

MW-Gaia: Revealing the Milky Way with Gaia WG1/4 Hybrid Workshop "Gaia – Beyond the Milky Way", Athens, Greece



Nicholas Walton (MW-Gaia COST Action Chair) (Institute of Astronomy, University of Cambridge)







Welcome to Gaia – Beyond the Milky Way! New science with the latest data from Gaia

gaia		and the					esa
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Workshop site at https://gaia2022.ia.forth.gr/



27 Sep 2022

Nic Walton - Gaia/ExtraGalactic - MW-Gaia @ Athens



GREAT 2019-2027 See <u>http://www.mw-gaia.org</u> and <u>http://www.great-esf.eu</u>







GREAT Plenaries

Last: http://great.ast.cam.ac.uk/Greatwiki/GreatMeet-PM15

GREAT has held plenary meetings since 2009 (at EAS from 2012)

Last GREAT plenary was held at the EAS Annual Meeting 2022 in Valencia

Aiming to organise a similar meeting at the EAS 2023 in Kraków (10-14 Jul







GREAT Community Input: Looking ahead: Requirements for Gaia Data DR4+ Access

- Gaia Data Archive system has recently been upgraded to support Gaia EDR3
- GREAT provides a forum to gather science user input to the requirements for Gaia DR4+
- Requirements captured via the GREAT wiki

http://great.ast.cam.ac.uk/Greatwiki/GaiaDataAccess

Use cases collected for Gaia-DR1/2: Brown et al (see http://www.rssd.esa.int/doc_fetch.php?id=3125400)

Your chance to suggest additional functionality for implementation with Gaia-DR4+





Delivering the Promise of Gaia





MW-Gaia: http://www.mw-gaia.org

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Welcome to MW-Gaia

MW-GAIA

MW-GAIA will provide European leadership in understanding the Galaxy, its stars and planets, enhance the potential of the community in its scientific exploitation of the observations of more than a billion stars with the European Space Agency's Gaia satellite, and enhance the development of the next steps in astrometry and space astrometry missions.

The Action brings together key stakeholders from across Europe, to leverage expertise, and develop new techniques to fully maximise the scientific returns from Gaia's rich and complex data.

Five key challenges are addressed: The Milky Way as a Galaxy, The Life and Death of Stars; Planetary Systems Near and Far; Gaia Fundamentals: Space and Time; and Astrometry Innovation Challenge – towards sub-µas astrometry. COST enables the vital Action activities, supporting exchanges, training and meetings.

The Action will have a significant legacy, creating a dynamic and vibrant network of researchers with expertise in the study of the Milky Way, its constituents and the art of Astrometry. Participation is inclusive, with researchers accessing the Network from across Europe, irrespective of their gender or location.

This COST Action commenced 14 Mar 2019 and will complete 13 Mar 2023 (although with the possibility of an extension)



WG4-WG2 Workshop: Transient Sky with Gaia ☑

17.08.2022 Filed in: Participate The WG4-WG2 workshop will be in-person in Coimbra, PT, and will be held Oct 13 - 14, 2022

Deadline for abstracts: 31 August 2022

Read More

Deadline for on-site participation registration: 9 September 2022 Social Media

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n: • WG5 • Workshops The MW-Gaia COST Action has participants from 30 COST countries (Ukraine recently welcomed) and participation from groups in Armenia, Canada, China, Lebanon, South Africa, USA

- Scientists in these COST countries can be supported to attend MW-Gaia events
- Check the website for details



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n - Gaia/ExtraGalactic - MW-Gaia @ Athens

Month Posted



MW:Gaia: Working Groups

MW-Gaia is organised into five working groups (WG):

- WG1: The Milky Way as a Galaxy:
- WG2: The Life and Death of Stars:
- WG3: Planetary Systems Near and Far:
- WG4: Gaia Fundamentals: Space and Time:
- WG5: Impact, Inclusiveness and Outreach:
- Each WG has an organizer, with participants able to signup to the WG mailing list
- Each WG is responsible for organizing workshops and training events in its topic area → get involved, sign up to the mailing lists







MW:Gaia: Working Group Leads

Action Chair: Nicholas Walton (Cambridge: UK) Action vice-Chair: Carme Jordi (Barcelona: ES) WG1 Lead: Despina Hatzidimitriou (Athens: GR) WG2 Lead: Gisella Clementini (Bologna: IT) WG3 Lead: Joris De Ridder (Leuven: BE) WG4 Lead: Sonia Anton (Aveiro: PT) WG5 Lead: Šarūnas Mikolaitis (Vilnius: LT) Exchange Visit (STSM) Coordinator: Karri Muinonen (Helsinki: FI) Country Inclusion Coordinator (TA): Ivanka Stateva (Sofia: BG) Science Communications (SCM): Anthony Brown (Leiden: NL) Inclusion and Training (ITM): Corinne Charbonnel (Geneva: CH)







MW-Gaia: WG1 The Milky Way as a Galaxy

Objective: Exploit the Gaia data in combination with other survey data (especially spectroscopic and infrared surveys) to address some of the most important questions in the formation and evolution of our Galaxy. These questions include the structure, star formation history, and dynamical evolution (both secular and by accretion) of the MW. Investigation of substructures, in the halo and the disk, such as streams, open and globular clusters, and the contribution of stars lost from these clusters to the field population of the Galaxy, the structure and dynamics of the bar/bulge region, the interstellar medium link

Tasks: WGT1a: Global structure and history of the MW including cluster formation and early phase dissolution, clusters as probes of the disk and halo formation history. **WGT1b**: Synergies between ground and space-based follow-up facilities and Gaia, and survey strategy requirements for upcoming spectroscopic and near infrared surveys. **WGT1c**: Gaia Challenge, including development of detailed MW (chemo) dynamical models.







