

Report of Affiliated Commission AC.2 for 2019
submitted by Beverly K. Berger, Secretary

The principal event of the year for the International Society on General Relativity and Gravitation (AC2) was the triennial GR conference. The 22nd International Conference on General Relativity and Gravitation, GR22, was held in conjunction with the Edoardo Amaldi Meeting on Gravitational Waves (Amaldi13) on 7 – 12 July 2019 in Valencia, Spain. The scientific highlights of the meeting were the plenary talks covering a very broad range of topics, from the mysteries of quantum gravity to instrumentation for future gravitational wave detectors, as well as from the mathematics of general relativity to the implications for astrophysics of the dawn of gravitational wave astronomy. To celebrate its centennial, the opening talk reviewed the impact of detection of the bending of light during the 1919 solar eclipse — the event that made Einstein a household name. Approximately 1000 registered participants attended the meeting, by far the largest attendance in this conference series. Sponsorship from IUPAP for this meeting, and AC2's own limited funds, assisted some of these participants. This was the first meeting in this series with a Code of Conduct, implemented as recommended by IUPAP. All indications are that it worked well.

As usual, the conference had plenary talks in the morning, covering the whole field of AC2's interests. In the afternoons there were parallel contributed papers and poster sessions. There were 20 plenary talks (with 7 of the speakers women) and 28 parallel sessions (with 8 of the chairs women). Abstracts of all submissions are available online.¹ Slides from the plenary talks are not yet available online. During the meeting, several prize winners were honored by AC2 and GWIC (WG11): The IUPAP Young Scientist Prize in General Relativity and Gravitation was first awarded at GR20 in 2013. The three winners since the GR21, Aron Wall, Cambridge University (2017), Samuel Gralla, Arizona State University (2018), and Kent Yagi, University of Virginia (2019) were recognized at the meeting and gave brief presentations of their work. The triennial Ehlers and Bergmann-Wheeler Prizes (for the best PhD theses in classical and quantum gravity respectively) were presented to Katerina Chatziioannou (Montana State University) and Adrian del Rio Vega (University of Valencia). The annual GWIC thesis prizes (for which AC2 acts as fund holder) were awarded, for 2017, to Hector Okada da Silva (University of Mississippi) and, for 2018, to Jonathan Cripe (Louisiana State University). The Hartle Prizes for best student presentations at the meeting and the Chandrasekhar Prizes for the best postdoctoral presentations at the meeting will be announced soon.

The Society also awarded Fellowship recognition to Emanuele Berti (Johns Hopkins), Jiří Bičák (Charles University), Luc Blanchet (CNRS), Rong-Gen Cai (Chinese Academy of Sciences), Manuela Campanelli (Rochester Institute of Technology), Veronika Hubeny (University of California at Davis), Renate Loll (Radboud University), Roy Maartens (University of the

¹ <https://www.gr22amaldi13.com/contributed-speakers.php>

Western Cape and University of Portsmouth), and B.S. Sathyaprakash (Penn State University and Cardiff University).

Following successful events at GR20 and GR21, AC2 repeated its reception for representatives of national and regional general relativity and gravitation organizations at GR22. The representatives presented brief summaries of their organizations. Discussions centered on common issues and possible future joint activities. Representatives from organizations in Australasia, China, Europe, Germany, Greece, India, Italy, Japan, Mexico, Poland, Portugal, South Africa, Spain, UK, and USA participated along with the AC2 President, the Secretaries of AC2 and GWIC (WG11), and the Chair of WG13. These two working groups also held their annual meetings at the conference.

The Commission itself (alias the Society's Committee) held 3 meetings during GR22/Amaldi13. IUPAP support for Commission meetings was used to enable a number of less well-funded members, in particular IUPAP representatives and those from developing countries, to be present.

The first meeting reviewed the previous three years' activities and included reports from the editors of the Society's journal, from GWIC, from IUPAP C&CC meetings, and from its information website, Hyperspace.² The purpose of the second meeting was to hear bids for the site of the next meeting. It was recommended that GR23 be held in Beijing, China, in July 2022.

This GR23 recommendation was accepted by the General Assembly of the Society held during the meeting, which also elected new officers and committee members in accordance with the constitution. Nils Andersson became President, Emanuele Berti became President Elect, Beverly Berger was reelected as Secretary, while the previous president, Eric Poisson, automatically became Past President. President Elect is a new office, recently approved by amendment of the AC2 constitution. The President Elect will automatically become President at GR23 (where a new President Elect but not President will be elected). The Assembly also reviewed membership, finance and administration and heard the reports from the journal, GWIC, IUPAP, and Hyperspace.

The third committee meeting was to complete essential business including selection of regions for the 8 open International Committee slots for the 2022 election, suggestions for the Chair of the Scientific Organizing Committee for GR23, and recommendations for two new IUPAP representatives to the International Committee.

IUPAP Representatives to AC2: By a long-standing agreement, IUPAP appoints four members of the AC2 Committee, each for a six-year term, two changing after every GR_n conference. AC2 itself nominates possible IUPAP members, seeking, in doing so, to improve geographic, subject, and/or gender balance among its members. The two IUPAP members retiring in 2016 are Rong-Gen Cai (China) and Sharon Morsink (Canada) (who was elected as a member of the

² <https://hyperspace.uni-frankfurt.de>

Committee). The continuing IUPAP members are Gustavo Dotti (Argentina) and David Wiltshire (New Zealand). AC2 proposes as the new IUPAP members Rong-Gen Cai (China) for a second term and J. Antonio Font R. (University of Valencia, Spain).