

GRAVITATIONAL WAVES, BLACK HOLES AND FUNDAMENTAL PHYSICS

- Austria
- Belgium
- Bosnia & Herzegovina
- Bulgaria
- Croatia
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Israel
- Italy
- Malta
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Russia
- Serbia
- Slovenia
- South Africa
- Spain
- Sweden
- Switzerland
- Turkey
- United Kingdom
- United States

1. Austria
2. Belgium
3. Bosnia and Herzegovina
4. Bulgaria
5. Croatia
6. Czech Republic
7. Denmark
8. Estonia
9. Finland
10. France

11. Germany
12. Greece
13. Hungary
14. Ireland
15. Israel
16. Italy
17. Malta
18. Netherlands
19. Norway
20. Poland

21. Portugal
22. Romenia
23. Serbia
24. Slovenia
25. Spain
26. Sweden
27. Switzerland
28. Turkey
29. United Kingdom

# International partners

1. Caltech
2. Cape Town University
3. Johns Hopkins University
4. Montana University
5. Mississippi University
6. Moscow State University
7. Rhodes University
8. Virginia University
9. CBPF (Brazil, in course)
10. Earlham College (US, in course)
11. Abastumani Observatory (in course)

# Agenda

1. Welcome to participants
2. Verification of the presence of two-thirds of the Participating COST Countries or, if applicable, a quorum
3. Adoption of agenda
4. Approval of minutes and matters arising of last meeting
5. Update from the Action Chair
  - a) Status of Action: start and end dates of Action, participating COST countries, participating NNC/IPC institutions and Specific Organisations.
  - b) Short Term Scientific Missions (STSM): review of completed reports and new applications
6. Update from the Grant Holder: Action budget status
7. Update from the COST Association, if a representative is present
8. Monitoring of the Action

# Agenda

9. Implementation of COST policies on (Diversity Adviser 10 min)
  - a) Promotion of gender balance and Early Career Investigators (ECI)
  - b) Inclusiveness and Excellence (see below list of Inclusiveness Target Countries)
10. Follow-up of MoU objectives: progress report of working groups
11. Scientific planning
  - a) Scientific strategy (MoU objectives, GP Goals, WG tasks and deliverables)
  - b) Action Budget Planning
  - c) Long-term planning (including anticipated locations and dates of future activities)
  - d) Dissemination planning (Publications and outreach activities)
12. Requests to join the Action from:
  - a) COST countries
  - b) Institutions in Near Neighbouring Countries, International Partner Countries, and/or Specific Organisations: EU agencies, European RTD Organisation, International Organisations
13. AOB
14. Location and date of next meeting
15. Summary of MC decisions
16. Closing

#### 4. Approval of minutes and matters from last meeting

## 5. Update from the Action Chair

a. Status of Action: start and end dates of Action, participating COST countries, participating NNC/IPC institutions and Specific Organisations.

Start date: 7 April 2017

End Date: 6 April 2021

1<sup>st</sup> MC meeting: 7 April 2017

### Participating COST countries

- |                           |                 |                    |
|---------------------------|-----------------|--------------------|
| 1. Austria                | 11. Germany     | 21. Portugal       |
| 2. Belgium                | 12. Greece      | 22. Romenia        |
| 3. Bosnia and Herzegovina | 13. Hungary     | 23. Serbia         |
| 4. Bulgaria               | 14. Ireland     | 24. Slovenia       |
| 5. Croatia                | 15. Israel      | 25. Spain          |
| 6. Czech Republic         | 16. Italy       | 26. Sweden         |
| 7. Denmark                | 17. Malta       | 27. Switzerland    |
| 8. Estonia                | 18. Netherlands | 28. Turkey         |
| 9. Finland                | 19. Norway      | 29. United Kingdom |
| 10. France                | 20. Polanda     |                    |

## 5. Update from the Action Chair

a. Status of Action: start and end dates of Action, participating COST countries, participating NNC/IPC institutions and Specific Organisations.

### International Partner Countries

Caltech (Davide Gerosa)

Cape Town University (Bishop Mongwane)

Johns Hopkins University (Emanuele Berti)

Montana University (Nico Yunes)

Mississippi University (Leo Stein)

Moscow State University (Dmitry Galt'sov)

Rhodes University (Nigel Nishop)

Virginia University (Kent Yagi)



