

UNIVERSITÄT LEIPZIG

## **Physics Colloquium**

Tuesday, November 21, 2023 at 16:30

## **Piet Brouwer**

Freie Universität Berlin

## Higher-order topological insulators and superconductors

Topological insulators and superconductors combine a bulk excitation gap with gapless states at their surfaces. Whether or not a topological phase is possible, depends on the presence or absence of fundamental symmetries, such as time-reversal and particle-hole symmetry. This talk focuses on insulators and superconductors for which the topology is protected by a crystalline symmetry, such as mirror or inversion. Such insulators and superconductors may have a "higher-order" topology, with a gapped bulk, gapped surfaces, but topologically protected gapless states at corners or crystal edges. Based on simple models, I'll show how and why this happens.



Venue: Universität Leipzig, Faculty of Physics and Earth Sciences 04103 Leipzig, Linnéstraße 5, **Room: small lecture hall** 

## Everyone is welcome to a reception with coffee, drinks and cookies in the Aula following the talk.

For an up-to-date semester program, sign-up for the physics colloquium mailing list, and subscription to the digital calendars in CalDAV format, head to the colloquiums web page www.physgeo.uni-leipzig.de/<u>events</u>.

