

EVA DURÁN CAMACHO

Researcher in astrophysics with a passion for star formation and evolution

Cardiff Hub for Astrophysics
Research and Technology
(CHART)
Cardiff University

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Education

- 2020–present **PhD, Astrophysics**, *Cardiff University*, Cardiff, United Kingdom.
Star formation in the Milky Way - observing numerical models using AREPO. Supervisors: Dr. Ana Duarte Cabral & Dr. Paul Clark
- 2019–2020 : **MASt in Astrophysics**, *University of Cambridge*, Cambridge, United Kingdom.
- 2015–2019 : **Grado en Física**, *Universidad Autónoma*, Madrid, Spain.

Summer Schools

- July 2021 : **International Summer School on the Interstellar Medium of Galaxies, from the Epoch of Reionization to the Milky Way**, *IAU*, Virtual Edition.

Honours & Awards

- August 2022 **IAU Travel Grant** (1682€), International Astronomical Union (IAU)
- August 2022 **KAS Travel Grant** (318€ + accommodation), Korean Astronomical Society (KAS)
- June 2022 **Travel Grant** (1594\$), Flatiron Institute (New York, USA)
- 2015–2019 : **Distinctions**, *Physics Degree*, Universidad Autónoma, Madrid, Spain.
Distinction in a series of subjects: Análisis I (1st year), Electromagnetismo I (2nd year), Métodos Matemáticos Avanzados and Electrodinámica Clásica (3rd year), Física Atómica y Molecular and Física del Cosmos (4th year)

Conferences & Talks

- January 2021: **Star Formation in Different Environments 2022**, *ICISE*, Contributed Talk.
- August 2022: **IAU Symposium 373: Resolving the Rise and Fall of Star Formation in Galaxies**, *IAU General Assembly XXXI*, Poster .
- June 2022: **From Stars to Galaxies II: Connecting our understanding of star and galaxy formation**, *Chalmers*, Poster.
- June 2022: **Computational Astrophysics in the ngVLA Era: Synergistic Simulations, Theory, and Observations**, *Flatiron Institute*, Poster.
- January 2021: **UKRI STFC Introductory Course in Astronomy for New Research Students**, *Armagh Observatory and Planetarium*, Virtual Edition , Contributed Talk.
- June 2021: **Conference for Astronomy and Physics Students (CAPS '21)**, *University of Birmingham*, Virtual Edition , Poster.

November 2021: **10th IRAM 30-meter School on Milimeter Astronomy**, *Institut de Radioastronomie Milimétrique*, Virtual Edition, Attendee.

Research Projects

- 2020–2022: **Self-consistent modelling of the Milky Way structure using live potentials**, *Cardiff University*. Numerical simulations of Milky Way type Galaxies using the state-of-the-art moving mesh code AREPO. Studying the structure of our Galaxy and zooming into smaller regions where star formation processes can be studied. Statistical comparison of our models with observations.
- Supervisors : Dr. Ana Duarte Cabral, Dr. Paul Clark
- Summer 2020: **Evolution of T Tauri Stars**, *University of Cambridge*. Studying the effects of magnetic fields and rotation on the evolution of the early type of stars T Tauri using the STARS code created at the University of Cambridge
- Advisors : Prof. Christopher Tout
- 2019–2020 : **Searching for extremely metal-poor stars with GAIA**, *University of Cambridge*, Cambridge, United Kingdom. MAST research project. Based on the usage of Gaia as a database to find extremely metal-poor stars in the Galactic Halo. Artificial Neural Networks were the main technique applied in the study
- Advisors : Dr. Giorgia Busso, Dr. Francesca D'Angeli and Prof. Mike Irwin
- 2018–2019 : **Intermediate-mass T Tauri stars**, *Universidad Autónoma*, Madrid, Spain. BA research project. Study and comparison of intermediate-mass T Tauri and its counterparts the Ae/Be stars based on their spectra and position in the Hertzsprung-Russell diagram.
- Advisors : Prof. Gwendolyn Meeus
- 2018–2019 : **Observations and data analysis of a point source**, *Universidad Autónoma*, Madrid, Spain. BA research project. Observations of the star AE UMA at Calar Alto Observatory, Almería (Spain). Data reduction and analysis.
- Advisors : Dr. Yago Ascasibar

Teaching Assistantship

- 2020–2021: **The Physics Mentor Project**, Mentor, Cardiff, United Kingdom.
- 2020–2022 : **Environmental Physics, Introduction to Astrophysics, Computational Physics, Atomic and Nuclear Physics, Optics**, *1st-3rd year Physics*, Marking and Demonstrating, Cardiff University.

Working Experience

- July–August 2018 : **Researcher**, *University of Cambridge*, Cambridge, United Kingdom. Internship at the Institute of Astronomy. I worked on the evolution of T Tauri stars using the STARS code. Supervisor: Christopher Tout
- January–June 2018 : **Laboratory Technician**, *Universidad Autónoma*, Madrid, Spain. Laboratory technician at the Condensed Matter Department. Worked for a PhD student extracting graphene samples from graphite
- November 2016–May 2019 : **Tutoring**, Madrid, Spain. High school students. Subjects: Physics, Mathematics and Chemistry

Computational skills

- Programming: Python, Matlab, C++
- Documents: LaTeX, Adobe, Word, Excel, PowerPoint
- Plotting: DataStudio, TopCat, SciDavis, CARTA, SAOImageDS9

Languages

- 1st **Spanish**, *Native.*
- 2nd **English**, *Cambridge Advanced Certificate (2014) IELTS Academic (Grade: 8.0/9.0) (2019) .*
- 3rd **French**, *Four years at high school, equivalent to a B1 level.*
- 4th **Italian**, *Currently undertaking the course Italian for Beginners - Stage A at Cardiff University.*