



ARNOLD SOMMERFELD
CENTER FOR THEORETICAL PHYSICS



Sommerfeld Theory Colloquium

Wednesday, 22nd December 2021

at 16.15 h

Prof. Norbert Schuch
(Uni Wien)

Entanglement in complex quantum systems: From quantum information to many-body systems and back

Complex quantum systems and the correlations they exhibit - quantum entanglement - play a key role both in quantum information and quantum computing and in exotic phenomena observed in quantum many-body systems. This common theme has stimulated a growing exchange between these two fields: On the one hand, the study of entanglement theory has given rise to new perspectives from which to study quantum many-body systems; on the other hand, the investigation of complex quantum systems forms a prime candidate both for the benchmarking and as an application of near-term quantum computers and simulators. In my talk, I will give an introduction to this growing field at the intersection of quantum information and many-body physics and highlight some recent results which make use of their interplay.

via ZOOM

Ulrich Schollwöck