

# Why are we here today?

## First International Gravitational Waves Outreach Group Meeting, Valencia – July 13, 2019

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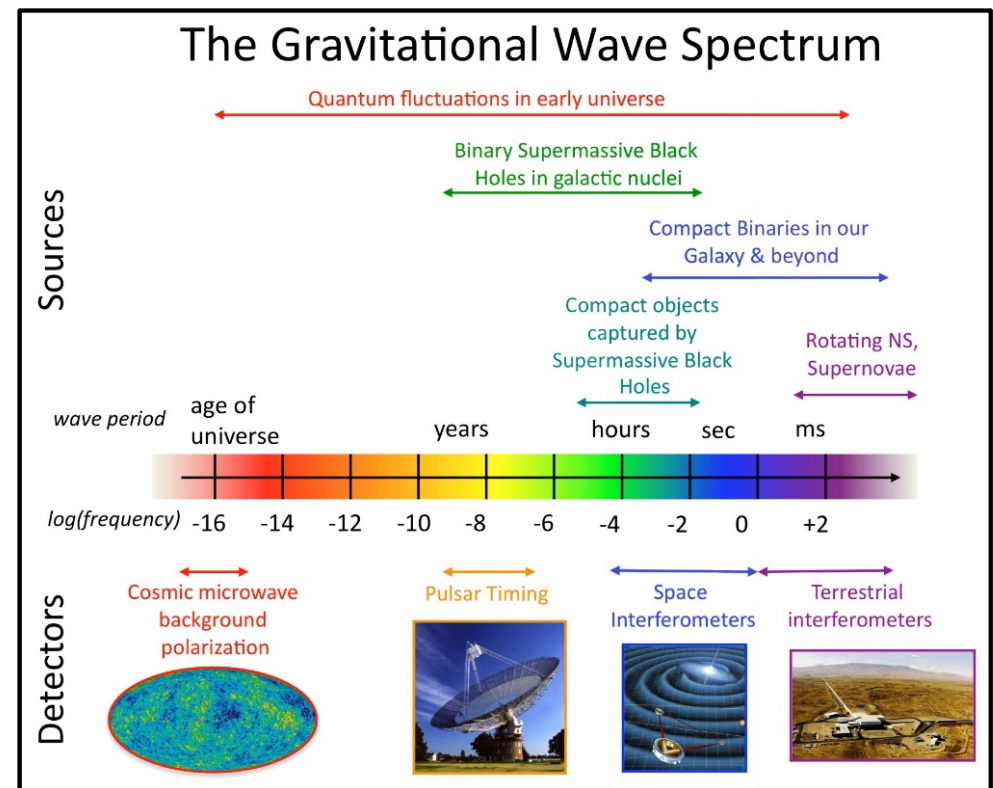
European Gravitational Observatory (Consortium, CNRS & INFN)

**Beverly Berger, Livia Conti, Isabel Cordero-Carrión,  
Martin Hendry, William Katzman, Joey Key, Amber Strunk**



# Why not?

- **Gravitational waves**: mature basic science research field
  - **Large and worldwide community**
  - **Several collaborations** looking for GWs of all kind
    - Instruments **operating**, being upgraded, in construction, planned
  - **First detections!**
    - **Experience + theory working together**
  - **Multi-messenger astronomy with GW**
  - **Long-term prospects** for the whole field
  - **General public interest** towards (new) things coming from the **Universe**
- **Opportunities!**
- **Lots of...**



# @ Amaldi 13

- Dedicated **parallel session**
  - 4 slots
- Several outreach public events accompanying the GR22 + Amaldi joint conferences
  - **Science, observations, art**

## C8: Education and Public Outreach on Gravitational Wave Astronomy

### Monday 1

#### Room 7

15:00-15:30 Education And Public Outreach Activities Of The LIGO Scientific Collaboration, **Keitel, David**

15:30-15:45 Summary Of Virgo Outreach Activities, **Conti, Livia**

15:45-16:00 An Overview On The Outreach Activities In The Virgo Group In Valencia, **Cordero-Carrión, Isabel**

16:00-16:15 Training Ambassadors For High Impact Outreach, **Williamson, Kathryn**

