full program of the symposium.

SYQC 1.1	Wed	15:00–15:30	HSZ 01	Topological magnetic whirls for computing — ●KARIN EVERSCHORSITTE
SYQC 1.2	Wed	15:30–16:00	HSZ 01	Topological waves from solids to geo/astrophysical flows — ●PIERRE DELPLACE, ANTOINE VENAILLE, NICOLAS PEREZ, GUILLAUME LAIBE, ARMAND LECLERC, MANOLIS PERROT, BRAD MARSTON
SYQC 1.3	Wed	16:00–16:30	HSZ 01	Topological Phase Transitions in Population Dynamics — ●ERWIN FREY
SYQC 1.4	Wed	16:45–17:15	HSZ 01	Topological invariants protect robust chiral currents in active matter — ●EVELYN TANG
SYQC 1.5	Wed	17:15–17:45	HSZ 01	Topological defects in biological active matter — ●AMIN DOOSTMOHAMMADI

Sessions

BP 1.1–1.12	Mon	9:30–13:00	BAR Schö	Membranes, Vesicles, Synthetic Cells
BP 2.1–2.12	Mon	9:30–13:00	TOE 317	Active Matter I (joint session BP/CPP/DY)
BP 3.1–3.12	Mon	9:30–13:00	BAR 0106	Computational Biophysics I
BP 4.1–4.9	Mon	15:00–17:30	BAR Schö	Tissue Mechanics I
BP 5.1–5.8	Mon	15:00–17:30	TOE 317	Focus Session NanoAgents
BP 6.1–6.7	Mon	15:00–17:15	BAR 0106	Bacterial Mechanics
BP 7.1–7.11	Mon	15:00–18:15	ZEU 160	Active Matter II (joint session DY/BP/CPP)
BP 8.1–8.11	Tue	9:30–13:00	BAR Schö	Cell Mechanics I
BP 9.1–9.11	Tue	9:30–12:30	TOE 317	Active Matter III (joint session BP/CPP/DY)
BP 10.1–10.9	Tue	9:30–12:15	BAR 0106	Evolution and Origin of Life
BP 11.1–11.78	Tue	12:30–15:30	P1	Poster Session I
BP 12.1–12.12	Wed	9:30–13:00	TOE 317	Biopolymers and Biomaterials (joint session BP/CPP)
BP 13.1–13.5	Wed	9:30–11:00	BAR 0106	Signaling, Biological Networks
BP 14.1–14.10	Wed	9:30–13:00	ZEU 160	Focus Session: From Inter-individual Variability to Heterogeneous Group Dynamics and Disorder in Active Matter (joint session DY/BP/CPP)
BP 15.1–15.6	Wed	10:30–12:15	BAR Schö	Tissue Mechanics II
BP 16.1–16.6	Wed	11:15–13:00	BAR 0106	Systems Biophysics
BP 17.1–17.9	Wed	15:00–17:30	BAR 0106	Protein Structure and Dynamics
BP 18.1–18.6	Wed	15:00–16:30	ZEU 250	Biologically Inspired Statistical Physics (joint session DY/BP)
BP 19.1–19.6	Wed	16:30–18:00	MER 02	Biopolymers, Biomaterials and Bioinspired Functional Materials (joint session CPP/BP)
BP 20	Wed	18:00–19:00	BAR Schö	Members' Assembly
BP 21.1–21.12	Thu	9:30–13:00	BAR Schö	Bioimaging
BP 22.1–22.12	Thu	9:30–13:00	TOE 317	Statistical Physics of Biological Systems I (joint session BP/DY)
BP 23.1–23.12	Thu	9:30–13:00	BAR 0106	Single Molecule Biophysics
BP 24.1–24.12	Thu	9:30–13:00	ZEU 160	Active Matter IV (joint session DY/BP/CPP)
BP 25.1–25.9	Thu	15:00–17:30	BAR Schö	Cell Mechanics II
BP 26.1–26.8	Thu	15:00–17:30	TOE 317	Focus Session mRNA Physics
BP 27.1–27.9	Thu	15:00–17:30	BAR 0106	Computational Biophysics II
BP 28.1–28.58	Thu	18:00–20:00	P2/EG	Poster Session II
BP 29.1–29.9	Fri	9:30–12:00	BAR Schö	Statistical Physics of Biological Systems II (joint session BP/DY)
BP 30.1–30.8	Fri	9:30–12:00	TOE 317	Active Matter V (joint session BP/CPP/DY)
BP 31.1–31.7	Fri	10:00–12:00	BAR 0106	Cell Mechanics III
BP 32.1–32.1	Fri	12:15–13:00	HSZ 03	Closing Plenary Talk (joint session BP/CPP)

Members' Assembly of the Biological Physics Division

Wed 18:00–19:00 BAR Schö