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wien

Quantum Optics, Quantum
Nanophysics &
Quantum Information



Institut für Quantenoptik und
Quanteninformation

CoQuS

Complex
Quantum
Systems



TECHNISCHE
UNIVERSITÄT
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UNIVERSITY OF
TECHNOLOGY



Guest lectures by

(TU-LV-Nr.: 387.054 Sommersemester 2009, 2.0 Stunden)

Prof. Helmut Ritsch

Universität Innsbruck

on

Cavity – Electrodynamics

Dates	Time
Monday, 20.04.09	15:00 – 17:00 hrs EG, Seminarraum 1, Florag. 7, 1040 Wien
Tuesday, 21.04.09	14:00 – 16:00 hrs
Wednesday, 22.04.09	13:00 – 15:00 hrs
Thursday, 23.04.09	14:00 – 16:00 hrs
Tuesday, 12.05.09	14:00 – 16:00 hrs
Wednesday, 13.05.09	13:00 – 15:00 hrs
Thursday, 14.05.09	14:00 – 16:00 hrs

Content

- Basics of Quantum Optics: cavity modes, two-level systems
- Non-classical light: Quantum noise, squeezed light, entangled states
- Light matter interaction: Jaynes Cummings Modell, “dressed states”, Tavis-Cummings Model
- Quantum Theory of open systems: Master equation for the description of spontaneous emission and decoherence
- Single-Atom Maser und Laser
- Simple quantum model of single mode lasers

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