## 5. Update from the Action Chair

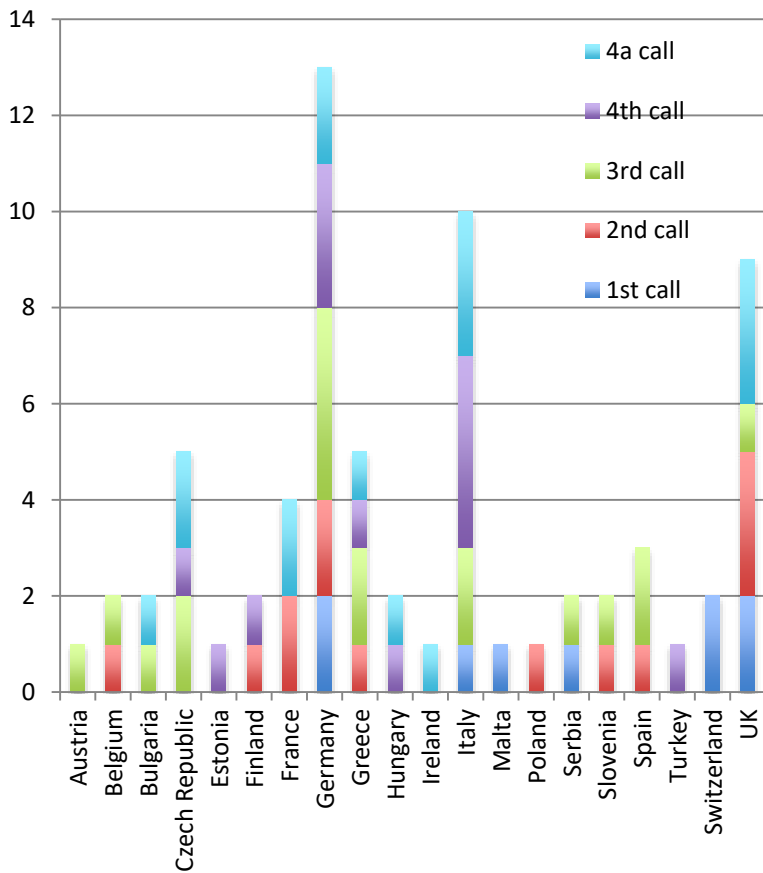
b) Short Term Scientific Missions (STSM): review of completed reports and new applications

# STSMs

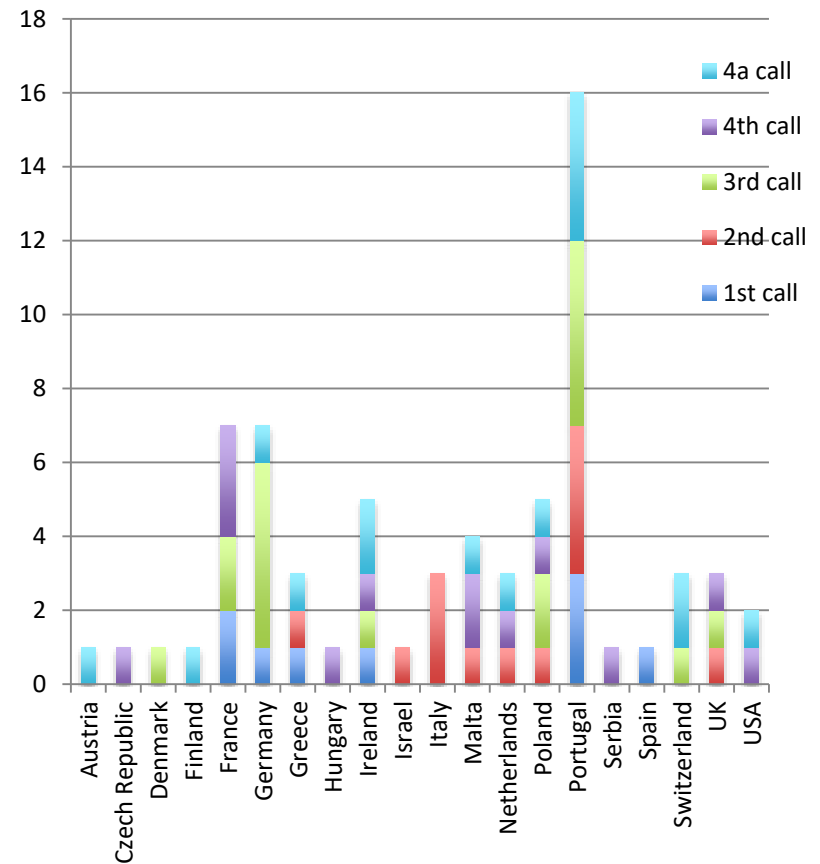
- **1<sup>st</sup> call** (01/07-30/11/17):  
9 applications, 9 approved (12 kEu)
- **2<sup>nd</sup> call** (01/11/17-30/04/18):  
13 applications, 13 approved (19 kEu)
- **3<sup>rd</sup> call** (01/05-30/11/18):  
24 applications, 18 approved (32 kEu)
- **4<sup>th</sup> call** (01/11/18-30/04/19):  
13 applications, 13 approved (2 reduced) (25 kEu)
- **additional 4A call** (01/02-30/04/2019):  
16 applications, 16 approved (26 kEu)
- **5<sup>th</sup> call** (01/05-30/11/19):  
opens May 1<sup>st</sup>, closes May 7<sup>th</sup> , results by May 15<sup>th</sup>
- ...

