Emily L. Hunt – Curriculum Vitae

📞 On request   ✉ emily.hunt.physics@gmail.com   🌐 emily.space   🔗 emilyhunt

Research Profile

Astronomer with interests in machine learning and statistics. Highly skilled programmer with 10+ years of programming experience. During my Ph.D., I used Gaia data and various machine learning techniques to create the largest ever catalogue of star clusters in the Milky Way. I am looking to work on applications of machine learning to large astronomical datasets such as Gaia, Vera Rubin, and JWST surveys.

Education & Employment

2025, Postdoc, Max Planck Institute for Astronomy, Germany

2023-2024, Postdoc, Heidelberg University, Germany

Ph.D. 2023, Heidelberg University, Germany
Thesis: "Improving the census of open clusters in the Milky Way with data from Gaia"
Advisor: S. Reffert

M.Phys. 2019, University of Bath, United Kingdom
Thesis: "Inference of photometric galaxy redshifts with a mixture density network"
Advisor: S. Wuyts

Selected Presentations

Talk, Heidelberg-Harvard Star Formation Workshop – Heidelberg, Germany		2024
Seminar, Stars seminar – Geneva, Switzerland		2024
Talk, MW Methods Workshop – Ringberg, Germany		2024
Invited review, EAS (SS33) – Padova, Italy		2024
Talk, EAS (S4) – Padova, Italy		2024
Invited talk, SFML2024 – Budapest, Hungary		2024
Colloquium – University of Vienna, Austria		2024
Talk, From star clusters to field populations – Florence, Italy		2023
Seminar, CEFCA – Teruel, Spain (online)		2023
Talk, .Astronomy 12 – Flatiron Institute, New York, NY, USA		2023
Colloquium, Königstuhl Colloquium – MPIA, Heidelberg, Germany		2023
Talk, National Astronomy Meeting – Coventry, England, UK		2022
Invited talk, EAS (SS34) – Valencia, Spain		2022
Talk, EAS (SS24) – Valencia, Spain		2022
Talk, EAS (SS15) – Valencia, Spain		2022
Talk, LGBTQ+ STEMinar – University of Glasgow, Scotland, UK		2022
Seminar, Galaxy group – ARI, Heidelberg, Germany		2021
Seminar, Astronomy group – University of Hertfordshire, England, UK		2021

Talk, Star Clusters: The Gaia Revolution   2021
Invited talk, EAS (SS32) – Leiden, Netherlands   2021
Talk, EAS (S15) – Leiden, Netherlands   2021
Seminar, SFB 881 – Heidelberg, Germany   2021
Seminar, Gaia group – University of Vienna, Austria   2021
Seminar, Astronomy group – University of Bath, England, UK   2020
Seminar, Milky Way group – MPIA, Heidelberg, Germany   2020

Open-source software

Bluesky Astronomy feeds – lead developer of astronomy community feeds on Bluesky social network, which are used daily by hundreds of astronomers to interact
ocelot – lead developer of an upcoming open cluster analysis Python package

Teaching & Supervision

Machine learning*, MWGaia Dr. Schl., University of Coimbra, Portugal   2024
Astronomy Lab Course, Heidelberg University   2021
Introduction to Astronomy I, Heidelberg University   2020
Co-supervisor of MSc student, Heidelberg University   2020-2021

* = as a primary lecturer

Awards

Ernst Patzer Award for an excellent publication (press release)   €2000 – 2023
University of Bath IMI Undergraduate Research Internship   £2000 – 2018

Selected Outreach

Invited talk – OUTer SPACE, Max Planck Institute for Astronomy   2023
Interviewed for article – Space.com   2021
Interviewed for article – Thrillist.com   2020
Radio interview – Deutschlandfunk (public radio) & Neue Zürcher Zeitung   2020

Meeting organization & service

Co-Chair at EAS 2025: Symposium S3 (Cork, Ireland)   2025
SOC for Roman Galactic Plane Survey Workshop (online)   2025
SOC for .Astronomy 13 (Madrid, Spain)   2024
SOC for .Astronomy 12 (New York, NY, USA)   2023
Reviewer for A&A, MNRAS   ongoing

Workshops Attended

.Astronomy 13 – ESAC, Madrid, Spain   2024
.Astronomy 12 – Flatiron institute, New York, NY, USA   2023
CZS school on Scientific Machine Learning – Heidelberg, Germany   2023
GaiaUnlimited Community Workshop – Heidelberg, Germany   2022
..Astronomy – online   2020

Relevant expertise

Programming languages

Python: expert (e.g. numpy, tensorflow, emcee)
JavaScript: intermediate (Svelte, SvelteKit)
C/C++: intermediate
Java: basic

Tools and scripting languages

Git/GitHub: expert
LaTeX: expert
ADQL/SQL: expert
HTML/CSS: intermediate

Languages

English: native speaker
German: intermediate