

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

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Overview of Invited Talks and Sessions

(lecture rooms H2, H3, H5, and H23; Poster D)

Prize Talk

The prize talk (Max Planck Medal) by Prof. Joel Lebowitz takes place Tuesday, 13:00, H1. See the plenary section for the abstract.

Invited Talks

DY 5.1	Mon	14:00–14:30	H2	Dynamics of Dunes — ●HANS HERRMANN
DY 11.1	Tue	9:30–10:00	H2	A single Josephson junction for atomic Bose-Einstein condensates: Dynamics and finite temperature effects — ●MARKUS OBERTHALER
DY 14.6	Tue	12:30–13:00	H2	Instabilities and pattern formation in phase-separating fluids — ●JÜRGEN VOLLMER
DY 20.1	Wed	14:00–14:30	H2	Semiclassical approach to universality in quantum chaos — STEFAN HEUSLER, ●SEBASTIAN MÜLLER, ALEXANDER ALTLAND, PETR BRAUN, FRITZ HAAKE
DY 25.1	Thu	9:30–10:00	H2	Surprises in the time-evolution of wave-packets — ●ARND BÄCKER

Invited Talks of internal symposia within DY

DY1 Symposium "Physics of Fracture"

Organization: H. Herrmann (ETH Zürich)

DY 1.1	Mon	9:30–10:00	H2	Towards a Dynamical Theory of Crack Propagation — ●ITAMAR PROCACCIA
DY 1.2	Mon	10:00–10:30	H2	Scaling properties of fracture surfaces — ●ELISABETH BOUCHAUD
DY 1.3	Mon	10:30–11:00	H2	Scaling of Fronts in Gradient Percolation — ●ALEX HANSEN
DY 1.4	Mon	11:00–11:30	H2	Fragmentation phenomena — ●FERENC KUN, FALK WITTEL, HANS HERRMANN

DY15 Symposium "Finite Size Effects at Phase Transitions"

Organization: W. Janke (Universität Leipzig), W. Selke (RWTH Aachen)

DY 15.1	Tue	14:00–14:30	H2	Unconventional types of phase transitions due to interplay of finite size and interfacial effects — ●KURT BINDER, ANDREY MILCHEV, MARCUS MUELLER
DY 15.2	Tue	14:30–15:00	H2	Successes and limitations of current renormalization group approaches to the study of finite size effects — ●HANS WERNER DIEHL, DANIEL GRÜNEBERG
DY 15.3	Tue	15:00–15:30	H2	Thermodynamic Casimir Forces — ●SIEGFRIED DIETRICH
DY 15.4	Tue	15:45–16:15	H2	Diversity of critical behavior within a universality class — ●VOLKER DOHM
DY 15.5	Tue	16:15–16:45	H2	Spin Dynamics Simulations of Excitations and Critical Dynamics in a Heisenberg Antiferromagnet: Resolution of a controversy via finite size scaling — ●DAVID P. LANDAU

Invited Talks of joint symposia with other Divisions

Symposium "Nonlinear and Fractional Transport in Complex Systems (SYNF)"

See SYNF for the full program of the symposium.

SYNF 1.1	Wed	14:45–15:15	H1	Depolymerization of microtubules by kinesins — ●JONATHON HOWARD
SYNF 1.2	Wed	15:15–15:45	H1	Hydra Molecular Network Reaches Criticality at the Symmetry-Breaking Axis-Defining Moment — JORDI SORIANO, CYRIL COLOMBO, ●ALBRECHT OTT
SYNF 1.3	Wed	15:45–16:15	H1	Morphogen Transport in Epithelia — ●TOBIAS BOLLENBACH
SYNF 1.4	Wed	16:15–16:45	H1	Flocks, Herds and Schools - Physical Models of Animal Motion — ●UDO ERDMANN
SYNF 1.5	Wed	16:45–17:15	H1	Nonlinear transport processes in large-scale ecological networks — ●BERND BLASIUS

Symposium "Bioinspired Materials (SYBM)"

See SYBM for the full program of the symposium.

SYBM 1.1	Thu	9:30–10:00	H1	Using Ice to Mimic Nacre: From Structural Materials to Artificial Bone — ●A. P. TOMSIA, S. DEVILLE, E. SAIZ
SYBM 1.2	Thu	10:00–10:30	H1	On the structure of biogenic CaCO_3 — ●B. POKROY
SYBM 1.3	Thu	10:30–11:00	H1	Bio-Inspired Hybrid Materials from Block Copolymer Assemblies and Nanoparticle Co-assemblies — ●U. WIESNER
SYBM 1.4	Thu	11:15–11:45	H1	Bio-Inspired Organic-inorganic Hybrid Materials — ●U. STEINER
SYBM 1.5	Thu	11:45–12:15	H1	Structural, Nanomechanical, and Nanotribological Characterization of Human Hair Using Atomic Force Microscopy and Nanoindentation — ●BHARAT BHUSHAN

Symposium "Entanglement (SYEN)"

See SYEN for the full program of the symposium.

