Seminar Announcement

Bernd A. Berg

Computer Simulations: Methods and Applications.

Wednesday, 17:00 – 18:30, KlHosSR

In the last thirty years computer simulations have have become a major enabling technique in applied sciences. The goal of this seminar is to provide an overview of cutting edge methods and their applications. Methods may include the pruned-enriched Rosenbluth method, biased Metropolis sampling, molecular dynamics, hybrid Monte Carlo, replica exchange algorithms, generalized ensembles and Wang-Landau sampling, and quantum computing. Applications will focus on recent research results in statistical physics, particle physics (lattice gauge theory), and bio-chemistry (for instance protein folding).