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JOHANNES GUTENBERG UNIVERSITÄT MAINZ

Theoriekolloquium

Nov. 12, 2015 at 1:30 p.m.
Medienraum 03-431

Note: Terminänderung: Beginn bereits 13:30 Uhr im Medienraum

Dr. Christian Schilling
University of Oxford, UK

Influence of Fermionic Exchange Symmetry beyond Pauli's Exclusion Principle

It is hardly known that fermionic occupation numbers do not only obey Pauli's exclusion principle, but are even further restricted by so-called generalized Pauli constraints. We provide a general overview over this new concept. Furthermore, we present two prominent few-fermion systems with occupation numbers lying on (or at least very close to) the boundary of the allowed region. We explain why this pinning (quasipinning)-effect is physically relevant and provide first insights into the mechanism behind it. Our findings also suggest a natural generalization of the Hartree-Fock optimization method.

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