SYEN 1.1	Thu	14:00–14:30	H1	Probabilities (and more) from entanglement — ●WOJCIECH ZUREK
SYEN 1.2	Thu	14:30–15:00	H1	Entanglement and the Foundations of Statistical Mechanics — ●SANDU POPESCU
SYEN 1.3	Thu	15:00–15:30	H1	Universality and classical simulation of quantum computation — MAARTEN VAN DEN NEST, WOLFGANG DÜR, AKIMASA MIYAKE, GUIFRE VIDAL, ●HANS BRIEGEL
SYEN 1.4	Thu	15:30–16:00	H1	Towards the convex roof of multipartite entanglement measures — ●ANDREAS OSTERLOH, JENS SIEWERT, ROBERT LOHMAYER, ARMIN UHLMANN
SYEN 1.5	Thu	16:00–16:30	H1	Decoherence induced by interacting quantum spin baths — ●ROSARIO FAZIO
SYEN 1.6	Thu	16:30–17:00	H1	Sweep a qubit to learn about its environment — ●PETER HÄNGGI, MARTIJN WUBS, KEIJI SAITO, ROLAND DOLL, SIGMUND KOHLER, YOSUKE KAYANUMA

Symposium "Polyelectrolytes (SYPE)"

See SYPE for the full program of the symposium.

SYPE 2.1	Thu	14:00–14:30	H37	Coulomb and Flory: Fathers of SONS. Polyelectrolytes in Self Organized Nano Systems — ●MARTIEN COHEN STUART
SYPE 2.7	Thu	16:00–16:30	H37	Bundling Phenomena in Semiflexible Polyelectrolytes — ●CHRISTIAN HOLM, MEHMET SAYAR, BERK HESS
SYPE 3.1	Fri	10:30–11:00	H1	Behaviour of polyelectrolyte solutions under confinement — ●DOMINIQUE LANGEVIN, CÉSAR MARQUEZ, HEINIG PETER, DAN QU
SYPE 3.4	Fri	11:30–12:00	H1	Polymers at Surfaces: Sticking and Gliding — ●ROLAND NETZ

Sessions

DY 1.1–1.6	Mon	9:30–12:00	H2	Internal Symposium: Physics of fracture
DY 2.1–2.6	Mon	10:30–12:00	H3	Time-delayed feedback and neural networks
DY 3.1–3.4	Mon	12:00–13:00	H2	Critical phenomena and phase transitions
DY 4.1–4.4	Mon	12:00–13:00	H3	Statistical physics of complex networks I
DY 5.1–5.7	Mon	14:00–16:00	H2	Fluid dynamics I
DY 6.1–6.7	Mon	14:30–16:15	H3	Statistical physics of complex networks II
DY 7.1–7.7	Mon	14:30–16:15	H5	Statistical physics far from thermal equilibrium
DY 8.1–8.7	Mon	16:15–18:00	H2	Quantum dynamics, decoherence and quantum information
DY 9.1–9.6	Mon	16:30–18:00	H3	Statistical physics in biological systems
DY 10.1–10.5	Mon	16:30–17:45	H5	Growth processes and surface properties
DY 11.1–11.5	Tue	9:30–11:00	H2	Superfluidity and Bose-Einstein condensation
DY 12.1–12.8	Tue	10:00–12:00	H3	Statistical physics (general)
DY 13.1–13.11	Tue	10:00–13:00	H23	Glass I (joint session with DF)
DY 14.1–14.6	Tue	11:15–13:00	H2	Fluid dynamics II
DY 15.1–15.5	Tue	14:00–16:45	H2	Internal Symposium: Finite size effects at phase transitions
DY 16.1–16.8	Tue	14:30–16:30	H3	Brownian motion and transport I
DY 17.1–17.10	Tue	14:30–17:50	H23	Glass II (joint session with DF)
DY 18.1–18.6	Tue	16:45–18:15	H3	Brownian motion and transport II
DY 19.1–19.6	Tue	17:00–18:30	H2	Finite size effects at phase transitions I (session accompanying the symposium of the same name)
DY 20.1–20.5	Wed	14:00–15:30	H2	Quantum chaos I
DY 21.1–21.6	Wed	14:00–15:30	H3	Finite size effects at phase transitions II (session accompanying the symposium of the same name)
DY 22.1–22.6	Wed	15:45–17:15	H2	Granular matter / contact dynamics I
DY 23.1–23.6	Wed	15:45–17:15	H3	Finite size effects at phase transitions III (session accompanying the symposium of the same name)
DY 24.1–24.62	Wed	16:00–18:00	Poster D	Poster I
DY 25.1–25.5	Thu	9:30–11:00	H2	Quantum chaos II
DY 26.1–26.10	Thu	10:30–13:00	H3	Ferrofluids / Liquid crystals
DY 27.1–27.6	Thu	11:15–12:45	H2	Quantum chaos III
DY 28.1–28.10	Thu	14:00–16:30	H2	Nonlinear stochastic systems
DY 29.1–29.7	Thu	14:00–15:45	H3	Soft matter
DY 30.1–30.69	Thu	16:00–18:00	Poster D	Poster II
DY 31.1–31.11	Fri	10:15–13:00	H2	Granular matter / contact dynamics II
DY 32.1–32.6	Fri	10:15–11:45	H3	Synchronization
DY 33.1–33.5	Fri	12:00–13:15	H3	Nonlinear dynamics and pattern formation

Annual General Meeting of the Section Dynamics and Statistical Physics

Thursday 18:30–19:30 H2

Tagesordnung:

- Bericht des Fachverbandsleiters
- Tagungsnachlese
- Verschiedenes