



**CO.CO.MAT**

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

## Seminar

**Dr. Anna Posazhennikova**

(Universität Karlsruhe (TH))

### Quantum top inside Bose Josephson junction

We consider an atomic quantum dot, coupled between two weakly-coupled Bose-Einstein condensates, where the dot serves as an additional tunneling channel. We show that thus-embedded quantum dot is a pseudospin subject to an external torque, and therefore equivalent to a quantum top. We demonstrate that the behaviour of this top is very sensitive to the tunneling regimes between the condensates, and in certain cases can modify/induce oscillations between the condensates.

**Wann?** Freitag 17.11.2006, 11:00 Uhr

**Wo?** Universität Stuttgart, NWZ II, Raum 2.136