Super Massive Computations in Theoretical Physics

Wednesday, 11 February 2015 - Friday, 13 February 2015

Trento

Scientific Programme

This workshop is organized in the framework of the SUMA-INFN project. SUMA is led by those people of the Istituto Nazionale di Fisica Nucleare (INFN) theoretical community who, although active in different research areas, share the need for massive computational resources. Examples of topics that are of interest for this community are lattice QCD, dynamical systems, classical and ab-initio simulations of bio-systems. Several existing INFN projects have already produced significant results and remarkable technological progresses upon which the new generation of high performance computer systems will be based. SUMA plans to back up the many INFN initiatives aiming at providing efficient tools for the present and future needs of computational physics. The workshop, whose main goal is to promote exchanges of ideas and foster collaborations, will be structured in four sections centred on the following four themes: Lattice Quantum Chromodynamics, Biophysics, Fluid Dynamics and Machine Development. Each one of the four topics will be introduced by a general talk aiming at providing an overview of the state-of-the-art of the field for what concerns scientific achievements and computational aspects. This workshop is open to all the researchers interested in high-performance and large-scale computations in theoretical physics. Registration is free, but compulsory for organizational reasons.