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Fakultät für Mathematik

## ANTRITTSVORLESUNG

### Mathematisches Kolloquium

Mittwoch, 06. April 2022

Sky Lounge

## EINLADUNG

**Norbert Schuch**

(Universität Wien – Fakultät für Mathematik, Fakultät für Physik)

**“Quantum Information and Quantum Many-Body Systems: Mathematics, Physics, Computation”**

## **“Quantum Information and Quantum Many-Body Systems: Mathematics, Physics, Computation”**

### **Abstract:**

*Quantum many-body systems hold a wide range of challenges, both in their mathematical description and modelling and in the analytical and numerical understanding of their rich physical phenomena. At the same time, quantum many-body systems also constitute a fruitful use case for quantum computers and simulators. Those phenomena are all driven by the presence of complex quantum correlations, called entanglement, whose study is central to the field of quantum information. In my talk, I will give an overview over the interdisciplinary field between quantum information and quantum many-body physics which aims to understand quantum many-body systems from an entanglement-based perspective, and highlight some of the key questions and results arising both in mathematics, physics, and quantum computation.*

**15.45 Uhr: Kaffeejause**

**16.15 Uhr: Vortrag**

**Kleines Buffet im Anschluss**

Radu Ioan Bot, Martin Fally

<https://univienne.zoom.us/j/61142998579?pwd=NFc1UGFzc0ZXSU5N2VtOTBxWWdjUT09>