# countries

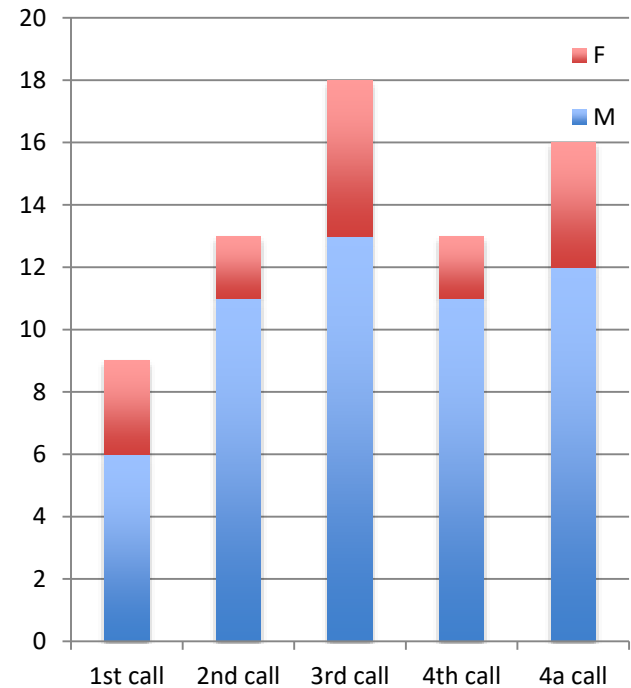
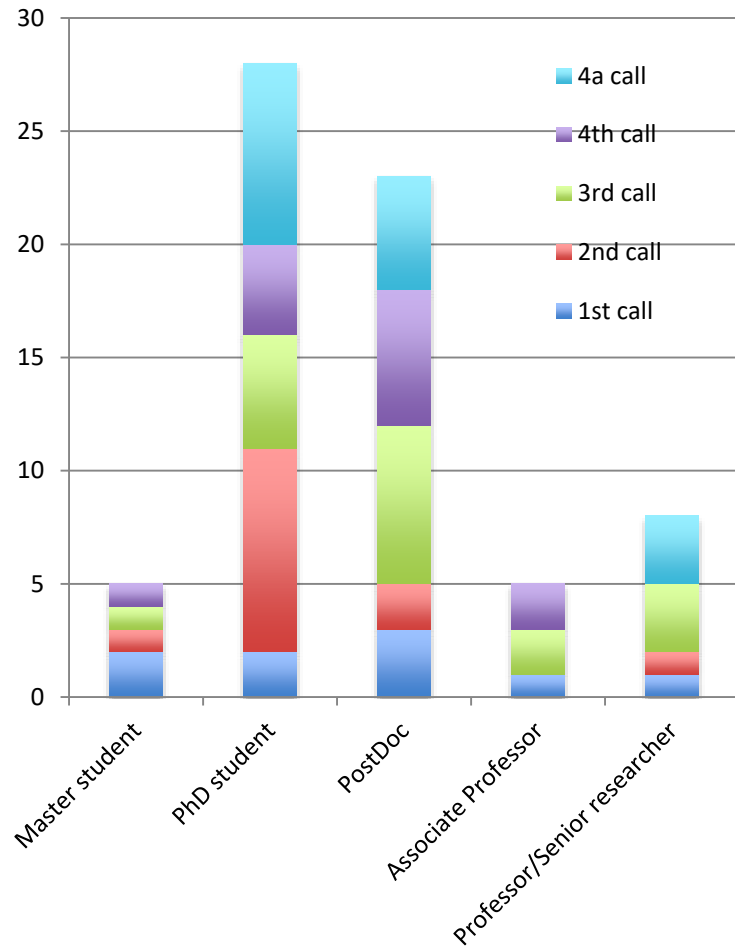
## home country



