

Dynamics and Statistical Physics Division Fachverband Dynamik und Statistische Physik (DY)

Markus Bär
Physikalisch-Technische Bundesanstalt
FB 8.4 - Modellierung und Datenanalyse
Abbestraße 2 - 12
10587 Berlin
markus.baer@ptb.de

Walter Zimmermann
Theoretische Physik I
Universität Bayreuth
Universitätsstrasse 30
95447 Bayreuth
walter.zimmermann@uni-bayreuth.de

Overview of Invited Talks and Sessions

(Lecture halls H18, H19, and H20; Poster P2)

Invited Talks

DY 2.1	Mon	9:30–10:00	H18	Roughness growth modes in thin film growth — ●MARTIN OETTEL
DY 9.1	Mon	15:00–15:30	H19	Granular matter composed of non-convex grains — ●RALF STANNARIUS
DY 12.1	Mon	15:30–16:00	H20	A phononic frequency comb from a single resonantly driven nanomechanical mode — ●EVA WEIG
DY 12.4	Mon	16:30–17:00	H20	From period-doubling bifurcations to time crystals and coherent Ising machines — ●ODED ZILBERBERG, TONI L. HEUGEL, JAN KOŠATA, JAVIER DEL PINO, R. CHITRA, ALEXANDER EICHLER
DY 12.6	Mon	17:15–17:45	H20	2D membranes in motion — ●HERRE VAN DER ZANT
DY 14.1	Tue	9:30–10:00	H18	Non-Markovian Brownian systems: from single-particle thermodynamics to collective behavior — ●SABINE KLAPP
DY 17.1	Tue	10:30–11:00	H19	Caustics in turbulent aerosols — ●BERNHARD MEHLIG
DY 29.1	Wed	12:00–12:30	H18	Derivation of a continuum description of sheared jammed soft suspensions from particle dynamics — ●ERIC BERTIN, NICOLAS CUNY, ROMAIN MARI
DY 32.1	Wed	15:00–15:30	H19	Large scale patterns in turbulent Rayleigh-Bénard convection — ●STEPHAN WEISS
DY 33.1	Wed	15:00–15:30	H20	Detecting dynamical quantum phase transitions by string observables — ●ANATOLI POLKOVNIKOV, AMIT DUTTA, SOUVIK BANDYOPADHYAY
DY 37.1	Thu	9:30–10:00	H20	Controlled and robust phase separation in cells — ●DAVID ZWICKER
DY 48.1	Fri	9:30–10:00	H19	Photonic Reservoir Computing: Analytic insights and possibilities for optimization — LINA JAURIGUE, FELIX KÖSTER, ●KATHY LÜDGE

Invited Talks of the joint Symposium SKM Dissertation Prize 2022 (SYSD)

See SYSD for the full program of the symposium.

SYSD 1.1	Mon	10:15–10:45	H2	Charge localisation in halide perovskites from bulk to nano for efficient optoelectronic applications — ●SASCHA FELDMANN
SYSD 1.2	Mon	10:45–11:15	H2	Nonequilibrium Transport and Dynamics in Conventional and Topological Superconducting Junctions — ●RAFFAEL L. KLEES
SYSD 1.3	Mon	11:15–11:45	H2	Probing magnetostatic and magnetotransport properties of the antiferromagnetic iron oxide hematite — ●ANDREW ROSS
SYSD 1.4	Mon	11:45–12:15	H2	Quantum dot optomechanics with surface acoustic waves — ●MATTHIAS WEISS

Invited Talks of the joint Symposium United Kingdom as Guest of Honor (SYUK)

See SYUK for the full program of the symposium.

SYUK 1.1	Wed	9:30–10:00	H2	Structure and Dynamics of Interfacial Water — ●ANGELOS MICHAELIDES
SYUK 1.2	Wed	10:00–10:30	H2	A molecular view of the water interface — ●MISCHA BONN
SYUK 1.3	Wed	10:30–11:00	H2	Motile cilia waves: creating and responding to flow — ●PIETRO CICUTA

SYUK 1.4	Wed	11:00–11:30	H2	Cilia and flagella: Building blocks of life and a physicist’s playground — ●OLIVER BÄUMCHEN
SYUK 1.5	Wed	11:45–12:15	H2	Computational modelling of the physics of rare earth - transition metal permanent magnets from SmCo₅ to Nd₂Fe₁₄B — ●JULIE STAUNTON
SYUK 2.1	Wed	15:00–15:30	H2	Hysteresis Design of Magnetic Materials for Efficient Energy Conversion — ●OLIVER GUTFLEISCH
SYUK 2.2	Wed	15:30–16:00	H2	Non-equilibrium dynamics of many-body quantum systems versus quantum technologies — ●IRENE D’AMICO
SYUK 2.3	Wed	16:00–16:30	H2	Quantum computing with trapped ions — ●FERDINAND SCHMIDT-KALER
SYUK 2.4	Wed	16:45–17:15	H2	Breaking the millikelvin barrier in cooling nanoelectronic devices — ●RICHARD HALEY
SYUK 2.5	Wed	17:15–17:45	H2	Superconducting Quantum Interference Devices for applications at mK temperatures — ●SEBASTIAN KEMPF

Invited Talks of the joint Symposium Interplay of Substrate Adaptivity and Wetting Dynamics from Soft Matter to Biology (SYSM)

See SYSM for the full program of the symposium.

