



**MW-Gaia WG5 Workshop**  
**Breaking Barriers: Inspiring the Next Generation**  
**Santiago de Compostela (Spain),**  
**23rd-25th May 2022**

The workshop [Breaking Barriers: Inspiring the Next Generation](#) in the University of Santiago de Compostela, Spain, from 23<sup>rd</sup> to 25<sup>th</sup> December 2022.

This was the ninth workshop of the CA18104 COST Action MW-Gaia and the second workshop of the Working Group 5 (WG5). The format of the workshop was based on invited reviews, contributed talks and posters.



### **Scientific motivation of the workshop**

This three-day school covered topics related to improving inclusion in the science process, how this leads to better science, and more impactful science. In the school the MW-Gaia community discussed, with the help of professionals from several scientific and social disciplines, current best practice in inclusion and impact and learned about possible new initiatives and solutions.

Speakers showed how their Equality/Diversity/Inclusion commitment is fundamental in underpinning their research.

Topics for the School included:

- ✓ public engagement with research
- ✓ practical skills on engagement with different audiences (including policy-makers)
- ✓ practical development of a public engagement project about Gaia.
- ✓ training in social innovation
- ✓ applying scientific knowledge to tackle social issues
- ✓ gender and diversity training
- ✓ contribute to the UN's Sustainable Development Goals

The meeting was especially aimed at WG5 members of the project, who discussed the current state of their work and discussed the future decisions to be taken. Participants were mainly expected from countries that are part of the COST MW-Gaia Action, but the workshop was open to scientists from all over the world, an international participation that was encouraged. Researchers who are in the early stages of their careers and those from underrepresented countries played a key role. The presence of some of the leads of the MW Gaia project, scientists of recognized international prestige, was also expected; as well as high-level astronomers as guest speakers.

In order to enable participation by people who might be unable to attend physically due to travel or time zone constraints or through a wish to reduce the carbon footprint of the event, the meeting happened in hybrid format. There were Invited talks 30 min (25+5) and Contributed talks 15 min (12+3).

## Day One

Day one focussed on EDI - what is equity, diversity and inclusion? Participants considered how they identify. How improving diversity, inclusion, in a project can increase the science impact of the project.

After the welcome talks, the first session was dedicated to the “Advances in our understanding of the Milky Way: WG1, WG2”. There was a resume of the activities of WG1 by Despina Hatzidimitriou, followed by Danielle de Brito Silva with the talk “The accreted Galaxy: An overview of TESS metal-poor accreted stars candidates”.

Gisella Clementini did the resume of the WG2 activities and Saniya Khan talked about “Gaia, stellar models, and asteroseismology”, followed by the invited talk by Sara Vitali presenting “Unveil the Sagittarius dwarf galaxy with the Pristine survey”. To finish session 1, Carlos Viscasillas explained us “Exploiting the abundances of neutron capture elements from the latest Gaia-ESO Survey (GES) data release”.

Session two was dedicated to the “Advances in our understanding of the Milky Way: WG3, WG4”. Alessandro Sozzetti gave a resume of the “Milky Way & Gaia: WG3 activities” and Barbara Soares presented “The Chemical link between stars and their rocky planets”. Then Fernando Tinaut-Ruano explained “Exploring near-UV region for primitive asteroids using ground-based observations and Gaia”.

Sonia Anton presented the resume of the “Milky Way & Gaia: WG4 activities”. And there was contributed talks by William Beordo “Gravitational Astrometry & Fundamental Physics to test the dynamical evolution of our Galaxy and its place in cosmology”; Marta González “Galactic hierarchy of clustered stellar formation” and Javier Olivares “The

dynamical interaction of the Coma Berenices open cluster and the GroupX moving group”.

After that there was the visit to the observatory and the group photo was taken.

## Day Two

Day two considered the application to the case of Gaia. A distributed, Pan European project, with science impact across astronomy, across domains. How the project culture within Gaia aims to promote greater understanding between the team, leading to better science outputs?

