**Introductory course on quantum information and quantum gases**

Organized by the Innsbruck Physics Research Center, Innsbruck Univ., by the SFB “Foundation and Application of Quantum Science”, and the Institute for Quantum Optics and Quantum Information (IQOQI)

R. Grimm, K. Hammerer

**Tentative Program**

**Mon, 5.7.**

19:00 -21:00 registration

20:00-22:00 get together

**Tue, 06.07.**

09:00-09:15 Rudi Grimm: Welcome

09:15-10:00 Klemens Hammer: Introduction to QI

10:15-11:00 Otfried Gühne: Entanglement

11:15-12:00 Barbara Kraus: Quantum computation

12:15-14:00 *lunch break*

14:00-14:45 Christian Roos: QI with trapped ions

15:00-15:45 Philip Walther: QI with photons

16:00-16:45 Tracy Northup: QI and cavity QED

**Wed, 07.07.**

09:00-09:45 Francesca Ferlaino: Basics of laser cooling and BEC

10:00-10:45 Sebastian Diehl: Basic BEC theory

11:00-11:45 Rudi Grimm: Key experiments with BEC

12:00-13:30 *lunch break*

13:30-14:15 Christoph Nägerl: Ultracold molecules

14:30-15:15 Florian Schreck: Ultracold Fermi gases

15:30-16:30 *break with refreshments*

16:30-19:00 lab tours

**Thu, 08.07.**

09:00-09:45 Alessandro Zenesini: Optical lattices

10:00-10:45 Enrique Ortega: Quantum simulation of many-body systems

11:00-11:45 Jörg Schmiedmayer: Atom chips

**Social event**

17:30 bus leaving

18:00-18:45 hiking up to Arzler Alm

19:00-22:00 dinner at Arzler Alm

22:00-22:30 hiking down

22:30 bus transfer