

PER<sup>2</sup>APS<sup>0</sup>  
JUGIA<sup>2</sup>  
ADVANCED<sup>4</sup>  
PHYSICS<sup>2</sup>  
SEMINARS<sup>4</sup>

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23 SETTEMBRE  
ORE 15:00 – AULA A



**Multiwavelength numerical modelling of  
extragalactic relativistic jets with JetSeT:  
from the open-source/reproducible approach  
to the physical insight of the results**  
Andrea Tramacere



In the first part of this talk, I will present the current state of open-source radiative modelling tools for the multiwavelength emission from extragalactic relativistic jets, focusing in particular on the JetSeT frameworks, highlighting features and the limitations related to the implementation of the different physical processes, I discussing the implications in terms of reproducibility, interoperability, maintainability, and overlapping, outlining the advisable routes for the near future.

In the second part, I will focus on some results and related open questions regarding the understanding of the physics acting in the relativistic jets, in particular, the particle acceleration processes, the VHE spectral emission, the optical/X-ray polarization, and the phenomenology of expanding jets. I will also discuss the requirements, for the development of the current tools, to advance our current understanding.