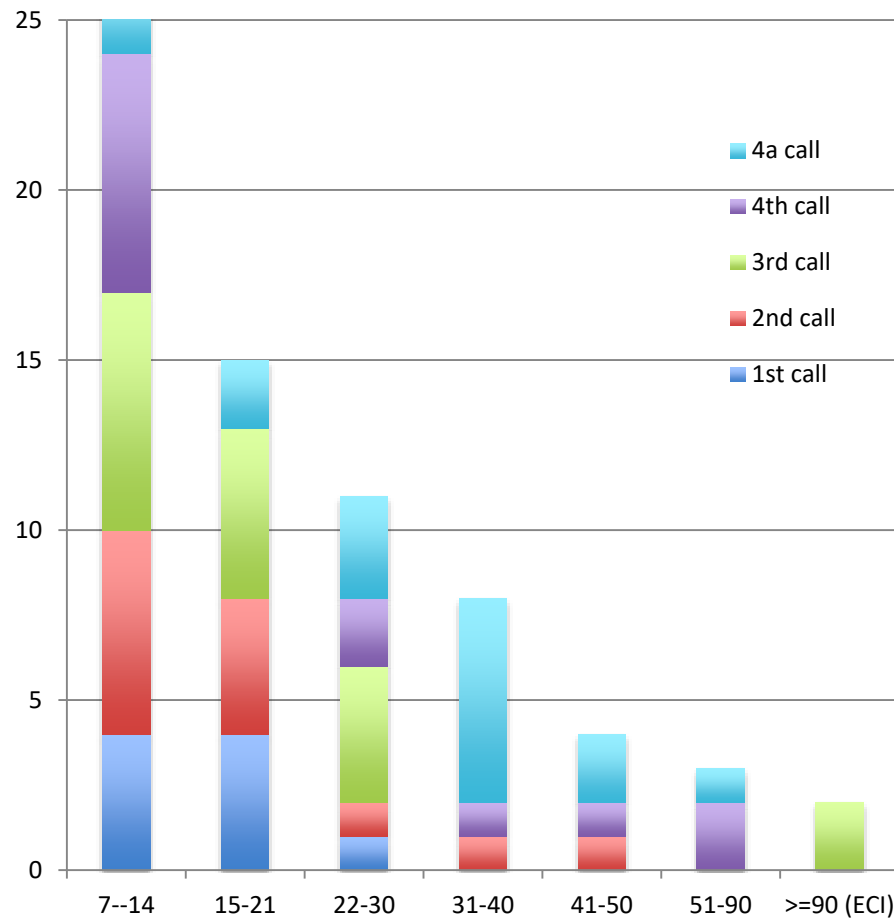
## host country



# applicants



# duration



## 6. Update from the Grant Holder

### GWverse Budget GP1

Networking Tools	Quantity	Budget
Meetings	2	EUR 43 860.00
Training Schools	0	EUR 0.00
Short Term Scientific Missions (STSM)	11	EUR 27 500.00
ITC Conference Grant	5	EUR 12 173.90
COST Action Dissemination	2	EUR 3 000.00
Other Expenses Related to Scientific Activities (OERSA)	0	EUR 0.00
<b>Total Science Expenditure</b>		<b>EUR 86 533.90</b>
Financial and Scientific Administration and Coordination (FSAC) - MAX. 15%	15 %	EUR 12 980.09
<b>Total Grant</b>		<b>EUR 99 513.99</b>

**EUR 102 609.78** was our initial budget but due to some leftovers we could not reach the 100%.

We achieved an execution rate of **97%**.

## 6. Update from the Grant Holder

### GWverse Budget 2018/05

Networking Tools	Quantity	Budget
Meetings	5	EUR 77 390.00
Training Schools	1	EUR 12 450.00
Short Term Scientific Missions (STSM)	38	EUR 38 000.00
ITC Conference Grant	2	EUR 5 000.00
COST Action Dissemination	0	EUR 0.00
Other Expenses Related to Scientific Activities (OERSA)	0	EUR 0.00
<b>Total Science Expenditure</b>		<b>EUR 132 840.00</b>
Financial and Scientific Administration and Coordination (FSAC) - MAX. 15%	15 %	EUR 19 926.00
<b>Total Grant</b>		<b>EUR 152 766.00</b>

In October COST informed that there was a possibility to allocate extra funds to on-going Actions. Our Action has received EUR 25 000 (including FSAC).

This amount has been distributed for STSM's and Meetings.

### GWverse Budget 2018/11

Networking Tools	Quantity	Budget
Meetings	5	EUR 88 771.76
Training Schools	1	EUR 12 449.99
Short Term Scientific Missions (STSM)	38	EUR 48 450.00
ITC Conference Grant	2	EUR 5 000.00
COST Action Dissemination	0	EUR 0.00
Other Expenses Related to Scientific Activities (OERSA)	2	EUR 72.60
<b>Total Science Expenditure</b>		<b>EUR 154 744.35</b>
Financial and Scientific Administration and Coordination (FSAC) - MAX. 15%	15 %	EUR 23 211.65
<b>Total Grant</b>		<b>EUR 177 956.00</b>

## 6. Update from the Grant Holder

### GWverse Budget 2019/01

Networking Tools	Quantity	Budget
Meetings	5	EUR 78 787.76
Training Schools	1	EUR 12 449.99
Short Term Scientific Missions (STSM)	60	EUR 76 500.00
ITC Conference Grant	4	EUR 10 000.00
COST Action Dissemination	0	EUR 0.00
Other Expenses Related to Scientific Activities (OERSA)	2	EUR 72.60
<b>Total Science Expenditure</b>		<b>EUR 177 810.35</b>
Financial and Scientific Administration and Coordination (FSAC) - MAX. 15%	15 %	EUR 26 671.55
<b>Total Grant</b>		<b>EUR 204 481.90</b>

In December COST informed one more time that have additional funds available for the COST Actions.

We received more EUR 25 000 (including FSAC) that we reallocated for STSMs and ITC Conference Grant.