SYSM 1.1	Wed	15:00–15:30	H1	Statics and Dynamics of Soft Wetting — ●BRUNO ANDREOTTI
SYSM 1.2	Wed	15:30–16:00	H1	Droplets on elastic substrates and membranes - Numerical simulation of soft wetting — ●SEBASTIAN ALAND
SYSM 1.3	Wed	16:00–16:30	H1	Wetting of Polymer Brushes in Air — LARS VELDSCHOLTE, GUIDO RITSEMA VAN ECK, LIZ MENSINK, JACCO SNOELJER, ●SISSI DE BEER
SYSM 1.4	Wed	16:45–17:15	H1	Elastocapillary phenomena in cells — ●ROLAND L. KNORR
SYSM 1.5	Wed	17:15–17:45	H1	Active contact line depinning by micro-organisms spreading on hydrogels — MARC HENNES, JULIEN TAILLEUR, GAËLLE CHARRON, ●ADRIAN DAERR

Invited Talks of the joint Symposium Collective Social Dynamics from Animals to Humans (SYSO)

See SYSO for the full program of the symposium.

SYSO 1.1	Thu	9:30–10:00	H1	Capturing group interactions: The next frontier of modeling social and biological systems — ●FRANK SCHWEITZER
SYSO 1.2	Thu	10:00–10:30	H1	Modelling Individual Mobility Behavior — ●LAURA MARIA ALESSANDRETTI
SYSO 1.3	Thu	10:30–11:00	H1	Validating argument-based opinion dynamics with survey experiments — ●SVEN BANISCH
SYSO 1.4	Thu	11:15–11:45	H1	Self-organization, Criticality and Collective Information Processing in Animal Groups — ●PAWEŁ ROMANCZUK
SYSO 1.5	Thu	11:45–12:15	H1	Collective dynamics and physiological interactions in bird colonies — ●HANJA BRANDL

Invited Talks of the joint Symposium Complexity and Topology in Quantum Matter (SYQM)

See SYQM for the full program of the symposium.

SYQM 1.1	Fri	9:30–10:00	H1	The role of crystalline symmetries in topological materials: the topological materials database — ●MAIA VERGNIORY
SYQM 1.2	Fri	10:00–10:30	H1	Microwave Bulk and Edge Transport in HgTe-Based 2D Topological Insulators — ●ERWANN BOCQUILLON, MATTHIEU C. DARTAILH, ALEXANDRE GOURMELON, HIROSHI KAMATA, KALLE BENDIAS, SIMON HARTINGER, JEAN-MARC BERROIR, GWENDAL FÈVE, BERNARD PLAÇAIS, LUKAS LUNCZER, RAIMUND SCHLERETH, HARTMUT BUHMANN, LAURENS MOLENKAMP
SYQM 1.3	Fri	10:30–11:00	H1	Spectral Sensitivity of Non-Hermitian Topological Systems — ●JAN CARL BUDICH
SYQM 1.4	Fri	11:15–11:45	H1	Topological photonics and topological lasers with coupled vertical resonators — ●SEBASTIAN KLEMBT
SYQM 1.5	Fri	11:45–12:15	H1	Spectroscopic Studies of the Topological Magnon Band Structure in a Skyrmion Lattice — ●MARKUS GARST

