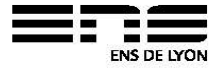


ÉCOLE DE PHYSIQUE DES HOUCHES



Dynamics and Disorder in Quantum Many Body Systems Far From Equilibrium

Session CXIV

July 29 - August 23, 2019

Organizers: D. Abanin (University of Geneva), L. Sanchez-Palencia (Ecole Polytechnique, Palaiseau),
M. Schiro (IPhT CEA & College de France)

Overview: The interplay of disorder and interactions in far-from-equilibrium quantum many body systems gives rise to fascinating emergent phenomena. While many questions remain open, spectacular theoretical and experimental progress at the interface of condensed matter, AMO physics, and quantum information now triggers a new wave of interest for this field. The aim of this session is to train young researchers from abroad community to the most advanced questions in this field.

Website: <https://leshouchesquantumdynamics.wordpress.com/>

Lectures:

Fabien Alet (Toulouse)	Numerical Methods for Many Body Localization
Immanuel Bloch (MPQ Garching)	Ultra Cold Atoms
Leticia Cugliandolo (Sorbonne Université)	Dynamics of Glassy Systems
Eugene Demler (Harvard)	Quantum Dynamics
Thierry Giamarchi (Geneva)	Quantum Disordered Systems
David Huse (Princeton)	Quantum Thermalization and Many Body Localization
Peter Zoller (Innsbruck)	Open Quantum Systems I
Laurent Sanchez-Palencia (Palaiseau)	Open Quantum Systems II
Misha Lukin (Harvard)	Quantum Simulations with Light and Matter
Subir Sachdev (Harvard)	Strange Metals and Black Holes
Frank Verstraete (Ghent)	Dynamics of Quantum Information
+ More to be confirmed	

Topical Seminars: M. Serbyn, E. Altman, M. Aidelsburger, F. Gerbier, + TBA

Registration: The online application can be found on <https://houches.univ-grenoble-alpes.fr/>. Applications must reach the School before March 15th, 2019 in order to be considered by the selection committee. The full cost per participant, including housing, meals and the book of lecture notes is given on the website. We should be able to provide financial aid to a limited number of students. Further information can be found on the website. One can also contact the School at:

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

Director: Christophe Salomon
Phone: +33 4 57 04 10 40
Email: houches0819@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.