# 6. Update from the Grant Holder

## Meetings

3-6 june 2018 - Numerical Relativity beyond General Relativity Workshop Benasque – **EUR 5 000.00**

4-6 september 2018 - Extreme (and Intermediate-) Mass Ratio Inspirals and the ESA LISA Mission - Barcelona – **EUR 4 000.00**

12-14 november 2018 - 1st workshop of the LISA fundamental physics working group – Florence – **EUR 5 000.00**

16-18 january 2019 – The Gravity Data Group – Athens – **EUR 13 500.00**

21-25 january 2018 – Management Committee Meeting, Core Group Meeting and Global GWverse Meeting - Athens – **EUR 55 000.00**

**Training School** - 11-22 june 2018 - Dublin Summer School on Gravitational Waves – **EUR 12 450.00**

6 Trainers and 75 Trainees of which 13 received Grants from our Cost Action.

Short Term Scientific Missions processed until today: **18 – EUR 21 380.00**

Short Term Scientific Missions to be held until April: **14 – EUR 26 955.00 + 28 165.00 additional call in February**

ITC Conference Grants – **EUR 10 000.00 in analysis and selection**

	Grant budget (a)
Total Meeting	78 787.76
Total Training School	12 449.99
Total Short Term Scientific Mission (STSM)	76 500.00
Total Inclusiveness Target Countries Conference Grant (ITC CG)	10 000.00
Total Action Dissemination	0.00
Total Other Expenses Related to Scientific Activities (OERSA)	72.60
Total Networking expenditure	<b>177 810.35</b>
Total Eligible Networking expenditure	177 810.35
Total FSAC 15% of Eligible Networking expenditure	26 671.55
Total Eligible Costs	<b>204 481.90</b>

# GWverse Meeting Athens

**22-24 january 2019**

**142 Registrations**

**32 MC Members**

**11 Invited Speakers**

**40 Participants with reimbursement**

GRAVITATIONAL WAVES, BLACK HOLES AND FUNDAMENTAL PHYSICS

Belgium  
Bosnia & Herzegovina  
Bulgaria  
Croatia  
Czech Republic  
Denmark  
Estonia  
Finland  
France  
Germany  
Greece  
Hungary  
Ireland  
Israel  
Italy  
Malta  
Netherlands  
Poland  
Portugal  
Serbia  
Slovenia  
Spain  
South Africa  
Switzerland  
Turkey  
United Kingdom  
United States

## 7. Update from the COST Association

## 8. Monitoring of the Action

### Recommendation from COST

#### Increase participation of ITCs at the leadership as well as participation level of Action

Of 8 core group members, 3 are ITCs (Chair, STSM coordinator and dissemination coordinator)

**Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, fYR Macedonia, Hungary, Latvia, Lithuania, Luxembourg, Malta, Montenegro, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Turkey**

#### Enhance participation of Early Career Investigators and maintain gender balance

~50% of core group are women, 50% are men; of these, ~40% from ITCs

~50% of TLs are ECIs

~1/3 WG Leader female

#### Seek cooperation with researchers from outside the COST countries, for example USA

One university from Russia, two from South Africa and five from the US joined

## 9. Gender balance and ECIs; Inclusiveness and Excellence

9. Implementation of COST policies on (Diversity Adviser 10 min)

- a) Promotion of gender balance and Early Career Investigators (ECI)
- b) Inclusiveness and Excellence (see below list of Inclusiveness Target Countries)

# Diversity

Diversity Advisor: Alicia M Sintes- UIB. Spain

## **Excellence and Inclusiveness aiming to promote and spread excellence 2014-2020**

<https://www.cost.eu/who-we-are/cost-strategy/excellence-and-inclusiveness/>

The COST inclusiveness policy is developed around **three main elements**:

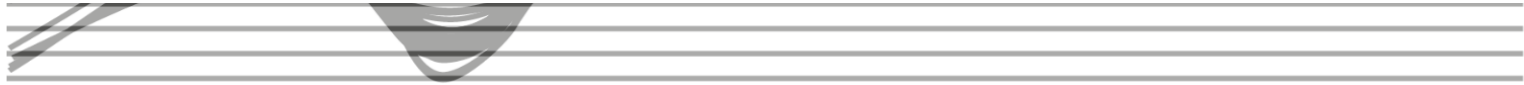
- geographical spread
- career stage: involving early career investigators
- gender balance

Geographical spread includes less research-intensive COST Members  
**COST Inclusiveness Target Countries (ITCs):**

Albania, Bosnia and Herzegovina, Bulgaria, Cyprus, Czech Republic, Estonia, Croatia, Hungary, Lithuania, Latvia, Luxembourg, Malta, Moldova, Montenegro, Poland, Portugal, Romania, Slovenia, Slovakia, the former Yugoslav Republic of Macedonia, Republic of Serbia and Turkey.

# Diversity and Ethics Statement/Pledge

<https://gwverse.tecnico.ulisboa.pt/diversity/>



gravitational waves, black holes and fundamental physics

## Diversity and Ethics Statement/Pledge

As members of the COST Action CA16104 Gravitational waves, black holes and fundamental physics (GWverse), we recognize the importance of diversity to enrich our research and scholarship. We pledge to provide a welcoming, inclusive environment to talented individuals regardless of characteristics such as, but not limited to, physical ability, race, ethnicity, gender, sexual orientation, economic status, or personal religious practices, and to support the professional growth of all members.

