



ÉCOLE DE PHYSIQUE DES HOUCHES



Theory of Large Deviations and Applications Session CXXIII July 1st - 26th, 2024

Organizers:

Abhishek DHAR (International Centre for Theoretical Sciences, Tata Institute of Fundamental Research), **Joachim KRUG** (Institute for Biological Physics, University of Cologne), **Satya N. MAJUMDAR**, (Laboratoire de Physique Théorique et Modèles Statistiques, CNRS, Université Paris-Saclay), **Alberto ROSSO** (Laboratoire de Physique Théorique et Modèles Statistiques, CNRS, Université Paris-Saclay), **Grégory SCHEHR** (Laboratoire de Physique Théorique et Hautes Energies, CNRS, Sorbonne-Université)

Overview:

The study of large deviations has emerged as a major theme of research in statistical physics over the last two decades, with multiple applications in several inter-disciplinary fields such as climate science, information theory, disordered systems, etc. The proposed school will gather international experts, spanning across disciplines, who will provide a broad overview (with long and short courses) of this rapidly evolving field.

Website: <http://www.lptms.universite-paris-saclay.fr/leshouches2024/>

Topics:

Stochastic dynamics
Nonequilibrium transport
Random matrices
Coulomb gases
Energy landscapes
Importance sampling methods
Stochastic Resetting
Fluctuation paths
Climate science

First confirmed lecturers:

Ada Altieri (University Paris-Cité)
Freddy Bouchet (Ecole Normale Supérieure, Paris)
Sergio Ciliberto (Ecole Normale Supérieure, Lyon)
Bernard Derrida (Collège de France, Paris)
Martin R. Evans (University of Edinburgh)
Juan P. Garrahan (University of Nottingham)
Alexander K. Hartmann (University of Oldenburg)
Pablo Hurtado (University of Granada)
Vivien Lecomte (University of Grenoble)
Mylène Maïda (University of Lille)
Baruch Meerson (Hebrew University of Jerusalem)
Joachim Peinke (University of Oldenburg)
Valentina Ros (University Paris-Saclay)
Hugo Touchette (University of Stellenbosch)
Eric Vanden-Eijnden (University of New York)
Pierpaolo Vivo (King's College, London)

Poster presentations by participants

Registration: The online Application Form can be found at <https://www.houches-school-physics.com>. Applications must reach the School before March 1st, 2024 in order to be considered by the Selection Committee. The full cost per participant includes housing and meals, and is specified on the School's Website. Further information can be found on the website too. For Scientific Matters, please contact the organizers at schehr@lptms.jussieu.fr.

For Administrative and Logistic Matters, please contact the Les Houches Physics school at:

Ecole de Physique des Houches
149 chemin de la Côte
F-74310 LES HOUCHES, France

Director: **Bérengère Dubrulle**
Phone: + 33/0 4 57 04 10 40
Email: houches0724@univ-grenoble-alpes.fr

Location: Les Houches is a village located in Chamonix valley, in the French Alps. Established in 1951, the Physics School is situated at 1150 m above sea level in natural surroundings, with breathtaking views on the Mont-Blanc mountain range, conducive to reflection and discussion.

