

The Vienna Doctoral Programme on Complex Quantum  
Systems invites you to an

## Seminar Talk

by

**Iacopo Carusotto**

*INO-CNR BEC Center, Trento Italy*

### ***"Topological photonics"***

In this talk I will give an overview of the novel field of topological photonics. This field merges platforms and techniques from AMO physics with ideas from topological states of matter so to enlarge the functionalities of photonic devices and explore new topological effects in wave mechanics and quantum many-body physics.

After an historical account of the early development of the field and of its milestone achievements so far, I will sketch two among the most promising and challenging directions, namely topological lasing and fractional quantum Hall fluids of strongly interacting photons.

Both these directions are presently the object of intense experimental efforts and raise a number of conceptual questions at the crossroad of quantum many-body physics, quantum optics and non-equilibrium statistical mechanics.

Ref. T. Ozawa et al., "Topological photonics", Rev. Mod. Phys. 91, 015006 (2019).

**Monday, 13 January 2020,**

**17:00 get-together with coffee and snacks!**

**17:30 Seminar Talk**

Lise Meitner Hörsaal, Strudlhofgasse 4, 1<sup>st</sup> floor, Vienna

Hosted by: Peter Rabl