We also pledge to work to increase the numbers of women and under-represented groups that actively participate in the action, to involve them in leading roles, and to maximize their contribution to excellence in our research. We will strive to create a professional climate that encourages inclusion and that respects and values diversity.

Furthermore, GWverse endorses the European Astronomical Society (EAS) Ethics Statement and Guidelines for Good Practice.

We refer our members there for further guidance. ([http://eas.unige.ch/documents/EAS\\_Ethics\\_Statement.pdf](http://eas.unige.ch/documents/EAS_Ethics_Statement.pdf))



# Working Groups

<https://gwverse.tecnico.ulisboa.pt/wgs/>

## **Astrophysics**

Led by Samaya Nissanke, The Netherlands.

1/3 women as topic leaders

## **Source Modelling**

Led by Leor Barack, UK.

1/3 women as topic leaders

## **Black holes and fundamental physics**

Led by Thomas Sotiriou, UK.

1 new woman as topic leader:

**WG3f: GW Data analysis beyond GR**

**Anuradha Samajdar**



# Approved ITC Grants

Name	Institution	Conference	Date(s)
Nemanja Rakić	Faculty of Natural Sciences and Mathematics, University of Banjaluka, Bosnia and Herzegovina	Revisiting narrow-line Seyfert galaxies and their place in the Universe	9-13 April 2018
Fethi Ramazanoğlu	Koç University	American Physical Society April Meeting 2018	14-17 April 2018

# STSMs: <https://gwverse.tecnico.ulisboa.pt/stsms/approved-stsms/>

## Eligible Home Institutions

Currently, the approved home institu

-  Austria [AT]
-  Belgium [BE]
-  Bosnia and Herzegovina [BA]
-  Bulgaria [BG]
-  Croatia [HR]
-  Czech Republic [CZ]
-  Denmark [DK]
-  Estonia [EE]
-  Finland [FI]
-  France [FR]
-  Germany [DE]
-  Greece [EL]
-  Hungary [HU]
-  Ireland [IE]
-  Israel [IL]
-  Italy [IT]
-  Malta [MT]
-  Netherlands [NL]
-  Norway [NO]
-  Poland [PL]
-  Portugal [PT]
-  Romania [RO]
-  Russia [RU] (Moscow State Unive
-  Serbia [RS]
-  Slovenia [SI]
-  South Africa [ZA] (Rhodes Univer
-  Spain [ES]
-  Switzerland [CH]
-  Turkey [TR]
-  United States of America [US] (Ca
-  United Kingdom [UK]

### 3rd call (May-Nov 2018)

Recipient	Home Institution	Host Institution	Duration of stay (days)
Alberto Mangiagli	Milan-Bicocca University Italy	University of Birmingham UK	7
David Fajman	University of Vienna Austria	University of Gothenburg Germany	11
Denys Malyshev	Institut für Astronomie und Astrophysik Tübingen, Universität Tübingen Germany	Dublin City University Ireland	14
Georgios Doulis	National and Kapodistrian University of Athens Greece	Institute of Theoretical Physics, University of Warsaw Poland	92
Georgios Loukes-Gerakopoulos	Astronomical Institute of the Academy of Sciences of the Czech Republic Czech Republic	Theoretical-Physical Institute, Friedrich-Schiller University of Jena Germany	19
Giulia Cusin	University of Oxford UK	Institut d'Astrophysique de Paris France	19
Giulia Ventagli	Sapienza University of Rome Italy	CENTRA, Instituto Superior Técnico Portugal	7
Hannes Rüter	Friedrich-Schiller-Universität Jena Germany	CENTRA, Instituto Superior Técnico Lisboa Portugal	14
Irina Dvorkin	Max Planck Institute for Gravitational Physics Germany	Institut d'Astrophysique de Paris France	25
Leon Escobar	University of Naples Germany	Faculty of Physics, University of Warsaw Poland	90
Marina Martinez Montero	Institute for Theoretical Physics, KU Leuven Belgium	CENTRA, Instituto Superior Técnico Portugal	12
Mateja Bošković	Petnica Science Center Serbia	CENTRA, Instituto Superior Técnico Portugal	15
Pep Covas	Universitat de les Illes Balears Spain	Max Planck Institute for Gravitational Physics, Hannover Germany	26
Raimon Luna	University of Barcelona Spain	CENTRA, Instituto Superior Técnico Portugal	20
Roman Konoplya	Silesian University in Opava Czech Republic	Theoretical Astrophysics, University of Tuebingen Germany	17
Stoytcho Yazadjiev	Sofia University Bulgaria	Theoretical Astrophysics, University of Tuebingen Germany	30
Stylanos Kazantzidis	University of Athens Greece	Institute for Computational Science (University of Zurich) Switzerland	15+15
Tanja Petrushevska	University of Nova Gorica Slovenia	DARK Cosmology Centre Denmark	14

