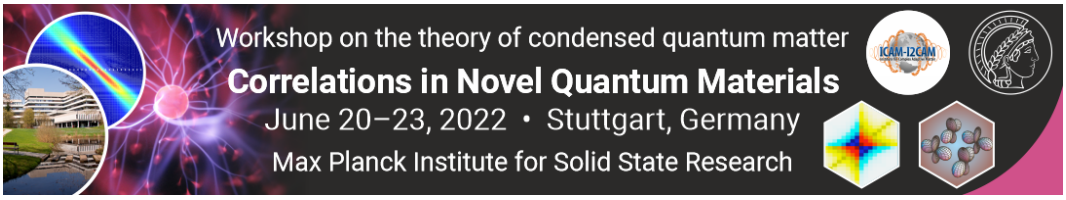
Session Program

Jun 20 – 23, 2022



Correlations in Novel Quantum Materials 2022 (CNQM2022)

Poster Session

Max Planck Institut für Festkörperforschung, 2D5

Mon, June 20

4:45 PM

Poster Session: Poster Ads

Session | **Location:** Max Planck Institut für Festkörperforschung, 2D5

5:30 PM

5:30 PM

Poster Session

Session | **Location:** Max Planck Institut für Festkörperforschung, 2D5

5:30 – 7:30 PM

Many body wavefunctions of hole-doped nickelate and cuprate superconductors

Speaker
Vamshi Katukuri

5:30 – 7:30 PM

Spin stiffness, spectral weight, and Landau damping of magnons in metallic spiral magnets

Speaker
Pietro Maria Bonetti

5:30 – 7:30 PM

SU(4) symmetry in Dirac materials - Application to twisted bilayer graphene

Speakers
Dr Laura Classen, Nikolaos Parthenios

5:30 – 7:30 PM

Renormalization-group theory of localization for 1D quasiperiodic lattice models

Speaker
Miguel Gonçalves

5:30 – 7:30 PM

Quantifying Entanglement in Heisenberg Spin Chains

Speaker
Pouria Mirsadegh

5:30 – 7:30 PM

Superconducting collective Leggett modes in single-layer 1H-NbSe2

Speaker
Daniel Muñoz-Segovia

5:30 – 7:30 PM

Spins, pseudo-Majoranas and the functional RG

Speaker
Björn Sbierski

5:30 – 7:30 PM

Curved FLRW universes in Bose-Einstein condensates

Speaker
Mireia Tolosa-Simeón

5:30 – 7:30 PM

Topology in magnetic phases of SmB$_6$

Speaker
Moritz M. Hirschmann

5:30 – 7:30 PM

Multiloop pseudofermion functional renormalization for quantum spin systems: Application to the spin-1/2 kagome Heisenberg model

Speaker
Marc Ritter

5:30 – 7:30 PM

Quantum metric, resistivity bound, and flat bands - Electrical conductivity in multiband systems

Speaker
Johannes Mitscherling

5:30 – 7:30 PM

Modelling viscous hydrodynamic electron flow in graphene with a two fluid model

Speaker
Ramal Afrose

5:30 – 7:30 PM

The role of non-local correlations in the triangular lattice Hubbard model

Speaker
Mário Malcolms de Oliveira

5:30 – 7:30 PM **Bogoliubov Fermi surfaces stabilized by spin-orbit coupling**

Speaker
Henri Menke

5:30 – 7:30 PM

Single boson exchange implementation of the multiloop functional renormalization group for the 2D Hubbard model

Speaker
Sarah Heinzelmann

5:30 – 7:30 PM

SU(N)xSU(M) symmetries realised by AB stacked twisted multilayer TMDs: A fRG study

Speaker
Hannes Braun

5:30 – 7:30 PM **Quantum criticality on a compressible lattice**

Speaker
Dr Saheli Sarkar

5:30 – 7:30 PM

Pushing the envelope: sparse modelling of two-particle diagrammatics

Speaker
Markus Wallerberger

5:30 – 7:30 PM

Magnetism and Mottness in the unfrustrated triangular lattice Hubbard model: a cellular dynamical mean-field study

Speaker
Marcel Klett

5:30 – 7:30 PM **The generalized DMFT susceptibility from linear response**

Speaker
Patrik Thunström

5:30 – 7:30 PM

Optical conductivity and Force-Force correlation function in the Hubbard model

Speaker
Maxence Grandadam

5:30 – 7:30 PM

Accuracy of moiré Wannier function models for twist bilayer graphene

Speaker
Dr Anushree Datta

5:30 – 7:30 PM

Disorder-robust phase crystal in high-temperature superconductors from topology and strong correlations

Speaker
Debmalya Chakraborty

5:30 – 7:30 PM

SU(2)-symmetric spin-boson model: Quantum criticality, fixed-point annihilation, and duality

Speaker
Manuel Weber

5:30 – 7:30 PM **Investigations of Instanton Crystal Phase**

Speaker
Dr Grigorii Starkov

5:30 – 7:30 PM **Heavy-fermion quantum criticality via two-stage screening**

Speaker
Andreas Gleis

5:30 – 7:30 PM **Zero-field superconducting diode effect in twisted trilayer graphene**

Speaker
Mathias Scheurer

5:30 – 7:30 PM

Emergent bands induced by plasmon excitations in cuprate superconductors

Speaker
Prof. Andr\'es Greco

5:30 – 7:30 PM **A stabilisation mechanism for many body localisation in 2D**

Speaker
Darryl Foo

5:30 – 7:30 PM

Single-boson exchange fRG application to the two-dimensional Hubbard model at weak coupling

Speaker
Dr Kilian Fraboulet

5:30 – 7:30 PM

Groundstate Phase Diagrams of Variants of the Two-Leg $t\text{-}J$ Ladder at Low Fillings

Speaker
Steffen Bollmann

5:30 – 7:30 PM

Fulfillment of sum rules and Ward identities in the multiloop functional renormalization group solution of the Anderson impurity model

Speaker
Patrick Chalupa-Gantner

5:30 – 7:30 PM **Multiloop fRG Analysis of the Attractive Hubbard Model**

Speaker
Aiman Al-Eryani

5:30 – 7:30 PM

Antiferromagnetic and pairing critical temperatures in the 2D Hubbard model

Speaker
Demetrio Vilardi

5:30 – 7:30 PM

The Mott metal-insulator transition in the two-dimensional Hubbard model - a cellular dynamical mean-field study on large clusters

Speaker
Michael Meixner

5:30 – 7:30 PM **Spinon induced drag in quantum spin liquid heterostructures**

Speaker
Raffaele Mazzilli

5:30 – 7:30 PM

How to get U? On the applicability of the constrained Random Phase Approximation

Speaker
Erik van Loon

7:30 PM