



ÉCOLE DE PHYSIQUE DES HOUCHES



New Developments in Topological Condensed Matter September 2-13 2019

Organizers: **Claudio Chamon** (Boston University, USA)
Roderich Moessner (Max Planck Institute for the Physics of Complex Systems, Germany)
Nicolas Regnault (Ecole Normale Supérieure Paris, CNRS, France)

Overview: Topological condensed matter is currently one of the most active research fields in physics. The field has matured and broadened considerably in the past 5 years. There have been many exciting developments, in particular in the areas of classification of topological systems, topological quantum chemistry, non-equilibrium dynamics, new types of topological phases (e.g. fractons), higher dimensional topological order, and engineering of non-Abelian excitations. In addition, a huge push for creating quantum computers is underway, part of which involves topologically-based architectures.

This two-week event at Les Houches will provide a broad survey of these developments. It follows on from our four-week programme held in 2014. It takes a hybrid form, with longer lectures interspersed with shorter presentations of recent developments. It is aimed at junior researchers, as well as interested newcomers at all levels.

Website: <http://topo-houches-2019.pks.mpg.de/>

Speakers:

E. Berg (Weizmann)	G. Jackeli (Stuttgart)	R. Ribeiro-Palau (Orsay)
E. Bergholtz (Stockholm)	V. Khemani (Harvard)	S. Simon (Oxford)
S. Bhattacharjee (Bengaluru)	C. Laumann (Boston)	D. T. Son (Chicago)
J. Cano (Stony Brook)	P. Moll. (Lausanne)	M. Thakurathi (Basel)
C. Castelnovo (Cambridge)	A. Nahum (Oxford)	R. Verresen (Muenchen)
A. Chandran (Boston)	T. Neupert (Zurich)	S. Vijay (Harvard)
P. Delplace (Lyon)	A. Nielsen (Dresden)	S. Viola-Kusminskiy (Erlangen)
C. Felser (Dresden)	S. Parameswaran (Oxford)	V. Vitelli (Chicago)
M. Goerbig (Orsay)	D. Poilblanc (Toulouse)	J. Yeomans (Oxford)
A. Grushin (Grenoble)		

Registration: The deadline for the applications is April 1, 2019, in order to be considered by the selection committee. The full cost per participant, including housing and meals, and further information can be found on the website. Participants will need to attend the full period of the programme. Arrival day is Monday 2 September, and the programme goes until noon on 13 September.

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

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.