16:15-16:16 Posters A New Gravitational Wave Lecture-Tutorial For "Astro 101", **Williamson, Kathryn**

### Monday 2

#### Room 7

17:00-17:30 Bringing General Relativity To Upper Secondary Schools: Design And Evaluation Of A Digital Learning Environment, **Kersting, Magdalena**

17:30-17:45 Ozgrav Public Outreach Virtual And Mixed Reality Toolkits, **Bailes, Matthew**

17:45-18:00 Playing With Gravitational Wave Detectors: Exhibits And Apps For Public Engagement With Gravitational Wave Research, **Gettings, Conner**

18:00-18:15 Improving The Black Hole Hunter Educational Game For The Advanced Detector Era, **Mcisaac, Connor**

### Tuesday 1

#### Room 7

15:00-15:30 Education And Public Outreach Efforts By Pulsar Timing Array Collaborations, **Hazboun, Jeffrey S**

15:30-15:45 Gravitational Wave Outreach With The International Pulsar Timing Array, **Perrodin, Delphine**

15:45-16:00 The Pulsar Search Collaboratory, **Williamson, Kathryn**

16:00-16:15 Qfirs – An Integrated Structured Educational Programme For Doctoral Students And Postdocs In Hannover And Braunschweig, **Kawazoe, Fumiko**

### Tuesday 2

#### Room 7

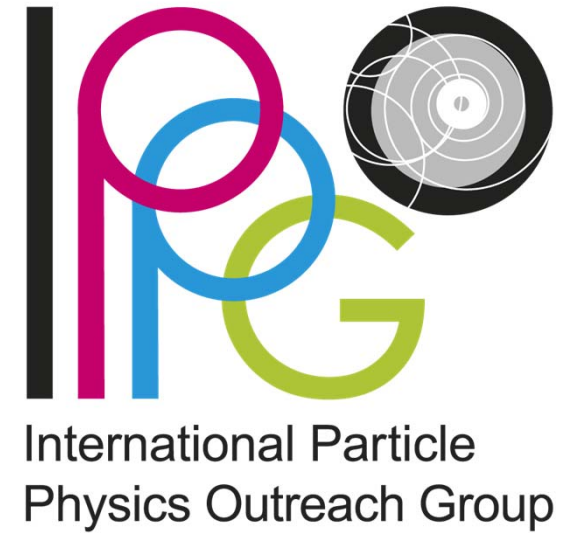
17:00-17:30 Advocacy And Outreach Activities Of The LISA Consortium, **Hendry, Martin**

17:30-17:45 The European Research Council – Funding Opportunities For Bright Minds, **Oswald, Christian**

17:45-18:00 Black Holes Tend (Not) To Exist! Some Personal Reflections About Public Dissemination On Gravity, **Pani, Paolo**

18:00-18:15 Of Funnels, Rivers And Trampolines: The Perils Of Conveying Spacetime Curvature To The Uninitiated, **Empanan, Roberto**

# IPPOG



- **International Particle Physics Outreach Group**
  - A **forum** for the high-energy community at large
  - Focusing on **outreach**
    - **Complementary to communication offices**
  - Not just **brainstorming** but doing joint **concrete projects**
  - To know more: <http://ippog.org>

→ See **Steve Goldfarb's** talk (IPPOG co-chair) later in this session


- **April 2018: joint IPPOG + LIGO-Virgo meeting at EGO**




# IGOG

- International Gravitational-wave Outreach Group
  - Not a duplicate of IPPOG
    - ◆ Let's be inspired by this collaboration and learn from its two decade-long experience
- Currently just an idea
  - Title and acronym are temporary / TBD
  - Its realization (or not) is up to us
- Kick-off meeting today, at the end of the conference week:  
<https://indico.ego-gw.it/event/29>

## First International Gravitational Waves Outreach Group Meeting

 Saturday 13 Jul 2019, 09:00 → 18:00 Europe/Madrid

 Botanical Garden of the University of Valencia

**Description** The organisers are committed to making this meeting productive and enjoyable for everyone involved. Be professional and respectful. Allow everyone the chance to speak. Step Up, Step Back: Be mindful of taking up much more space than others. On the same note, empower yourself to speak up when others are dominating the conversation.

