



CO.CO.MAT

CONTROL OF QUANTUM CORRELATIONS IN TAILORED MATTER
SFB/TR 21 – STUTTGART, ULM, TÜBINGEN

Kolloquium

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Supersolids on optical lattices

A supersolid is an exotic phase of matter where long range diagonal and off-diagonal orders co-exist in a thermodynamically stable phase. Interest in such phases has intensified due to (a) recent experiments on solid Helium and (b) the realization of BEC with dipolar atoms which offers the possibility of realizing this phase on optical lattices. I will first review the problem of supersolidity with a very brief summary of the Helium experiments. I will then discuss the various bosonic Hubbard models on two dimensional optical lattices and under what conditions they exhibit supersolidity. I will finally show some recent results in one dimension and present my conclusions.

Wann? Freitag 26.01.2007, 15:30 Uhr

Wo? Universität Stuttgart, Raum 2.136