SFB/TRR 21 - Kolloquium
14. Dezember 2007, Ulm

Dr. Jacob Taylor
(Massachusetts Institute of Technology (MIT))

Quantum communication and computation with simple ion traps

Simple electromagnetic traps for atomic ions have a long history in metrology and quantum information processing. I will describe applications of such single-zone traps to problems in quantum communication and large-scale information processing. This approach, relying upon proven technology, benefits from the tremendous experimental advances in preparing, controlling, and measuring ions made with simple ion trap systems. These techniques may be extended to systems with many ions, such as Wigner crystals of ions in large- volume Penning traps, allowing for novel approaches to quantum metrology and quantum information.

14. Dezember 2007, 14:00 Uhr

Universität Ulm, Raum H13 / N24
Albert-Einstein-Allee 11, 89081 Ulm

CO.CO.MAT