Mini-Colloque JMC2018 Grenoble:

Topology

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Topology has emerged as an ubiquitous tool to characterize properties of matter. It was initially used in condensed matter physics to describe defects, such as vortices in superconductors or skyrmions in magnets. But, in recent years, it has also allowed researchers to discover new electronic states of matter, the most prominent being topological insulators and superconductors.

More recently yet, an alternative approach to design and explore topological states of matter has been put forward by using other degrees of freedom, for example in mechanical, optical, or electrical circuits. The unique appeal of synthetic approaches is that they allow one to realize novel topological phases and to probe them in ways that are different from the probes available in real materials.

Topology has even revealed itself as a fruitful approach in unexpected areas of physics, such as the study of geophysical fluids.

Given the current level of interest in all things topological, it is timely to organize a mini-colloque aiming at bringing together experts from various communities in order to assess recent developments, generate new ideas, and emulate new trans-disciplinary exchanges. We invite researchers working on all different aspects of topology in condensed matter and beyond to submit contributions.