Session 3 was dedicated to “MW Gaia inclusiveness and equal opportunities. Gender Balance”. Alessandra Zanazzi, invited talk devoted to “An astronomy exhibition, inclusive also for blind and visually impaired people and other INAF inclusive activities”. Then Edita Stonkute presented “Mentorship platform for early career researchers”. And Paula Jofre gave an invited talk “Inclusiveness and equal opportunities. Gender Balance”. And Josefina F. Ling presented ““AstronomAs” A journey through the Universe by hand of hundreds of women”

Session 4 was dedicated to the posters:

- ✓ Tineke Roegiers “Female contribution to the Gaia DPAC consortium”
- ✓ Minia Manteiga “Two STEMBACH projects based on Gaia data: introducing Big Data Astronomy in Spanish High Schools”
- ✓ Antoaneta Avramova-Boncheva “Extracurricular activities for school students with special interest in astronomy”
- ✓ Tòfol Tobal “Star Analyser Spectroscopic Data Base. OAG-SVO Pro-Am project”
- ✓ Antoaneta Antonova “STELLAR: an EU twinning project on LOFAR data analysis and knowledge transfer”
- ✓ Judith Ardèvol Guillamón “Disseminating the rotation curve of our Galaxy and its implication on the Dark Matter content”
- ✓ Cecilia Doportó Regueira and Carlos Viscasillas Vázquez “The Museum of Lalin “Ramon Maria Aller Ulloa”, the first astronomical observatory in Galicia”

Session 5 was dedicated to “Reaching out to the public with Gaia”. First invited talk by Stefan Jordan “Reaching out to the public with Gaia” and then there were three contributed talks: Tineke Roegiers with “Outreach and community resources for Gaia”, Pedro P. Campo “Astronomical outreach in the Ramón María Aller Astronomical Observatory” and Marusa Zerjal “A website dedicated to the nearby young open clusters as seen by Gaia”.

That evening there was a public talk by Carme Jordi “Los secretos de la Vía Láctea” in Spanish for general public. Followed by the workshop dinner.

## Day Three

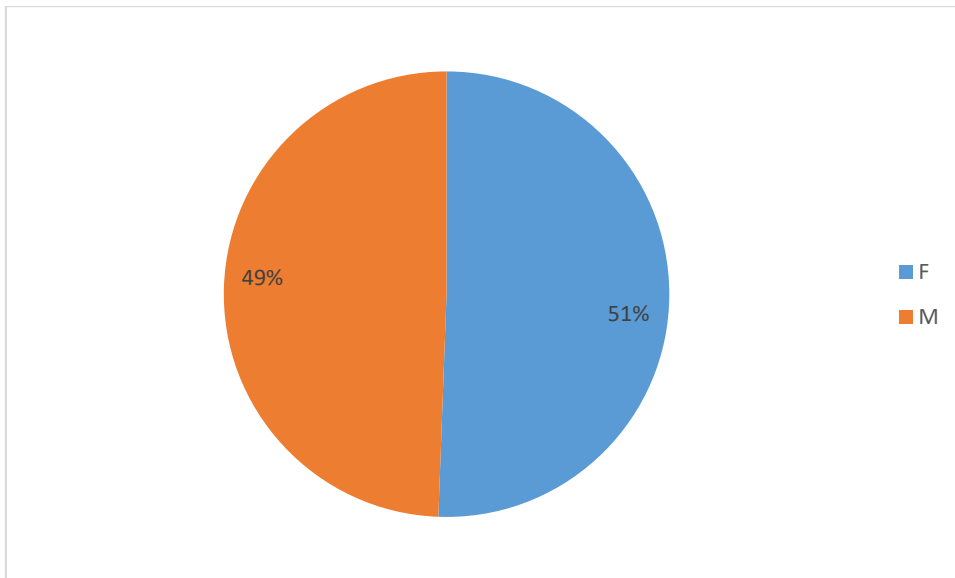
Day three provided training in communication of ideas, and how this can help reinforce students’ ability to actively participate in and promote the development of a positive and inclusive culture within the MW-Gaia network.

