Emily L. Hunt – Curriculum Vitae

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Personal Information

Nationality: British

Sex: female

Marital status: single

Education

Ph. D. 2023. International Max Planck Research School for Astronomy & Cosmic Physics at the University of Heidelberg. *Advisor: S. Reffert*

M. Phys. 2019. University of Bath. *Advisor: S. Wuyts*

Research internship, 2018. University of Bath. *Advisor: V. Scowcroft*

Publications

Emily L. Hunt and Sabine Reffert (2023). "Improving the open cluster census. III. The masses and dynamics of open clusters in the Milky Way". *In prep.*

Emily L. Hunt and Sabine Reffert (2023). "Improving the open cluster census. II. An all-sky cluster catalogue with Gaia DR3". A&A (accepted March 21st, 2023).

Emily L. Hunt and Sabine Reffert (2021). "Improving the open cluster census. I. Comparison of Clustering Algorithms applied to Gaia DR2 Data". A&A 646, A104.

Selected Presentations

Searching for clusters of stars. OUTer SPACE, Max Planck Institute for Astronomy, 2023.*+

The power (and caveats) of clustering algorithms with examples from use on Gaia data. NAM 2022 (Techniques 2).

The open cluster renaissance has only just begun: Exciting new insights from an all-sky Gaia EDR3 cluster census. EAS 2022 (SS15).

Name change policies in astronomy journals: How they were achieved and lessons we can learn. EAS 2022 (SS34).*

Approximate Bayesian neural networks with 'Flipout' weight perturbations. EAS 2022 (SS24).

Ancestry in space: Looking for families of stars with machine learning. LGBTQ+ STEMinar, 2022.+

An all-sky open cluster census with Gaia EDR3. Galaxy group seminar, Astronomisches Rechen Institut of Heidelberg University, 2021.*

An all-sky open cluster census with Gaia EDR3. Astronomy seminar, University of Hertfordshire, 2021.*

A more complete and accurate open cluster census with Gaia EDR3. Star Clusters: The Gaia Revolution, 2021.

Uncertainty in machine learning: are Bayesian neural networks viable in 2021? EAS 2021 (S32).*

A more complete and accurate open cluster census with Gaia EDR3. EAS 2021 (S15).

Searching for open clusters with Gaia. SFB 881 seminar, Center for Astronomy of Heidelberg University, 2021.

Searching for open clusters with Gaia. Gaia group seminar, University of Vienna, 2021.*

Comparing methods to search for open clusters with Gaia. Astronomy seminar, University of Bath, 2020.*

Comparing methods to search for new open clusters with Gaia. Milky Way group seminar, Max Planck Institute for Astronomy, 2020.*

* = invited; + = outreach.

Workshops

CZS summer school on Scientific Machine Learning in Astrophysics, Heidelberg, 2023.

GaiaUnlimited Community Workshop, Heidelberg, 2022. (Led session on open cluster selection functions.)

dotdotAstronomy (2020).

Awards

University of Bath IMI Undergraduate Research Internship (funded), 2018

Teaching

Astronomy Lab Course, Heidelberg University, 2021

Introduction to Astronomy I, Heidelberg University, 2020

Relevant expertise

Programming languages

Python: expert, *with modules including: numpy, matplotlib, tensorflow, and emcee.*

C/C++: intermediate

JavaScript: intermediate, *using the SvelteKit framework.*

Java: basic

Tools and scripting languages

Git/GitHub: expert

LaTeX: expert

ADQL/SQL: basic

HTML/CSS: basic