

Computational Methods for Strongly Correlated Systems and Nanomagnetism

September 26 - October 1, 2004
Lugano, Switzerland

Preliminary program

- Sunday, September 26: Welcome reception
- Monday, September 27:
 - Introduction to C++
 - Classical Monte Carlo simulations
 - The Ψ -Mag Toolset
 - *Hands-on session with the Ψ -Mag Toolset*
- Tuesday, September 28:
 - Introduction to XML and ALPS
 - Exact diagonalization
 - Series expansion
 - *Hands-on session with the ALPS classical Monte Carlo code*
- Wednesday, September 29:
 - Introduction to path integrals and quantum Monte Carlo
 - The loop algorithm for quantum Monte Carlo
 - *Hands-on session with the ALPS exact diagonalization code*
 - *Excursion and conference dinner*
- Thursday, September 30:
 - The directed loop and worm algorithms for quantum Monte Carlo
 - The Density Matrix Renormalization Group Method (DMRG)
 - Wang-Landau sampling for classical and quantum systems
 - *Hands-on session with the ALPS quantum Monte Carlo codes*
- Friday, October 1:
 - The Coupled Cluster Method
 - *Hands-on session with the DMRG code*
 - Simulating time-evolution in quantum systems

Expected end: 17:30