

Symposium Physics of Fluctuating Paths (SYFP)

jointly organised by
 the Dynamics and Statistical Physics Division (DY),
 the Chemical and Polymer Physics Division (CPP), and
 the Biological Physics Division (BP)

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State-of-the-art experiments probe physical observables, such as heat, work or entropy production, empirical densities and currents, on the level of individual, stochastic paths. Such experiments are typically analysed by averaging along a limited number of individual realisations, which leads to substantial uncertainties in estimates. The systematic sample-to-sample fluctuations of such path-observables encode important information about the underlying, microscopic dynamical processes and are therefore a frontier of experimental, theoretical, and computational physics. Recently there has been a surge in the development and applications of path-based concepts across many fields of physics, which are surveyed in this symposium.

Overview of Invited Talks and Sessions

(Lecture hall HSZ01)

Invited Talks

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

Sessions

SYFP 1.1–1.5	Tue	9:30–12:15	HSZ 01	Physics of Fluctuating Paths
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