



universidade
de aveiro



CENTRO DE I&D EM MATEMÁTICA E APLICAÇÕES
CENTER FOR R&D IN MATHEMATICS AND
APPLICATIONS

Gravitational Geometry and Dynamics Group Seminar

Tue. 4th October '22 On Campus at 14h30

Exploring strong gravity systems with the techniques of magnetohydrodynamics

Hector Olivares

from Radboud University
to University of Aveiro

Sala Sousa Pinto, Math dept.

Gravitational wave detections, images of black hole shadows, and other impressive developments in observational astronomy allow us to study strong gravity systems in a completely new way. Being immersed in the universe, these systems are surrounded by plasma, which can be described by the equations of magnetohydrodynamics (MHD). In light of the observing missions planned for the near future, we will explore some applications of general relativistic MHD simulations to study the observable properties of black holes and other compact objects, as well as new ways in which numerical solutions of the Einstein field equations could benefit from methods employed in numerical MHD.

about us gravitation.web.ua.pt

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