

Lurdes Ondaro Mallea

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Current Position

10/25–now Postdoctoral Researcher
Institution: Institute of Astronomy, University of Cambridge, Cambridge, United Kingdom
Advisors: Dr. Boryana Hadzhyiska

Academic background

2021–2025 PhD in Computational Cosmology
Institution: Donostia International Physics Center, Donostia, Spain
Advisors: Prof. Raul Angulo
Thesis: *Simulating structure formation in the Universe*
Main research topics: structure formation; simulations; warm dark matter and first halo formation, phase-space simulations, baryonic effects on cosmic gas, theoretical modelling of kinetic Sunyaev-Zel'dovich effect, constraining AGN-feedback.

09/20–07/21 Master Degree in Theoretical Physics and Physics of the Cosmos
Institution: Universidad Autónoma de Madrid, Madrid, Spain
Advisor: Prof. Raul Angulo, Prof. Miguel Ángel Sánchez Conde
Thesis: *γ -ray annihilation flux in Warm Dark Matter cosmologies*

09/19–06/20 Research Assistant in Computational Cosmology
Institution: Donostia International Physics Center, Spain
Advisor: Prof. Raul Angulo

06/19–09/19 Summer Internship in Computational Cosmology
Institution: Donostia International Physics Center, Spain
Advisor: Prof. Raul Angulo

2015–2019 Bachelor Degree in Physics
Institution: University of the Basque Country, Leioa, Spain
Advisor: Jon Urrestila
Thesis: *Time in Physics*

Grants, Honors and Awards

2025 Cum Laude mention in PhD

2022 2.5M CPUh allocation in MareNostrum IV
Co-PI of CPU-time allocation in the Spanish Supercomputing Network.

2021 La Caixa Inphinit Retaining Fellowship (total awarded: 115.092 €)
An extremely-competitive PhD fellowship awarded to < 4% of applicants over all areas of science and humanities in Spain and Portugal.

2021 IKASIKER Fellowship (total awarded: 600 €)

A competitive Basque government fellowship for top Master's students to conduct their thesis within a research group.

- 2019 DIPC Summer Fellowship (total awarded: 2100 €)
Ten research internships (out of ≈ 300 applicants) addressed to Bachelor and Master's students to carry out research projects at Donostia International Physics Center.
- 2019 Extraordinary Prize for the Best Academic Record of Physics
First ranked in Bachelor's degree (final mark: 8.53/10) among 47 graduates (average mark: 6.95/10).

Outreach & Services

- 2024-2025 Reviewer of the *Open Journal of Astrophysics*, *American Astronomical Society Journals*, *Monthly Notices of Royal Astronomical Society*;
- 03/2025 Outreach talk; Public presentations to high schools within *Cinema & Science* program
- 01/2025 Outreach interview; Interview in the public radio, Euskadi Irratia.
- 12/2024 Outreach talk; Public presentation organized by local astronomy group, Oñati
- 12/2024 Outreach interview; EHU-Ekinean podcast of the University of the Basque Country
- 02/2024 Visit to high-school students within the program "Women in Science"; Donostia
- 10/2023 Talk & public interview; *El palo de Eratóstenes*, Aranzadi Science Association
- 10-11/2023 Scientific advisor & guide; STRÖM astronomy exposition, Donostia
- 12/2021 Newspaper interview; El Diario Vasco
- 10/2021 Outreach talk; XXX Jornadas Astronómicas de Aranzadi, Donostia

Research Students Supervised

- 2024 Kurt Walsen: *The kinetic Sunyaev-Zeldovich signal in zoom-in hydrodynamical simulations*

Presentations

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| 05/2025 | The Future of Cosmological Surveys, MIAPbP | contributed |
| | <i>Non-gravitational effects on the gas density and velocity fields</i> | |
| 02/2025 | Cosmology on the Steep Rise, Sexten, Italy | contributed |
| | <i>Galaxy formation and feedback effects on gas: density and velocity fields (poster)</i> | |
| 11/2024 | ETH Cosmology group, Zürich | contributed |
| | <i>Constraining AGN feedback using kinetic Sunyaev-Zeldovich signal</i> | |
| 11/2024 | Astroparticle Symposium workshop, Paris-Saclay | invited |
| | <i>Constraining AGN feedback using kinetic Sunyaev-Zeldovich signal</i> | |
| 12/2023 | Galaxy Clustering club, Department of Astrophysics, Zürich | contributed |
| | <i>Non-universality of the halo mass function: origins and modelling</i> | |
| 09/2023 | COSMO23 Conference, Madrid | contributed |
| | <i>Simulating the first haloes in warm dark matter cosmologies</i> | |
| 05/2023 | CosmoLSS workshop, Donostia | contributed |
| | <i>Simulating the first haloes in warm dark matter cosmologies</i> | |
| 04/2023 | Future Science with CMB x LSS, YITP, Kyoto University | contributed |
| | <i>Non-universality of the halo mass function: origin and modelling (poster)</i> | |
| 12/2022 | Winter School of Astrophysics, Insituto de Astrofísica de Canarias | contributed |
| | <i>Simulating the first haloes in warm dark matter cosmologies</i> | |
| 11/2022 | VIIIth Meeting in Fundamental Cosmology, Granada | contributed |

<i>10/2022</i>	<i>Simulating the first haloes in warm dark matter cosmologies</i> Galaxy Clustering club, Department of Astrophysics, Zürich	contributed
<i>05/2022</i>	<i>Simulating the first haloes in warm dark matter cosmologies</i> Advances in Cosmology through numerical Simulations, MIAPbP	contributed
<i>02/2021</i>	<i>Simulating the first haloes in warm dark matter cosmologies</i> Galaxy Clusters Journal Club, MPE, Gärching	invited
<i>02/2021</i>	<i>Non-universality of the halo mass function: origin and modelling</i> Galaxy Clusters Journal Club, Observatory of Trieste	invited
	<i>Non-universality of the halo mass function: origin and modelling</i>	

Graduate-level schools and other events

<i>12/2022</i>	Winter School of Astrophysics, Instituto de Astrofísica de Canarias
<i>05/2022</i>	Advances in Cosmology through Numerical Simulations, MIAPbP, Gärching
<i>06/2021</i>	Gamma rays to shed light on dark matter, Insituto de Fisica Teorica, Madrid