Centro de Investigação em Matemática e Aplicações
Departamento de Matemática
Programa de Doutoramento em Matemática

Seminário

21 de fevereiro de 2020
CLAV – sala 138 – 14h00

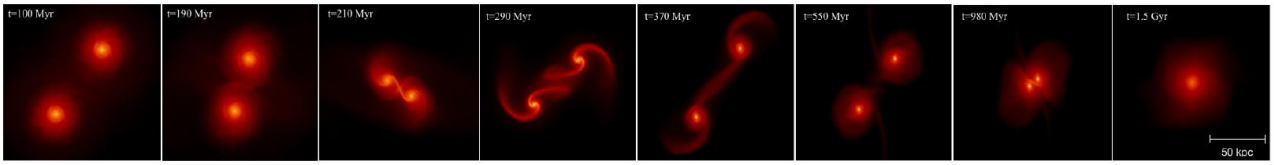
The OBLIVION Supercomputer

Miguel A. de Avillez
Computational Astrophysics Group, Department of Mathematics, University of Évora, Portugal
Zentrum für Astronomie und Astrophysik, Technische Universität Berlin, Germany

Abstract: The OBLIVION supercomputer was acquired by the University of Évora under the ENGAGE SKA Research Infrastructure[1] in order to address the large data analytics and computational demands of the Square Kilometer Array (SKA; the largest ongoing astronomical project in the world). This is the fastest and largest peak performance supercomputer in Portugal. Although the machine's primary use is for Astrophysics, a large fraction of the computing time will be available for the scientific community and enterprises to carry out production runs and deal with massive amounts of data (hundreds of terabytes or even petabytes).

There are a few major goals defined for this machine: (1) carry out computationally demanding scientific simulations, (2) handle massive volumes of data using high performance computing (HPC), (3) training and transfer of knowledge on HPC and high performance data analytics (HPDA), and (4) establish a HPDA program associated to different data collections and their access by different communities (e.g., astrophysics, atomic and particle physics, engineering, mathematics and statistics, health and medicine, and tourism, just to name a few).

In this talk I'll present the supercomputer, its scalability against other machines in Europe, the goals referred above, and the scientific case.



[1]"Enable Green E-Sciences for the Square Kilometre Array", Ref. POCI-01-0145-FEDER-022217, funded by the FCT and COMPETE2020.

Projeto UIDB/04674/2020