



GREAT

Gaia Research for European Astronomy Training

Update for GST 44






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GREAT Programme 2014

- **GREAT-ESF Workshop** *Gaia Viz Workshop*, 9-11 July 2014, Vienna, Austria ( [Workshop website](#))
 - **GREAT PLENARY** *7th Great Plenary Meeting*, 10 Jun - 2 Jul 2014, Geneva, Switzerland ( [Plenary website](#)) (([wiki site](#)))
 - The GREAT Plenary will be taking place at the  [European Week of Astronomy](#), as Symposium 3 (30 Jun - 2 Jul 2014).
 - **GREAT-ESF Workshop** *Young Clusters in the Gaia-ESO Survey*, 19-21 May 2014 (TBC), Palermo, Italy
 - **GREAT-ESF Workshop** *Gaia and the Unseen: The Brown Dwarf Question*, 24-26 March 2014, Torino, Italy ( [Workshop website](#))
 - **GREAT-ESF Workshop** *Supernova from Gaia*, 5-7 Feb 2014, Queen's University Belfast, UK ( [Workshop website](#))
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- Next Plenary at EWASS Geneva 30 Jun – 2 Jul 2014
 - Next GREAT-ITN Full Meeting, Geneva, 3 Jul 2014
 - Final GREAT-ITN conf, Barcelona, 1-5 Dec 2014



GREAT-ESF call 9: Dec 2013



- 9th call closed 20th December 2013
 - Open call with no priority on topics
- Approvals at ESF RNP SC meeting – 28th Jan 2014
 - Two workshops supported
 - Eight exchange visits supported
- There have also been a range of short visits over the recent period
- Call 10 will be issued Mid March 2014 and close mid June 2014
- Final wrap up call will close December 2014
<http://great.ast.cam.ac.uk/Greatwiki/GaiaScienceMeetings>



GREAT-ITN

- 17 ESRs located across 13 main nodes
- Runs for 48 months from Mar 2011 to Feb 2015
- Mid term review early 2013
 - Very successful to that date
- Final year now underway
 - 17 ESRs moving to completion of a range of good to excellent PhDs
 - Major networking and collaborative activities between partners
 - Supporting a range of topical Gaia related science
- GREAT-ITN has successfully built on the earlier ELSA RTN



1. Overall Assessment

a. Executive summary: Comments, in particular highlighting the research training and career development achievements, the scientific/technical achievements of the project, its contribution to the State of the Art and its impact:

Mid Term Review Report

The GREAT ITN have been extremely successful. It has recruited 17 ESR according to the original plan. One of the ESRs (at the Leuven Node) has left because of personal reasons. However another ESR will join the Network in January 2013 quickly replacing her. The local node has secured the needed funds to allow the ESR to have a full three years PhD. The Network has carried during this period an extensive number of network activities including 6 schools. Two of the school involved external industry partners. Some of the ESRs have already had secondments in other institutions and others are planned to have secondments during the coming year 2013. This have lead to the formation of a vibrant group of ESRs that have the needed background and are all actively working on their research projects. One of the projects has already led to a publication in a scientific journal, and two others to publications in proceedings and almost all other projects have led to presentations in scientific conferences and workshops. Overall progress was made in all work packages. The overall goal of this network is to prepare both in terms of education of ESRs and in terms of scientific projects towards the launch of GAIA – a major European satellite. This is done extremely well on both frontiers.

b. Overall assessment/Progress

Excellent progress (the project has fully achieved its objectives and technical goals for the period or has even exceeded expectations).





GREAT Futures

- Current Horizon 2020 programme underway
- Opportunities to support a follow on ITN
- **Marie Skłodowska-Curie Actions**

Innovative Training Networks (ITN)

Call identifier: H2020-MSCA-ITN-2014

Closing Date: 09 April 2014 at 17:00:00
(Brussels local time)

Date of publication: 11 December 2013

Version Number: 2014.1





H2020 ITN Features

- Similar concept to FP7 ITN's
 - Name change 'I' from Initial to Innovation
 - Maximum size of network – 15 x 36 Month ESR
 - Range of structures – ETN most appropriate
- Evaluation criteria similar to earlier round
 - Excellence (50%); Impact (30%); Implementation (20%)
 - c.f FP7: S&T quality 30%; Training 30%; Implementation 20%; Impact 20%
 - More emphasis on the quality of the training now (under excellence) – less on the science!