### 4th call (Nov 2018-Apr 2019)

Recipient	Home Institution	Host Institution	Duration of stay (days)	Topic of project
Alexandru Dima	SISSA (Trieste) Italy	IAP (Paris) France	31	Superradiance in dilatonic Bonnet gravity
Areti Eleni	National and Kapodistrian University of Athens Greece	Astronomical Institute of the Czech Academy of Sciences Czech Republic	26	The perturbed Euler problem: Newtonian analogue to test integrable EMRI systems
Barbara Patricelli	University of Pisa Italy	Centre de Saclay France	14	Electromagnetic signature of gravitational wave transients: era: observational strategies
Fethi Mübin Ramazanoglu	Koc University Turkey	University of Nottingham UK	7	Instabilities, phase transitions
Károly Csukás	Wigner Research Center for Physics Budapest Hungary	University of Warsaw Poland	90	Numerical implementation of fully constrained evolution
Manuel Arca Sedda	Zentrum für Astronomie der Universität Heidelberg Germany	Eotvos Lorand University Hungary	7	Black hole binary mergers: binary interactions in dense clusters
Nicola Tamanini	Max Planck Institute for Gravitational Physics Germany	Leiden Observatory Netherlands	12	Exploring the environment of white dwarf binaries with
Roberto Oliveri	Czech Academy of Sciences, Prague Czech Republic	Aix-Marseille Université France	26	Null infinity, tetrads formalism, gravitational radiation
Sebastian Bahamonde	University of Tartu Estonia	University of Malta Malta	8	Horndeski Theories of Gravity: Teleparallel Setting
Sergey Tsygankov	University of Turku Finland	Dublin City University Ireland	14	Polarimetric observations of binaries: new tool for exploration
Serguei Ossokine	Max Planck Institute for Gravitational Physics Germany	Caltech USA	12	Detecting the effects of 2nd precession in black hole binaries: third generation of gravitational detectors
Simone Mastrogiovanni	INFN (Rome) Italy	Nikhef - National Institute for Subatomic Physics, Amsterdam Netherlands	43	Detecting the gravitational echoes in LIGO and Virgo
Valerio Ganci	Università degli Studi di Padova Italy	Observatory of Belgrade Serbia	90	Looking for super-massive black holes along the quasar main sequence

The involvement of ECIs is one of the success of this action !

# **GWverse second global meeting**

## Athens 2019: Gravitational Waves, Black Holes and Fundamental Physics

- Code of conduct
- Invited talk promoting gender equality
- Effort in gender balance in plenary invited speakers
- Effort in balance in presentations regarding career stage, gender and geographical spread

# Code of Conduct

## Code of conduct

The organizers are committed to making this meeting productive and enjoyable for everyone, regardless of gender, sexual orientation, disability, physical appearance, body size, race, nationality or religion. We will not tolerate harassment of participants in any form. Please follow these guidelines:

- Behave professionally. Harassment and sexist, racist, or exclusionary comments or jokes are not appropriate. Harassment includes sustained disruption of talks or other events, inappropriate physical contact, sexual attention or innuendo, deliberate intimidation, stalking, and photography or recording of an individual without consent. It also includes offensive comments related to gender, sexual orientation, disability, physical appearance, body size, race or religion.
- All communication should be appropriate for a professional audience including people of many different backgrounds. Sexual language and imagery is not appropriate.
- Be kind to others. Do not insult or put down other attendees.

Participants asked to stop any inappropriate behaviour are expected to comply immediately. Attendees violating these rules may be asked to leave the event at the sole discretion of the organizers without a refund of any charge.

Any participant who wishes to report a violation of this policy is asked to speak, in confidence, to [issor.em@gmail.com](mailto:issor.em@gmail.com).

# Talk promoting gender equality

**Marika Taylor**, University of Southampton,  
UK

## *The GenHET initiative*

GEN-HET aims to improve the visibility of women in high-energy theory, increase awareness of gender issues in the scientific community, and provide networking, support, and mentoring for women, particularly in the early stages of their careers.

**TUESDAY, 22/1/2019 @ 12:00**

# Athens 2019: Gravitational Waves, Black Holes and Fundamental Physics

## Invited Speakers

- Enrico Barausse, IAP France
- Tomek Bulik, Warsaw University Astronomical Observatory
- Sarah Caudill, Nikhef, the Dutch National Institute for Subatomic Physics/VIRGO/LIGO
- Geoffrey Compere, Université Libre de Bruxelles, Belgium
- Mihalis Dafermos, DAMTP Cambridge UK
- Martin Hewitson, Albert Einstein Institut, Hannover Germany
- Stefan Hild, University of Glasgow UK
- David Hilditch, Instituto Superior Técnico Portugal
- Michela Mapelli, Institut für Astro- und Teilchenphysik, Universität Innsbruck, Technikerstrass
- Marika Taylor, University of Southampton UK
- Helvi Witek, King's College London UK
- **15+16+21= 52 presentations & 11 posters** from senior and young researchers

