



SFB/TRR 21 - Seminar

14. November 2012, Ulm

## Enrique Rico Ortega

(Universität Innsbruck, Austria)

### Quantum simulation of (non-)abelian lattice gauge theories

Using ultra-cold atoms in optical lattices, we construct a quantum simulator for (1+1), (2+1) and (3+1)-d  $U(N)$  and  $SU(N)$  lattice gauge theories coupled to fermionic matter. These systems share qualitative features with QCD. We discuss the observation of confinement, string-breaking or quark-gluon plasma with these simulators.

14. November 2012, 14:00 Uhr

Universität Ulm, Raum N25/4413  
Albert-Einstein-Allee 11, 89081 Ulm

