HPC at CNAF

ACCELERATORS AND PLASMA PHYSICS

WHEN

24th june, 2014
13.00 - 18.00

WHERE

CNAF Meeting room
Viale Berti Pichat 6/2, Bologna (first floor)

SPEAKERS • G. Turchetti (UniBO/INFN) • G. Maron (CNAF/INFN) • G. Arduini (CERN) • A. Bazzani (UniBO/INFN) • M. Giovannozzi (CERN) • G. Franchetti (GSI) • A. Franchi (ESRF) • L. Gizzi (CNR/INO) • G. Sarri (QUB) • F. Boscherini (UniBO) • A. Sgattoni (CNR/INO) • S. Sinigardi (UniBO/INFN) • C. Benedetti (LBNL) • F. Rossi (UniBO/INFN) • D. Cesini (CNAF/INFN) • F. Giacomini (CNAF/INFN) • S. Karsch (LMU/MPQ)

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- Beams and plasma dynamics
- Computing activities at CNAF
- HPC infrastructure at CNAF: status and perspectives
- Support infrastructures to software development projects
- Beam dynamics studies for the LHC and Injector upgrade: some examples
- Multipolar non-linearities and correction strategies
- Transport and space charge studies with MICROMAPS
- Transport and space charge studies with HALODYN
- Laser acceleration of electrons and Thomson X-rays at CNR/INO
- Generation of ultra-bright, multi-MeV gamma-ray beams via non-linear Thomson scattering
- Time resolved X-ray spectroscopies
- Rayleigh-Taylor Instability in high energy gain radiation pressure ion acceleration
- Prepulse and preplasma studies for a proton acceleration record experiment: 2D analysis
- Wakefield excitation using multiple incoherent laser pulses
- Laser acceleration of protons and electrons: simulations on GPUs at the HPC@CNAF facility
- X-ray generation using LWFA generated electrons