# **Athens 2019: Gravitational Waves, Black Holes and Fundamental Physics**

**130 participants**

**33 countries:**

Algeria, Austria , Belgium, **Bosnia and Herzegovina**, Brazil, **Bulgaria**, Canada, Chile, **Czechia**, Denmark , **Estonia**, Finland, France, Germany, Greece, **Hungary**, India, Italy, Ireland, Israel, Netherlands, **Malta**, Pakistan, **Poland**, **Portugal**, **Romania**, Russia, **Slovenia**, Sweden, Switzerland, **Turkey**, UK, USA

**11 Inclusiveness Target Countries**

**Following COST inclusiveness objectives, we are working on:**

Increasing brain circulation between peripheral regions to research intensive territories

Empowering young talents at the beginning of their careers to acquire the necessary recognition and leadership

Ensuring equal opportunities and gender-friendly career advancement.

**Furthermore, GWverse endorses the European Astronomical Society (EAS) Ethics Statement and Guidelines for Good Practice.**

## 10. Progress report of WGs

10. Follow-up of MoU objectives: progress report of working groups (WG Leaders)



## 11. Scientific planning

### a) Scientific strategy (MoU objectives, GP Goals, WG tasks and deliverables)

Research Coordination 1	The Action will coordinate the efforts of different communities, promote collaboration across different disciplines and train the next generation of leaders in the field, and the very first 'native' GW/multi-messenger astronomers.
Research Coordination 2	Develop, share and disseminate relevant knowledge across the wide community, forming a single, interdisciplinary network.
Research Coordination 3	Create and maintain freely available catalogues with (1) up-to-date waveform models for GW searches, and (2) modified theories of gravity, with current observational constraints. This will be the most comprehensive effort to date, demanding a network-wide contribution.
Research Coordination 4	Perform a Europe-wide outreach action on gravitational physics, promoting public awareness of, and engagement in, this exciting field, which is bound to enjoy much media attention in the coming years, as more results come in from GW experiments.
Research Coordination 5	Train early-stage researchers in interdisciplinary topics, and prepare them for successful careers in research or (via acquisition of transferable skills) in the industry or education sectors.

## 11. Scientific planning

a) Scientific strategy (MoU objectives, **GP Goals**, WG tasks and deliverables)

- 1 Creation of webpage
- 2 Establish Working Group Structure
- 3 Opening call for STSM, and engage Early Career Investigators in the Action
- 4 Plan white paper for the field
- 5 Organize a global meeting with community

## 11. Scientific planning

a) Scientific strategy (MoU objectives, GP Goals, WG tasks and deliverables)

White paper (month 24)

Webpage (month 24)

GDG (month 36)

Short movie (month 36)

Documentary (month 48)

Training schools (month 48)

## 11. Scientific planning

b) Action Budget Planning and c) Long term planning

43 K STSMs YES

50 K Global YES

5 K ITCs YES

2 K Norway Nardini YES

8 K France Bernard, Maselli, Zilhao

5 K Spain Pau

7 K Witek AEI

4 K Netherlands 2019

3 K GDG

#### d) Dissemination planning (Publications and outreach activities)

Communication	Dissemination
About the <b>project and results</b>	About <b>results only</b>
<b>Multiple audiences</b> Beyond the project's own community (include the media and the public)	<b>Audiences that may use the results in their own work</b> e.g. peers (scientific or the project's own community), industry and other commercial actors, professional organisations, policymakers
<b>Inform and reach out to society,</b> show the benefits of research	<b>Enable use and uptake of results</b>

##### Webpage is regularly updated:

1) Various examples (TV/radio interviews, newspaper pieces, other media coverage...).  
Tell us more!

2) Our Deliverable for the first year:  
short movie (done and in webpage)

Other good practices?

##### Already many results

1) GWverse roadmap became public (1806.05195)

2) Five sponsored meetings in 2018

3) List of publications that acknowledge COST in webpage

Acknowledge the project in publications (e.g.):  
"The authors would like to acknowledge networking support by the COST Action CA16104."

Use COST emblem in talks



## 12. Requests to join the Action

### 12. Requests to join the Action from:

#### a) COST countries

1. Romania (Victor Ambrus and Eugen-Mihaita Cioroianu)
2. Sweden (Stephan Rosswog)

#### b) Institutions in Near Neighbouring Countries, International Partner Countries, and/or Specific Organisations: EU agencies, European RTD Organisation, International Organisations

1. Johns Hopkins (US, representative Emanuele Berti)
2. Mississippi (US, representative Leo Stein)
3. Montana (US, representative Nicolas Yunes)
4. Moscow State (Russia, representative Dmitry Gal'tsov)

### 13. AOB

Report. Send Herdeiro DOI and reference of published work.  
Deadline: 3 weeks

GR22: please register and urge students and colleagues to attend

## 14. Location and date of next meeting



## 15. Summary of MC decisions

## 16. Closing