

From GRAMOLA to GRAVITON: new HPC computing infrastructure at IFIC

In this talk we will present GRAVITON, the new MPI-intensive computing cluster acquired by the SOM group at IFIC within the framework of the Complementary Plan for Astrophysics and High Energy Physics, funded through the GRAMOLA project (Gravitational Waves, Axions and Dark Matter, Lattice and Artificial Intelligence). The system, based on state-of-the-art nodes interconnected through a low-latency network, is optimized for large-scale simulations in particle physics and astroparticle physics.

This new computing resource will make it possible to address frontier problems in the study of gravitational waves, the phenomenology of axions and dark matter, as well as lattice QCD calculations. We will present the infrastructure acquired, its integration into the IFIC computing ecosystem, and some of the scientific results that can be achieved with GRAVITON.

Authors: RAMOS MARTINEZ, Alberto (Univ. of Valencia and CSIC (ES)); G. FOLGADO, Miguel (IFIC / CSIC - UV); MENA, Olga

Presenter: G. FOLGADO, Miguel (IFIC / CSIC - UV)

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