

Seminario

Departamento de Física Teórica

“Of Monsters and Jets: Exploring Active Galactic Nuclei across wavelengths and scales”

David Fernández Gil

(Centro de Estudios de Física del Cosmos de Aragón, CEFCA)

Abstract:

Active Galactic Nuclei (AGN) are cosmic engines shaping the evolution of their galactic hosts. In this talk, I will explore how AGN, their relativistic jets, and their host galaxies are interconnected across vastly different scales and wavelengths. I will present results from observations of the parsec-scale, innermost region of the jets, revealing a surprising statistical alignment with the structure of the host galaxy, despite a difference in size of 4 orders of magnitude. Next, I will explain how by combining narrow-band optical, low-frequency radio, and infrared observations, we can get access to a multi-wavelength window into AGN activity and feedback. We see that galaxies with extended radio jets show signs of quenched star formation. Finally, I will discuss future plans of studying the life-cycle of AGN and their jets, highlighting how the lifetimes and evolution of jets may regulate star formation and influence galaxy evolution over cosmic timescales.

Fecha: martes, 10 de febrero de 2026

Hora: 16:10 horas

Lugar: seminario de Física Atómica, Molecular y Nuclear