International Thematic School on

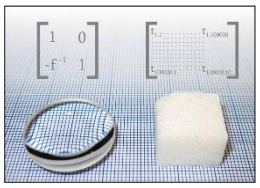
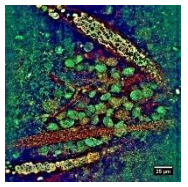
WAVES IN COMPLEX MEDIA

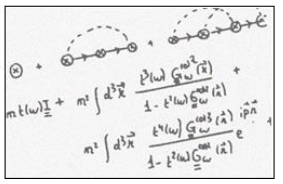
FROM THEORY TO PRACTICE

Keywords : scattering and transport of waves in complex media, mesoscopic physics, Anderson localization, matter waves in random opticals potentials, cold atoms, random matrix theory, wave front shaping, time reversal, order/disorder transition, computational imaging, multi-wave/non-linear imaging

April 14th-24th, 2020 — **Les Houches Physics School, Chamonix Mont Blanc Valley, France**

Scope of the school



School directors: ***Sylvain Gigan, Nicolas Cherroret, Alexandre Aubry***

This field of the physics of waves in complex media not only covers optics, radio waves, but also acoustics (ultrasonic or seismic waves) and even quantum matter waves. In optics, it is especially important for a number of applications: biomedical imaging, photonics, bio-inspired materials or atom optics to give a few examples. The recent growth of these applications is, nevertheless, strongly connected with rich advances in fundamental physics: coherent wave transport and Anderson localization, cooperative effects, random-matrix theory constitute fields where the progresses in the recent years have opened a new range of possibilities for applications.

The objective of this school is to gather the best international specialists of the field, theoreticians and experimentalists, able to give solid bases on wave transport, imaging, control of waves in complex media and atomic physics, paying a particular attention to the analogies between different types of waves and materials.

www.sfoptique.fr

Attending a thematic school is a unique opportunity to learn, share and connect with top leaders in the field. The School is open to all researchers and PhD students without restriction of age, status or nationality.
Application deadline (short motivation letter + abstract): February 1st, 2020

https://www.sfoptique.org/pages/ecoles-thematiques/2020-waves-in-complex-media/

Lecturers

Carlo Beenaker *(Leiden University, NL),*
Emmanuel Bossy *(Université Grenoble, FR)*
Antoine Broaweys *(Institut d'Optique, FR)*
Dominique Delande *(LKB, FR)*
Mathias Fink *(Institut Langevin, FR)*
Arthur Goetschy *(ESPCI, FR)*
Allard Mosk *(University of Twente, NL)*
John Page *(University of Manitoba, CA)*
Romain Pierrat *(CNRS, FR)*
Stefan Rotter *(TU Wien, AU)*
Anne Sentenac *(Institut Fresnel, FR)*
Sergey Skipetrov *(CNRS, FR)*

Applications Seminars

Jacopo Bertolotti *(Exeter University, UK)*
Jérome Beugnon *(LKB, FR)*
Sophie Brasselet *(Institut Fresnel, FR)*
Michel Campillo *(Université Grenoble-Alpes, FR)*
Hui Cao *(Yale University, US)*
Rémi Carminati *(ESPCI, FR)*
Marcel Filoche *(Ecole Polytechnique, FR)*
Luis Froufe *(Fribourg University, CH)*
Robin Kaiser *(Université Côte d'Azur, FR)*
Ori Katz *(Hebrew University, IL)*
Vincent Josse *(Institut d'Optique, FR)*
Tsampikos Kottos *(Wesleyan University, US)*
Geoffroy Lerosey *(GreenerWave, FR)*
Riccardo Sapienza *(Imperial College, UK)*
Silvia Vignolini *(University of Cambridge, UK)*
Laura Waller *(Berkeley University, US)*