Sessions

DY 1.1–1.3	Sun	16:00–18:30	H4	Tutorial: Stochastic Processes from Financial Risk to Genetics (joint session SOE/TUT/BP/DY)
DY 2.1–2.1	Mon	9:30–10:00	H18	Invited Talk Martin Oettel
DY 3.1–3.9	Mon	10:00–12:30	H18	Statistical Physics far from Thermal Equilibrium
DY 4.1–4.8	Mon	10:00–12:15	H19	Wetting, Droplets and Microfluidics (joint session DY/ CPP)
DY 5.1–5.10	Mon	10:00–12:45	H20	Many-Body Quantum Dynamics 1 (joint session DY/TT)
DY 6.1–6.7	Mon	10:30–12:45	H16	Active Matter 1 (joint session BP/ CPP/ DY)
DY 7.1–7.7	Mon	15:00–17:15	H16	Statistical Physics of Biological Systems 1 (joint session BP/ DY)
DY 8.1–8.10	Mon	15:00–17:45	H18	Data Analytics for Complex Systems (joint session DY/ SOE)
DY 9.1–9.1	Mon	15:00–15:30	H19	Invited Talk Ralf Stannarius
DY 10.1–10.10	Mon	15:00–17:45	H39	Modeling and Simulation of Soft Matter (joint session CPP/ DY)
DY 11.1–11.9	Mon	15:30–18:00	H19	Granular Matter and Contact Dynamics
DY 12.1–12.6	Mon	15:30–17:45	H20	Focus Session: Nonlinear Dynamics of Nanomechanic Oscillators
DY 13.1–13.2	Mon	17:45–18:15	H18	Big Data and Artificial Intelligence (joint session SOE/ DY)
DY 14.1–14.1	Tue	9:30–10:00	H18	Invited Talk Sabine Klapp
DY 15.1–15.4	Tue	9:30–10:30	H19	Delay and Feedback Dynamics
DY 16.1–16.11	Tue	10:00–13:00	H18	Active Matter 2 (joint session DY/ BP/ CPP)
DY 17.1–17.1	Tue	10:30–11:00	H19	Invited Talk Bernhard Mehlig
DY 18.1–18.6	Tue	11:15–12:45	H19	Nonlinear Dynamics 1: Synchronization and Chaos (joint session DY/ SOE)
DY 19.1–19.6	Tue	11:30–13:00	H20	Many-Body Quantum Dynamics 2 (joint session DY/ TT)
DY 20.1–20.5	Tue	11:30–13:00	H38	Complex Fluids and Colloids, Micelles and Vesicles (joint session CPP/ DY)
DY 21.1–21.1	Wed	9:30–10:15	H11	Invited Talk Dirk Brockmann (joint session SOE/ DY)
DY 22.1–22.10	Wed	9:30–12:30	H16	Active Matter 3 (joint session BP/ CPP/ DY)
DY 23.1–23.9	Wed	9:30–12:00	H18	Complex Fluids and Soft Matter 1 (joint session DY/ CPP)
DY 24.1–24.6	Wed	9:30–11:15	H19	Stochastic Thermodynamics and Information Processing
DY 25.1–25.7	Wed	9:30–11:15	H39	General Session to the Symposium: Interplay of Substrate Adaptivity and Wetting Dynamics from Soft Matter to Biology (joint session CPP/ DY)
DY 26.1–26.6	Wed	10:00–11:30	H20	Critical Phenomena and Phase Transitions
DY 27.1–27.6	Wed	10:15–12:45	H11	Networks: From Topology to Dynamics (joint session SOE/ BP/ DY)
DY 28.1–28.7	Wed	11:15–13:00	H19	Extreme Events, Glasses and Miscellaneous
DY 29.1–29.1	Wed	12:00–12:30	H18	Invited Talk Eric Bertin
DY 30.1–30.2	Wed	12:45–13:15	H11	Energy Networks (joint session SOE/ DY)
DY 31.1–31.9	Wed	15:00–17:30	H18	Active Matter 4 (joint session DY/ BP/ CPP)
DY 32.1–32.1	Wed	15:00–15:30	H19	Invited Talk Stephan Weiss
DY 33.1–33.1	Wed	15:00–15:30	H20	Invited Talk Anatoli Polkovnikov
DY 34.1–34.6	Wed	15:30–17:15	H19	Fluid Physics: Turbulence and Convection
DY 35.1–35.9	Wed	15:30–18:00	H20	Quantum Chaos and Coherent Dynamics
DY 36.1–36.11	Thu	9:30–12:30	H22	Quantum Coherence and Quantum Information Systems (joint session TT/ DY)
DY 37.1–37.1	Thu	9:30–10:00	H20	Invited Talk David Zwicker
DY 38.1–38.6	Thu	10:00–11:30	H18	Complex Fluids and Soft Matter 2 (joint session DY/ CPP)
DY 39.1–39.8	Thu	10:00–12:15	H19	Pattern Formation and Reaction-Diffusion Systems
DY 40.1–40.7	Thu	10:00–12:00	H20	Brownian Motion and Anomalous Diffusion
DY 41.1–41.12	Thu	15:00–18:15	H22	Nonequilibrium Quantum Many-Body Systems (joint session TT/ DY)
DY 42.1–42.6	Thu	15:00–16:30	H16	Statistical Physics of Biological Systems 2 (joint session BP/ DY)
DY 43.1–43.8	Thu	15:00–18:00	P2	Poster Session: Quantum Chaos and Many-Body Dynamics
DY 44.1–44.20	Thu	15:00–18:00	P2	Poster Session: Statistical Physics and Critical Phenomena
DY 45.1–45.13	Thu	15:00–18:00	P2	Poster Session: Nonlinear Dynamics, Pattern Formation, Data Analytics and Machine Learning
DY 46.1–46.22	Thu	15:00–18:00	P2	Poster Session: Complex Fluids, Soft Matter, Active Matter, Glasses and Granular Materials
DY 47	Thu	18:30–19:15	H19	Members' Assembly
DY 48.1–48.1	Fri	9:30–10:00	H19	Invited Talk Kathy Lüdge (joint session DY/ SOE)
DY 49.1–49.10	Fri	9:30–12:15	H20	Statistical Physics: General
DY 50.1–50.11	Fri	10:00–12:45	H18	Active Matter 5 (joint session DY/ BP/ CPP)

DY 51.1–51.5	Fri	10:00–11:15	H19	Machine Learning in Dynamics and Statistical Physics (joint session DY/SOE)
DY 52.1–52.5	Fri	11:30–12:45	H19	Nonlinear Dynamics 2: Stochastic and Complex Systems, Networks (joint session DY/SOE)

Members' Assembly of the Dynamics and Statistical Physics Division

Thursday 18:30–19:15 H19