



UNIVERSITÄT
LEIPZIG

Fakultät für Physik und Geowissenschaften

Prof. Dr. J. Deiglmayr
Prof. Dr. I. Sodemann

Physics Colloquium

Tuesday, 7 Nov 2023 at 16:30

Prof. Dr. Sabine Klapp

Technische Universität Berlin

Colloidal systems out of equilibrium: Impact of feedback, activity, and external forcing

In the last decades, colloidal systems have been established as excellent models for phase transitions and dynamics of condensed matter at room temperature, and, at the same time, as building blocks for innovative materials. A large body of research nowadays targets out-of-equilibrium situations. Besides external driving, much attention has recently been devoted to systems that are intrinsically out of equilibrium, a prime example being synthetic “active” colloids, but also colloids subject to feedback control.

I will give an overview of our recent activities in this area, with a focus on non-equilibrium transitions and aggregation of feedback-controlled colloids with time delay, as well as active colloids with non-reciprocal couplings. We employ a spectrum of methods from statistical physics, including particle-based simulations, hydrodynamic approaches, and elements from stochastic thermodynamics.



Venue: Universität Leipzig, Faculty of Physics and Earth Sciences
04103 Leipzig, Linnéstraße 5, Small Lecture Hall

After the lecture, everyone is invited to continue discussions in the Aula with Coffee and Cookies.

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