

orenzo Posti

bom: 16/10/1988 — Perugia (IT)

Strasbourg (FR)



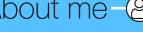








About me-8



Research scientist with a Ph.D. in physics and 10+ years experience in data science, creative modelling, software development, communication.

Skilled and trained in critical thinking, machine learning, data analysis, and statistics. Always intrigued by cutting-edge algorithms on the arXiv.

Seeking new challenges as a data scientist & eager to lend my research methodology to build together something new, for a better future for all.



Programming:

- python, jupyter, C++, LaTex, git, bash, sphinx-docs
- pytorch, numpy, scipy, pandas, matplotlib, numpyro
- MPI / OpenMP, SQL (basics)

Technical:

- descriptive, predictive, and generative modelling
- data interpretation, model uncertainty assessment
- regression, optimisation, MCMC, neural network, VAE, diffusion models, gaussian processes
- project planning, problem solving

Communication:

- report/paper writing, presentations, public speaking
- constructive reviewing, mentoring

Soft:

- positive & encouraging attitude, constructive criticism
- worked in a multi-cultural environment in 5 countries
- leadership over small teams (~5)
- team player in large teams (~10 100)
- organisation of internal and international meetings
- accustomed to deadlines & multi-tasking





Italian — native language

English — fluent (C1/C2)

French — intermediate (B1/B2)





Summary of research output:

38 peer-reviewed papers, 984 citations, h-index: 18 (source ADS, ORCiD). 60+ seminars given worldwide, 9 repositories on GitHub, 5 data catalogs on Vizier.

Research scientist

2023-

University of Strasbourg (FR)

- Modelling large astronomical datasets with machine learning techniques
- Analysis of terabytes of data, filtering noise from signal with own pipelines

Experience - ©

- Started a deep learning blog, used in internal group meetings
- Leading small international teams successfully producing research output
- Mentoring of students, organisation of international meetings

2019-2016

University of Groningen (NL)

- Analysis and modelling of large astronomical catalogs of >1 billion stars
- Methods: machine learning, Bayesian statistic, probabilistic modelling
- Member of large international collaborations and local working group

Ph.D. researcher

2016-

University of Bologna (IT)

- Pioneered new generative models of galaxies based on distribution theory
- Used HPC facilities to perform computer simulations of galaxies
- Worked in prestigious institutes abroad for ~10 months (UK, USA)
- I curate a <u>deep learning blog</u>, coding cutting-edge algorithms from scratch
- I taught classes of python, classical machine learning, and astronomy
- Over the years, I strived to stay up-to-date on the latest tech completing numerous courses: e.g. MPI/OpenMP, GPUs, pytorch, fast.ai

Education —



2015-2012

Ph.D. in Astrophysics — University of Bologna (IT)

Thesis: "On the luminous and dark matter distribution in early-type galaxies"

2012-2010

M.Sc. in Astrophysics — University of Bologna (IT)

Grade: 110/110 cum laude

2010-2007

B.Sc. in Astrophysics — University of Bologna (IT)

Grade: 110/110 cum laude

Research Funding



Grants

- CNES fellowship, Strasbourg (FR), 2019 50 k€
- Ph.D. fellowship, Bologna (IT), 2012 40 k€
- CNRS grant for conferences, Univ. of Strasbourg (FR) 10 k€
- Travel grants from IAU, Univ. of Groningen (NL) 4 k€

Computing Time

- 200 khrs of computing time at CINECA HPC facility (PI: Posti)

Telescope Time

- PI & co-l of 5 observing runs at the most competitive facilities in the world

Honours & Prizes



- ISSNAF INAF prize funding an internship at STScl, Baltimore (USA), 2011
- Qualification for lecturer in physics & astronomy, France, 2020
- Invitation as an expert panel reviewer for the Spanish Space Agency, 2020
- Reviewer for professional journals e.g. Nature, Astrophysical Journal