

Report of Affiliated Commission AC.2 for 2015-16
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 21st International Conference on General Relativity and Gravitation, GR21, was held 10 – 15 July 2016 at Columbia University. The scientific highlights of the meeting were talks and activities related to the first direct detection of gravitational waves by the LIGO Scientific Collaboration and the Virgo Collaboration—a momentous celebration of the Centennial of Einstein's first presentation of general relativity in November 1915. Approximately 650 registered participants attended the meeting. Sponsorship from IUPAP for this meeting, and AC2's own limited funds, assisted some of these participants.

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 15 plenary talks (5 of the speakers being women) and 17 parallel sessions (7 of the chairs being women). Abstracts of all submissions became available online¹ after the meeting. The abstracts of all parallel session talks and posters and the slides from the parallel session talks are available on the conference website.² Slides from the plenary talks will be available soon. 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 then, Jorge Santos, Stanford University and Cambridge University (2014), Nicolas Yunes, Montana State University (2015), and Ivan Agullo, Louisiana State University (2016) were recognized at the meeting. Through the generosity of Abhay Ashtekar, all winners received travel grants to enable attendance at the meeting. The triennial Ehlers and Bergmann-Wheeler Prizes (for the best PhD theses in classical and quantum gravity respectively) were presented to William East (Princeton University) and Lisa Glaser (Neils Bohr Institute). The annual GWIC thesis prize (for which AC2 acts as fund holder) was presented to Denis Martynov (Caltech). The Hartle Prizes for best student presentations at the meeting were awarded to Beatrice Bonga (Penn State, USA), Maria Charisi (Columbia University, USA), Lin-Qing Chen (Perimeter Institute, Canada), Philippe Landry (University of Guelph, Canada), Adam Levi (Technion, Israel), Maria Okounkova (Caltech, USA), Katharina Radermacher (KTH Royal Institute of Technology, Sweden), Helgi Freyr Rúnarsson (University of Aveiro, Portugal), John VanLandingham (University of Maryland, USA), and Serena Vinciguerra (University of Birmingham, UK). The Chandrasekhar Prizes for the best postdoctoral presentations at the meeting were awarded to David Fajman (University of Vienna, Austria), Dustin Madison (NRAO, USA), Ian Morrison (McGill University, Canada), and Adam Pound (University of Southampton, UK).

¹ <http://www.gr21.org/GR21FullAbstractBooklet.pdf>

² <http://www.gr21.org/program.html>

The Society also awarded Fellowships to Abhay Ashtekar (Penn State), James Hartle (UCSB), Stephen Hawking (U of Cambridge), Marc Kamionkowski (Johns Hopkins), Jerzy Lewandowski (U of Warsaw), Nergis Mavalvala (MIT), Jorge Pullin (Louisiana State U), Norna Robertson (Caltech and U of Glasgow), Kip Thorne (Caltech), and Clifford Will (U of Florida and Washington U). A special plaque was given to Malcolm MacCallum, who is well known to IUPAP, for his service to AC2 as International Committee member, Secretary, President, and Deputy President extending over 30 years. The plaque's inscription read "The members of the International Society on General Relativity and Gravitation express our deepest appreciation to Malcolm A. H. MacCallum for his extraordinary service to the Society and the broader scientific community."

Following a successful event at GR20, AC2 repeated its reception for representatives of our national organizations at GR21. These organizations range in character from mailing lists to independent societies. Many are groups within larger physics societies. The representatives presented brief summaries of their organizations. Discussions centered on common issues and possible future joint activities. Representatives from organizations in Australasia, China, Germany, India, Italy, Japan, Poland, Portugal, Russia, Spain, UK, and USA participated along with the AC2 President and the Secretaries of AC2 and GWIC.

The Commission itself (alias the Society's Committee) held 3 meetings during GR21. 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.³ The purpose of the second meeting was to hear bids for the site of the next meeting. It was agreed that GR22 will be held in Valencia, Spain in July 2019. As for GR20, this meeting will be held jointly with the GWIC-sponsored Amaldi13 conference on gravitational waves.

This GR22/ Amaldi13 recommendation was accepted by the General Assembly of the Society, which also elected new officers and committee members in accordance with the constitution. Eric Poisson became President, Beverly Berger was reelected as Secretary, while the previous president, Gary Horowitz, automatically became Deputy President. 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 2019 election and suggestions for the Chair of the Scientific Organizing Committee for GR22.

³ <http://hyperspace.aei.mpg.de/~>

As previously mentioned, the past year saw both the centennial of general relativity and the detection of gravitational waves from merging black holes. These milestones were described in the IUPAP Newsletter by Gary Horowitz⁴ and Albert Lazzarini⁵ respectively.

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 GRn 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 Nadja Magalhaes (Brazil) and David McClelland (Australia). The continuing IUPAP members are Rong-Gen Cai (China) and Sharon Morsink (Canada). AC2 proposes as the new IUPAP members Gustavo Dotti (Universidad Nacional de Córdoba, Argentina) and David Wiltshire (University of Canterbury, New Zealand).

⁴ G. Horowitz, “100 Years of General Relativity,” IUPAP Newsletter, December 2015.

⁵ A. Lazzarini, “The Discovery of a Binary Black Hole Merger by LIGO,” IUPAP Newsletter, March 2016.