MAX PLANCK GESELLSCHAFT

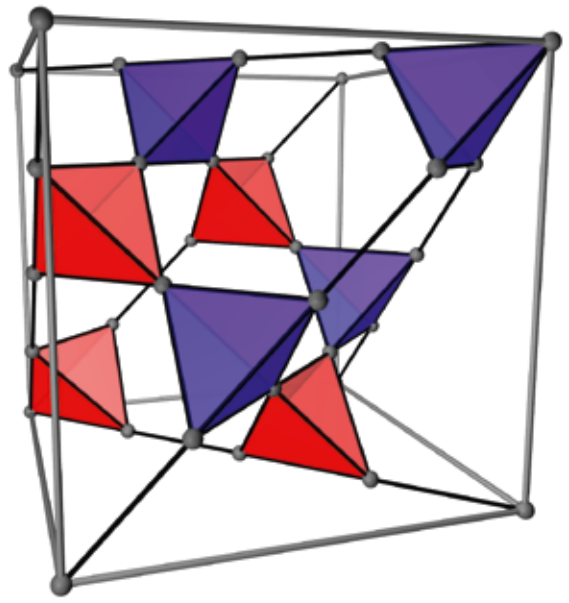
mpipks

Strongly Correlated Quantum Matter

Max Planck Institute for the Physics of Complex Systems

Virtual Winter School
30 November - 18 December 2020

The last two decades have witnessed the development of an increasingly interdisciplinary approach to the theory of strongly correlated systems interfacing with quantum field or quantum information theory and more recently with artificial intelligence. This has been accompanied by rapid experimental progresses, both in solid state and atomic physics platforms. The aim of this virtual school is to present a broad-spectrum introduction to the field of strongly correlated systems, with particular attention dedicated to cross- disciplinary aspects. The school is structured combining pedagogical lectures with several small scale, 'pyramidal' tutoring for some of the lectures, a series of 'overview' selected seminars, and a poster session. It will be a particular goal to foster scientific interactions, where we eagerly await also initiative actions and contributions by the participants.



c/o David Luitz

Topics

- Computational approaches to correlated quantum matter
- Quantum many-body dynamics
- Frustrated magnets and topology
- Quantum information
- Programmable quantum devices
- Lattice gauge theories

Invited speakers

Antoine Browaeys (FR)

Giuseppe Carleo (CH)

Claudio Castelnovo (UK)

Antoine Georges (US)

Tetsuo Hatsuda (JP)

Vedika Khemani (US)

Corinna Kollath (DE)

Bella Lake (DE)

Roger Melko (CA)

Massimo Palma (IT)

Filippo Vicentini (CH)

Uwe-Jens Wiese (CH)

Scientific coordinators

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Organisation

Katrin Lantsch & Maria Voigt
MPIPKS Dresden

Jointly organized with ICTP The Abdus Salam International Centre for Theoretical Physics

Applications received before 10th November 2020 are considered preferentially.

Applications are welcome and should be made by using the application form on the event's web page. The number of attendees is limited.

Active participation in tutorials, lectures, etc. is expected by accepted participants.

During the school Matrix as a central communication channel as well as Big Blue Button for lectures, colloquia and poster sessions will be used.

For further information please contact:
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We also offer individual fellowships (phd, postdoc, sabbatical). Applications are accepted continuously. For details, please check www.pks.mpg.de/visitors