# Today's meeting

- **Introduction**
  - Isabel, NA, Martin
- **IPPOG**
  - Steve
- **Working groups**
  - All of us!
  - 2 sessions: before and after lunch
    - ◆ **Feel free to move between groups**
  - 2 conveners / session
- **Summary** from the working groups
- **Conclusions**
  - What to do next?
  - When?
  - How?

| First International Gravitational Waves Outreach Group Meeting  |   | 🔍        |
|---|---|----------|
| 📅 Saturday 13 Jul 2019, 09:00 → 18:00 Europe/Madrid   |   |          |
| 📍 Botanical Garden of the University of Valencia  |   |          |
| <b>Description</b> The organisers are committed to making this meeting productive and enjoyable for everyone involved. Be professional and respectful. Allow everyone the chance to speak. Step Up, Step Back: Be mindful of taking up much more space than others. On the same note, empower yourself to speak up when others are dominating the conversation. |   |          |
| 10:00 → 10:30   | Welcome coffee break  | 🕒 30m    |
| 10:30 → 11:15   | <b>Introduction</b>   | 🔍        |
| 10:30   | <b>Welcome and meeting information</b><br>Speaker: Dr Isabel Cordero  | 🕒 10m 🔍  |
| 10:40   | <b>Why are we here today?</b><br>Speaker: Nicolas Arnaud  | 🕒 15m 🔍  |
| 10:55   | <b>Overview of gravitational-wave outreach</b><br>Speaker: Prof. Martin Hendry  | 🕒 20m 🔍  |
| 11:15 → 12:00   | <b>The IPPOG Collaboration</b>  | 🕒 45m 🔍  |
| IPPOG: the International Particle Physics Outreach Group<br>Speaker: Dr Steve Goldfarb (IPPOG co-chair)   |   |          |
| 12:00 → 13:00   | <b>Breakout sessions: Breakout sessions (1/2)</b>   | 🔍        |
| See morning session for the list of groups and conveners  |   |          |
| 12:00   | <b>Art and science</b><br>Speaker: Dr Isabel Cordero  | 🕒 1h 🔍   |
| 12:00   | <b>Communication</b><br>Masterclasses<br>Social media<br>Talk to a scientist<br>Visits and virtual visits<br>Websites   | 🕒 1h 🔍   |
| 12:00   | <b>Evaluation</b>   | 🕒 1h 🔍   |
| 12:00   | <b>Formal education</b><br>Primary, middle and high schools   | 🕒 1h 🔍   |
| 12:00   | <b>Multi-messenger astronomy outreach collaborations</b><br>Speaker: Dr Chris North   | 🕒 1h 🔍   |
| 12:00   | <b>Organization structure for IGOG</b><br>Funding<br>Mailing list(s)<br>Meetings: telecons and in-person<br>Membership<br>Name<br>Structure<br>Speakers: Nicolas Arnaud, Dr Steve Goldfarb (IPPOG co-chair) | 🕒 1h 🔍   |
| 12:00   | <b>Outreach to under-represented groups</b><br>Speaker: Iivia conti   | 🕒 1h 🔍   |
| 12:00   | <b>Political lobbying</b><br>Speaker: Prof. Martin Hendry   | 🕒 1h 🔍   |
| 12:00   | <b>Science festivals</b><br>Demonstrators<br>Exhibits<br>Materials<br>Speaker: Dr Joey Shapiro Key  | 🕒 1h 🔍   |
| 13:00 → 14:30   | Lunch (on your own)   | 🕒 1h 30m |
| 14:30 → 15:30   | <b>Breakout sessions: Breakout sessions (2/2)</b>   | 🔍        |
| See morning session for the list of groups and conveners  |   |          |
| 15:30 → 16:15   | <b>Share out from breakout sessions and discussion</b>  | 🕒 45m 🔍  |
| 16:15 → 16:45   | Coffee break  | 🕒 30m    |
| 16:45 → 17:45   | <b>Consensus on a path forward</b>  | 🕒 1h 🔍   |
| 17:40 → 18:00   | <b>Conclusions &amp; Adjourn</b>  | 🕒 20m 🔍  |