Session 6 dedicated to “Citizen science and amateur input” began with an invited talk by Sandor Kruk “From galaxies to asteroids: Citizen science as an efficient tool to explore large datasets”. Followed by three contribution talks: Elsa Moreira “CoAstro: @an Astronomy Condo-a new possible path for GAIA's dissemination strategy”; Victor Tilve “Light pollution data from Galicia (Spain): measurements from the Earth” and Eduard Masana “Modelling the natural sky brightness with Gaia data”.

Session 7 dedicated to “Bringing Milky Way to schools and universities” began with an invited talk by Jackie Faherty “Visualizing the Gaia enabled Milky Way for Science and Education” and followed by three contributed talks: Rosa M. Ros talking about NASE, an ambitious program of teaching astronomy for everybody “NASE, Astronomy for everybody”; Ederlinda Viñuales with “NASE: Using Demonstrators for Easier Training of Future Teachers” and Hristo Stoev “EAAE's Catch a Star Competition: helping teachers and students”. To finish the session, an invited talk by Luis Aguilar about “The next generation of astrometry experts”.

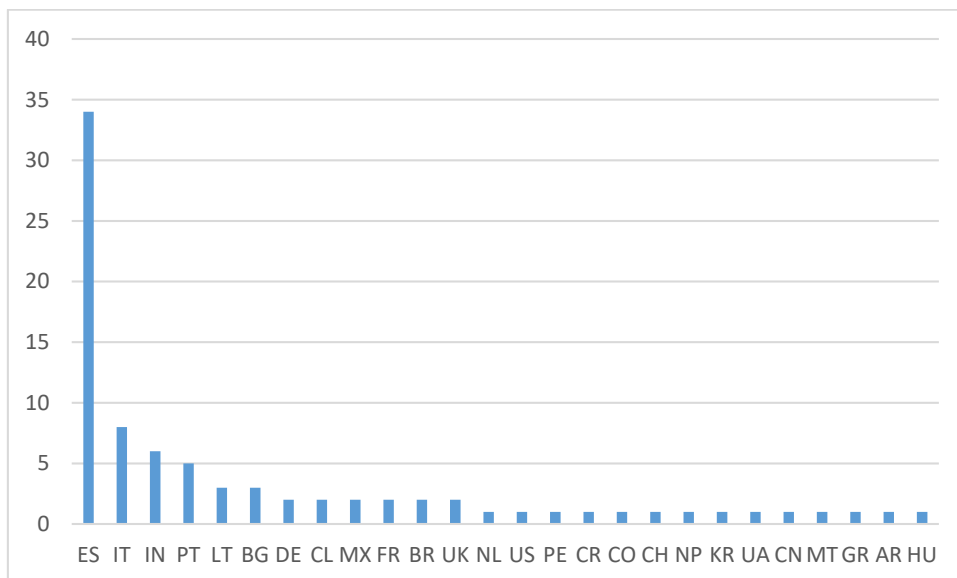
Session 8 was devoted to the debate and conclusions and was chaired by Šarūnas Mikolaitis. It was followed by a tourist guided visit to Pazo do Faramello.

## The workshop in numbers



The workshop was attended by 85 researchers (55 remotely), 51% of them female.

From the total, 8 participants (9%, including invited speakers) had financial support by the COST Action.



There were researchers from 26 different countries in Europe (mostly Spain), Argentina, Colombia, Chile, Mexico, Brazil, Peru, Costa Rica, US, Nepal, Korea, China and India.

There were 37 presentations. 56% of female participants presented while 31% of male participants did. There were 11 Invited talks (64% female) and 25 Contributed talks (58% female) and 7 posters (86% female).

Report prepared by Lola Balaguer-Núñez.