Einladung

zum

Physikalischen Kolloquium
Montag, 05.02.2018
16:15 Uhr in N24/H13

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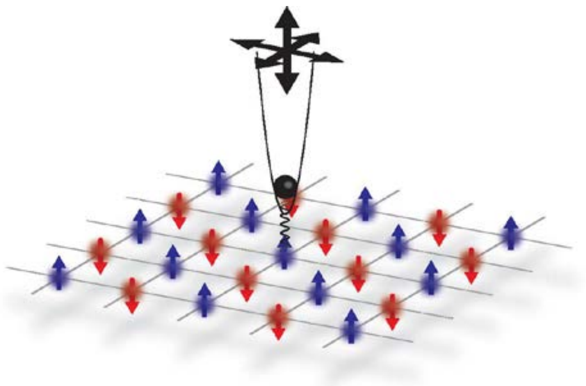
HISKP

Quantum simulations with strongly correlated ultracold gases

Atomic gases cooled to Nanokelvin temperatures are a new exciting tool to study a broad range of quantum phenomena. In particular, an outstanding degree of control over the fundamental parameters, such as interaction strength, spin composition, or dimensionality, has been achieved. This has facilitated access to strongly correlated quantum many body physics in exceptionally clean samples. The outstanding tunability allows to rapidly change the system parameters, even in real time, and to observe the subsequent quantum evolution.

The cleanliness and the good tunability of these cold quantum gases opens the door to simulate systems from other areas of physics. For example, artificial periodic structures for the atomic gas can be created using laser light to mimic condensed matter systems.

I will report on recent theoretical and experimental progress on the realization of these strongly correlated ultracold gases in optical lattices and their response to perturbations from equilibrium.



Ab 16.00 Uhr Kaffee, Tee und Kekse vor dem Hörsaal H13
Organisation: **Prof. Dr. F. Jelezko, Tel. 23750**
Host: **Prof. Dr. s. Huelga, Tel. 22924, off.: 22911**