ITN - Marie Skłodowska-Curie Innovative Training Networks



Excellence	Impact	Implementation
<p>Quality, innovative aspects and credibility of the research programme (including inter/multidisciplinary and intersectoral aspects)</p>	<p>Enhancing research- and innovation-related human resources, skills, and working conditions to realise the potential of individuals and to provide new career perspectives</p>	<p>Overall coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources (including awarding of the doctoral degrees for <i>EID</i> and <i>EJD</i> projects)</p>
<p>Quality and innovative aspects of the training programme (including transferable skills, inter/multidisciplinary and intersectoral aspects)</p>	<p>Contribution to structuring doctoral / early-stage research training at the European level and to strengthening European innovation capacity, including the potential for:</p> <p>a) meaningful contribution of the non-academic sector to the doctoral/research training, as appropriate to the implementation mode and research field</p> <p>b) developing sustainable joint doctoral degree structures (for <i>EJD</i> projects only)</p>	<p>Appropriateness of the management structures and procedures, including quality management and risk management (with a mandatory joint governing structure for <i>EID</i> and <i>EJD</i> projects)</p>
<p>Quality of the supervision (including mandatory joint supervision for <i>EID</i> and <i>EJD</i> projects)</p>		<p>Appropriateness of the infrastructure of the participating organisations</p>
<p>Quality of the proposed interaction between the participating organisations</p>	<p>Effectiveness of the proposed measures for communication and dissemination of results</p>	<p>Competences, experience and complementarity of the participating organisations and their commitment to the programme</p>
50%	30%	20%
Weighting		
1	2	3
Priority in case of <i>ex aequo</i>		
<p>NB: An overall threshold of 70% will be applied to the total weighted score.</p>		





H2020 ITN - Budgets

- Further move on cost standardisation
 - Fixed salary cost per ESR (modified by country factor)
 - Fixed mobility cost per ESR
 - Fixed cost to support researcher and host costs (€1,800/ ESR mnth) (old D+E cost items)
 - Fixed cost for mgt and overhead (€1,200/ ESR mnth) (old G+H cost items)
- Maximum of 540 research-months per network
- ITNs can only fund ESRs now (no Ers)
- Financial scope of full scale H2020 ITN at similar level to our current GREAT-ITN

Gaia-ITN – a H2020 ITN

GREAT Astrometry Innovation Alliance-ITN



- New training theme to build on the GREAT-ITN
 - ELSA (prepare for Gaia technology)
 - GREAT-ITN (prepare for Gaia Science)
 - Gaia-ITN (extend Gaia science/ prepare future astrometry)
- Themes: the four 'E's
 - Exploit – science around current Gaia
 - Extend – techniques for nano-scale astrometry
 - Enhance – the skills of the ESRs
 - Effect – the next revolution in European led Astrometry
- Aim → strengthen leadership in Astrometry – towards a nano-arcsec mission → train students to lead





Gaia-ITN: Structure

- WP1: Management and Strategy
- WP2: Training
- WP3: Gaia Science – Galaxy Structure & Distance
- WP4: Gaia Science – Stars & Planets
- WP5: Nano Astrometry
- WP6: Computation and Control Challenges
- Some Potential Topics as suggested in recent ESA report for L missions: development of the science case for future space-borne astrometry / define the astrometric requirements (relative vs. absolute astrometry; all-sky vs. limited-angle/pencil beam surveys) / develop modelling tools (e.g. General Relativity framework model for photon trajectories to high accuracy) should be given the proper attention to prove feasibility/ better model Solar System properties



Gaia-ITN: Partners

(EU recommend no more than 10 beneficiaries)



a) GST:

Cambridge (UK)/ Leiden (NL)/ Barcelona (E)/
Bordeaux (F)/ Dresden (D)/ Lund (S)/ Arcetri (I)/
Nice (F)

b) Others:

ESA (ESTEC and/or ESAC)

Wider DPAC/ GREAT

(Preferably) need a non-academic sector partner (ESA might count). Astrium possible for technology training.

NB: Partner Organisations (H2020) = Associate Nodes (FP7)





Gaia-ITN: Actions

- Agreement on participation
 - The who and from where
 - Need to identify non-academic partner(s)
- Define key science/ training scope
- Initial definition of structure
 - Match people to WPs
- 'Consensus' telecon – ~21 Feb 2014
- Create proposal
- Submit before 9 Apr 2014





GREAT2Net

- GREAT ESF RNP ends 31 Aug 2015
- Aim to issue expression of interest call Mar 2014 with the next GREAT ESF funding call
- Gauge community response, ideas for future networking bid
- Discuss response at GREAT ESF Steering Committee – 2 Jul 2014
- Not currently obvious what would be best route forward – potentially set up an ERIC – European Research Infrastructure Consortium.
 - Subscription model, small budget. Allows entity to receive funds from agencies to then distribute as via ESF

