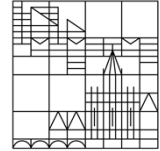


Physikalisches Kolloquium

Universität
Konstanz



Di 11.12.18
15:15 Uhr
14:45 Uhr, Kaffee/Tee
R 513



Prof. Dr. Oded Zilberberg
Institute for Theoretical Physics
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Quantum engineered systems

In recent years, there has been rapid development in control and manipulation of coherent quantum systems. These advances allow for the study and utilization of coherent quantum phenomena as well as the exploration of quantum mechanical concepts that were formerly of purely theoretical interest in realistic many-body setups. My research is centered on the study of electronic, atomic, and photonic systems, with their modern ramifications such as topology, out-of-equilibrium, controllability, and their consequences for fundamental physics and device applications. In my talk I will provide an overview of my interests in these topics, as well as give examples of selected results, e.g., the description of the out-of-equilibrium interplay between coherent transport and quantum measurement, realization of higher-dimensional topological effects using synthetic dimensions, and the relationship between dissipative many-body light-matter systems and nonlinear parametric phenomena.