MW-Gaia: WG4 Gaia Fundamentals: Space and Time

Objective: Parameterised post Newtonian parameter determination with Gaia / distances: investigate various crucial steps of the cosmic ladder from the very local to the 100 Mpc universe that will greatly benefit from Gaia. The complementary expertise of the various nodes will be integrated in order to provide an accurate calibration of primary and secondary distance indicators / transients / investigate the requirements on observation and source modelling for sub-µas astrometry:

Tasks: WGT4a: Reference frames and Fundamental physics with Gaia. WGT4b: Gravitation Waves with Gaia. WGT4c: Calibrating the distance scale. WGT4d: The transient sky with Gaia.





MW-Gaia: <u>http://www.mw-gaia.org</u>



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05.2022

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03.2021

11.2020

10 2020

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06.2020

03.2020

02.2020

11.2019

10.2019

09.2019

08.2019



WG5 Workshop: Breaking Barriers: Inspiring the Next Generation C

04.03.2022 Filed in: Participate The WG5 workshop will be hybrid, and will be held May 23 - 25, 2022

Deadline for abstracts: 25 March 2022

Deadline for on-site participation registration: 31 March 2022



participate



MW-Gaia / GREAT / Gaia Symposium (S12) at EAS 2022 🖸

25.02.2021 Filed in: Participate REGISTER NOW

Gaia: The (TWO) Billion Star Galaxy Census: The Dawn of Gaia DR3 will take place in Valencia, ES, hosted at the EAS 2022 meeting 2022, 27-28 Jun 2021





MW-Gaia Grant Period 3 Open IZ

02.01.2022 Filed in: Participate The third grant period list of activities for MW-Gaia has now been published. These cover activities until 31 Oct 2022. There are a range of workshops and a school planned - hopefully these will be face to face meetings - although all will have the opportunity to participate remotely as well. In addition the exchange visit programme call is now open (see the

- The MW-Gaia COST Action continues to 2023
 - Extension through to 13 Sep 2023
 - Possible additional year to Sep 24
- Check the website for details of network activities
- Workshops at <u>https://www.mw-gaia.org/participate/workshops/</u>
- CH/UK participation assured as CH/UK are full COST members





MW-Gaia: <u>http://www.mw-gaia.org</u> Grant Period 3 Workshops and School

Grant Period 3 Workshops (1 Nov 2021 to 31 Oct 2022)

WG5-Santiago-de-Compostela-GP3

Breaking Barriers: Inspiring the Next Generation: 23-25 May 2022

WG3-WG2-Aarhus-GP3

Fundamental stellar parameters from asteroseismology: the connection with exoplanet studies in the era of Gaia: 13-15 Jun 2022.

WG2-WG1-Naples-GP3

Stellar evolution across the HR diagram with Gaia: 20-23 Sep 2022

WG4-WG1-Athens-GP3

Gaia – Beyond the Milky Way 27-29 Sep 2022

WG4-WG2-Coimbra-GP3

Gaia and the Time domain, capturing the transient sky: 13-14 Oct 2022

Schools

This page contains details about the schools organised by MW-Gaia

WG3-Geneva-GP3

Exoplanets and astro-statistical analysis techniques: 12-16 Sep 2022







MW-Gaia: Exchange Visits Short Term Science Missions (STSM) in "COST speak"

- STSMs provide funding for (primarily) early career investigators to visit another institution to carry out collaborative research
- Details of the procedure available at: <u>https://www.mw-gaia.org/participate/stsm-visits/</u>
 - All exchange visits for MW-Gaia Year 4 to complete by 30 Aug 2023
 - Applications now accepted at any time and reviewed at end of each month:
- Exchange visit idea originating at MW-Gaia workshops (such as this one!) will be viewed positively at the application evaluation stage.

ITC Conference grants provide support to those from ITC countries to attend conferences – see <u>https://www.mw-gaia.org/participate/itc-grants/</u> for details







Home > News > Georgia and Ukraine become COST Full Members

31/03/2022

The Committee of Senior Officials (CSO), the General Assembly of the COST Association, has accepted Georgia and Ukraine as its latest members.



On 30-31 March 2022, representatives of the COST Members met under the auspices of the French Presidency of the Council of the EU in Paris. Following a unanimous decision, both Georgia and Ukraine join the COST family which now has <u>40 Full Members</u>.

"The admission of Georgia and Ukraine as COST Full Members underpins the key role of COST in facilitating integration to the European research and innovation landscape. COST aims to foster open and inclusive networks of excellence in all scientific fields, and through their membership Georgian and Ukrainian researchers will be able to take a proactive role in proposals for future COST Actions"

MW-Gaia and Ukraine

- COST has admitted Ukraine as a COST Full Member
- Researchers based in Ukraine are fully eligible for support via COST
- Within MW-Gaia we welcome participation from our colleagues in Ukraine
- Specifically, I'd like to welcome our colleagues attending this meeting from Kyiv



Enjoy Gaia – Beyond the Milky Way!