

ERC_FIRST HPC-class Projects @ INAF-OAR

Friday, 9 October 2015 09:50 (25 minutes)

This talk will introduce three HPC-level projects developed in the ERC-funded group FIRST (@INAF-OAR): dustyGadget, HPCCRASH, and GAMESH. Our projects span from the implementation of accurate dust production, spreading and evolution in the SPH algorithm of Gadget3, to a traditional Monte Carlo radiative transfer (RT) method implemented in the code CRASH. Finally I will describe our novel pipeline GAMESH, which combines both CRASH and the semi-analytical chemical evolution code GAMETE. GAMESH is currently used to study the effects of the radiative feedback in the formation and evolution of the Local Group. I will focus both in presenting our tools and their computational requirements, also highlighting the many advantages that could derive from partnerships of INAF with HPC-oriented organisations as PRACE or the OpenPower foundation

Presenter: GRAZIANI, Luca