



Eleonora Puzzoni

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Social Network

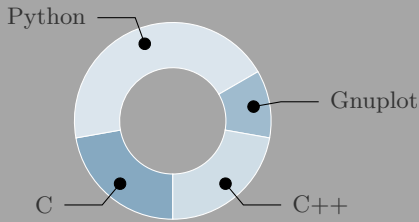
R^G Researchgate Link

Languages

English
Italian

Programming skills

Coding Languages



Codes

PLUTO Astrophysical Fluid Dynamics

Research interests

- Astrophysical Plasmas
- Plasma instabilities
- Magnetohydrodynamics
- Particle acceleration
- Computational Fluid Dynamics

Interpersonal skills

- Organization
- Focus on objectives
- Collaboration
- Communication
- Active Listening
- Attention to detail
- Open-mindedness
- Curiosity

Education

- Nov 2022 – present **Postdoctoral Research Associate** University of Arizona
Currently working on the modeling of the gamma-ray emission observed by Fermi
Supervisor: Federico Fraschetti
- Nov 2019 – Oct 2022 **PhD in Astrophysics** University of Turin
On the impact of numerical and physical resistivity on magnetic reconnection and particle acceleration
Supervisor: Andrea Mignone
- Sep 2017 – Oct 2019 **Master's Degree in Physics (110/110 cum laude)** University of Turin
Particle acceleration in astrophysical plasmas
Supervisor: Andrea Mignone
- Sep 2014 – Sep 2017 **Bachelor's Degree in Physics (110/110 cum laude)** University of Cagliari
Ricerca dei parametri orbitali e di spin della pulsar X al millisecondo IGR J00291+5934
Supervisor: Luciano Burderi

Research Visits

- Aug 2022 – Sep 2022 **Visiting Student at the Columbia University** New York
Focus on the importance of the resistive electric field in accelerating particles in tearing-unstable current sheets
Supervisor: Lorenzo Sironi

Publications

- 2023 **A guiding center implementation for relativistic particle dynamics in the PLUTO code**
A. Mignone, H. Haudemand, E. Puzzoni
Computer Physics Communications, 285, 108625
- 2022 **The impact of resistive electric fields on particle acceleration in reconnection layers**
E. Puzzoni, A. Mignone, G. Bodo
Monthly Notices of the Royal Astronomical Society, 517, 1452
- 2021 **On the impact of the numerical method on magnetic reconnection and particle acceleration – I. The MHD case**
E. Puzzoni, A. Mignone, G. Bodo
Monthly Notices of the Royal Astronomical Society, 508, 2771
- 2020 **Particle-Gas Hybrid Schemes in the PLUTO Code**
A. Mignone, B. Vaidya, E. Puzzoni, D. Mukherjee, G. Bodo, M. Flock
Journal of Physics Conference Series, 1623, 012007

Contributed Talks

- Nov 2022 **High Energy Seminar (Center for Astrophysics, Boston)**
Particle acceleration in astrophysical plasmas: from jets in Active Galactic Nuclei to the Sun
- July 2022 **44th COSPAR Scientific Assembly (Athens, Greece)**
Particle acceleration in relativistic environments: on the role of magnetic reconnection
- May 2022 **Active Galactic Nuclei XIV: The Renaissance of Black Holes and Galaxies (Florence, Italy)**
The role of magnetic reconnection on particle acceleration in relativistic jets
- Jun 2021 **PLUTO Symposium 2021 (Member of the SOC)**
On the Impact of the Numerical Method on Magnetic Reconnection and Particle Acceleration - the MHD case