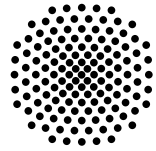


Stuttgarter Physikalisches Kolloquium

Max-Planck-Institut für Festkörperforschung
Max-Planck-Institut für Intelligente Systeme
Fachbereich Physik, Universität Stuttgart

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Hybrid login data will be announced by email and on the colloquium webpage.

Dienstag, 12. Juli 2021

16.15 Uhr

Hörsaal 2D5

Stuttgarter Max-Planck-Institute, Heisenbergstraße 1, 70569 Stuttgart-Büsnau

Strategies to design quantum materials with exotic properties

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Abstract

Unconventional superconductivity with high critical temperatures, topologically non-trivial phases, frustrated magnetism, spin liquids or the intensively discussed Kitaev phases are a few examples of exotic states in quantum materials. One of the big challenges in quantum physics is the microscopic description of such systems. Moreover, being able to understand them implies the possibility of predicting compounds with desirable properties. In this talk, I will present and discuss alternative strategies for designing quantum materials from first principles and by using statistical methods, and will motivate their possible use for present technological applications such as quantum computing purposes.