



Quantum Information meets Statistical Mechanics

September 22-25 2012, Innsbruck, Austria



	8:30-9:00	9:00-10:00	10:00-11:00	11:00-11:30	11:30-12:30	12:30-14:30	14:30-15:30	15:30-16:30	16:30-17:00	17:00-18:00	18:00-20:00
Sat	Registration (Grauer Bär)	Introduction	Verstraete	Break	Nishimori	Lunch	Bloch	Moessner	Break	Marinari	Poster session
Sun		Unruh	Rubi	Break	Zoller	Excursion	Excursion	Excursion	Excursion	Excursion	Excursion conference dinner
Mon		Cirac	Creutz	Break	Forcrand	Lunch	Blatt	Benatti	Break	Werner	Poster session
Tue		Middleton	Eisert	Break	Läuchli	Lunch	Popescu	Departure			

talks: 45 min+ 15 min discussion

Excursion on Sunday:

- 12:30 departure: short walk from conference hotel to Nordkettenbahn- cable railways (see <http://www.nordkette.com/en>)
- 13:30 lunch at the Restaurant Alpenlounge Seegrube (altitude 1900m, very nice view of Innsbruck)
- 16:30 guided sight-seeing tour in Innsbruck (meeting point conference hotel)
- 19:15 departure (by bus from conference hotel) to conference dinner at Villa Blanka (Innsbruck) (see www.villablanka.com)
- 22:30 / 23:30 bus back to conference hotel



Quantum Information meets Statistical Mechanics

Saturday, 22.9.

09:00		Introduction
10:00	Frank Verstraete	Quantum metropolis sampling
11:30	Hidetoshi Nishimori	Quantum annealing: basics and perspectives
14:30	Immanuel Bloch	Controlling Quantum Matter under Extreme Conditions
15:30	Roderich Mössner	Slow, and very slow, driven quantum dynamics
17:00	Enzo Marinari	A statistical mechanical analysis of genome scale metabolic networks.

Sunday, 23.9.

09:00	Bill Unruh	Measurement of Hawking Radiation from a horizon
10:00	Miguel Rubi	Thermokinetic description for radiative heat exchange in nanostructures
11:30	Peter Zoller	Atomic Quantum Simulation of Dynamical Gauge Fields coupled to Fermionic Matter: From String Breaking to Evolution after a Quench

Monday, 24.9.

09:00	Ignacio Cirac	Bulk-boundary correspondence in many-body quantum systems
10:00	Michael Creutz	Emergent spin
11:30	Philippe de Forcrand	The sign problem in Monte-Carlo simulations of lattice QCD
14:30	Rainer Blatt	Quantum Information Processing with Trapped Ca ⁺ Ions
15:30	Fabio Benatti	Entanglement of indistinguishable particles
17:00	Reinhard Werner	1/N corrections to the mean-field ground state problem as a local version of finite deFinetti theorems

Tuesday, 25.9.

09:00	Alan Middleton	Exact algorithms for correlations and configurations in dimer and Ising models and a 2D entropic glass
10:00	Jens Eisert	Insights from quantum information theory into quantum statistical mechanics
11:30	Andreas Läuchli	Entanglement Spectra: From Wavefunction Tomography to Continuous Symmetry Breaking
14:30	Sandu Popescu	Entanglement and the foundations of statistical mechanics