The group of Computational Relativistic Astrophysics and Cosmology of the Departments of Astronomy and Astrophysics, and Mathematics, of the University of València offers 3 predoctoral contracts. The focus of the research will be on numerical simulations of extragalactic, relativistic jets at parsec scales and in cosmological environments, and the development of numerical methods for hyperbolic differential equations with stiff source terms (with applications to resistive RMHD, strong cooling systems, etc.). The group comprises faculty members Pablo Cerdá-Durán, Isabel Cordero-Carrión, Jose Antonio Font, José María Martí, Susana Planelles, Manel Perucho, Vicent Quilis and Alejandro Torres-Forne.

We are seeking highly motivated candidates interested in using and developing our numerical codes to study different scenarios in the field of Relativistic Astrophysics and Cosmology.The specific topics that will be covered by the PhD projects are:

- Jet physics from formation to parsec scales, led by José María Martí, Manel Perucho.

- Numerical methods for hyperbolic systems with stiff source terms, led by Isabel Cordero-Carrión.

- AGN feedback and its role in galaxy/cluster evolution, led by Susana Planelles, Manel Perucho, Vicent Quilis.

Interested candidates must hold a Master in Physics or Mathematics. The appointment is for a period of 3 years. The expected starting date isAutumn 2023.Yearly gross salary will be around 22 kEuros. The University of València is an equal opportunity employer that is committed to diversity and inclusion encouraging applications from women and/or other underrepresented groups.

The applicants should submit a short declaration of interest and a cv to Manel Perucho (manel.perucho[at]valencia.edu) within the next month. Please, contact us in the case that you have any questions.

We would appreciate that you forwarded this e-mail to any potential candidates that you may know.

Sincerely,

Toni Font and Manel Perucho, on behalf of the group