

Reports from IUPAP Affiliated Commissions

for October meeting, 2013

Collected by Cecilia Jarlskog

The reports here below are from

- AC.2. International Commission on General Relativity and Gravitation
- AC.3. International Commission for Acoustics
- AC.4. International Commission on Medical Physics

AC.2.

Report of Affiliated Commission AC.2 for 2012-13
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. GR20 was held in July 2013 at the University of Warsaw jointly with Amaldi10 (in the Amaldi series organized by GWIC and sponsored by IUPAP via AC2). There were 845 registered participants. Sponsorship from IUPAP for both meetings, 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 (and GWIC's) interests. In the afternoons there were parallel contributed papers and poster sessions. There were 20 plenary talks (4 of the speakers being women) and 23 parallel sessions (4 of the chairs being women). A book containing abstracts of all submissions was circulated. The abstracts of all talks and posters and the slides from the plenary talks are available on the conference website (<http://gr20-amaldi10.edu.pl>). Proceedings will be published by *General Relativity and Gravitation*, AC2's journal.

During the meeting, the first annual IUPAP General Relativity and Gravitation Young Scientist Prize was presented to Lisa Barsotti (LIGO Lab, MIT). While subsequent prizes will be awarded and announced annually, the formal presentations will take place at the triennial GR meetings. Through the generosity of Abhay Ashtekar, all winners will receive a travel grant 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 Aseem Paranjape (ETH Zurich) and Aron Wall (UC Santa Barbara). The annual GWIC thesis prize (for which AC2 acts as fundholder) was presented to Paul Fulda (Florida). The Hartle Prizes for student presentations at the meeting were awarded to Majd Abdelqader (Queens U, Canada), Valentina Baccetti (Victoria U, Wellington), Christopher Berry (Cambridge), Sydney Chamberlin (U Wisconsin, Milwaukee), Stephanie Erickson (Southampton), Oliver Gerberding (Albert Einstein Inst.), Lisa Glaser (Niels Bohr Inst.), Gavin Hartnett (UC Santa Barbara), Giuliana Russano (Trento), and Antonia Zipfel (Erlangen-Nürnberg). The Chandrasekhar Prizes for postdoctoral presentations at the meeting were awarded to Alexandre Le Tiec (Maryland), Charles Melby-Thompson (Tokyo), Eric Perlmutter (Cambridge), and John Veitch (Nikhef). Regrettably, the funding foundation FORTH (Greece) was forced by financial considerations to withdraw its support for AC2's Xanthopoulos Prize, which has been discontinued until further notice.

The Society also awarded Fellowships to Yvonne Choquet-Bruhat, Nathalie Deruelle (Paris), George Ellis (Capetown), Eanna Flanagan (Cornell), Stefan Hollands (Cardiff), Werner Israel (Victoria), Balasubramanian Iyer (Raman Inst.), Luis Lehner (Perimeter), Ezra Newman (Pittsburgh), Peter Saulson (Syracuse), Bernard Schutz (AEI), Masaru Shibata (Kyoto), Tarun Souradeep (IUCAA), Takahiro Tanaka (Kyoto), and Robert Wald (Chicago).

AC2 sponsored its first event for representatives of our national organizations which 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, Canada, China, Germany, India, Japan, Poland, Russia, South Africa, Spain, UK, and USA participated while those from Greece sent comments which were presented to the group. Efforts are already underway to continue the communications among these organizations and with AC2.

The Commission itself (alias the Society's Committee) held 3 meetings during GR20. IUPAP support for Commission meetings was used to enable a number of less well-funded members, in particular IUPAP representatives, 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, newly reconstituted as WG11, from IUPAP C&CC meetings, and from its information website <http://hyperspace.aei.mpg.de/>. One topic of discussion was the status of AC2's review volume to celebrate the 2015 centennial of general relativity. The volume, edited by A. Ashtekar *et al*, will be published by Cambridge University Press. The component chapters are currently in progress by a distinguished list of authors.

The second meeting was to hear bids for the site of the next meeting. It was agreed that GR21 will be held in New York City in July 2016.

This recommendation was accepted by the General Assembly of the Society, which also elected new officers and committee members in accordance with the constitution. Gary Horowitz became President, Beverly Berger was reelected as Secretary, while the previous president, Malcolm MacCallum, 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 discuss future plans. AC2 is exploring suitable ways to mark the centennial. Heavy emphasis will be placed on coordination with the national organizations. The AC2 website will provide links to national events. Other activities such as a worldwide series of talks on 25 November 2015, the centennial of Einstein's final lecture introducing GR, are under consideration.

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 members retiring in 2010 are Nigel Bishop (South Africa) and Yongge Ma (China). The continuing IUPAP members are Nadja Magalhaes (Brazil) and David McClelland (Australia). AC2 proposes as the new IUPAP members Rong-Gen Cai (China) and Sharon Morsink (Canada).

AC.3.

**Report from AC3 International Commission for Acoustics (ICA) to IUPAP
C&CC Meeting in Geneva, Switzerland October 2013**

1. ICA Governance The ICA comprises the acoustical societies from 47 member countries and our most recent members have been acoustical societies in Israel and Nigeria. Both of these societies confirmed their membership of ICA at the time of national conferences. There are 8 international affiliate organizations which themselves have individual members distributed across the world and also organize international conferences every one or two years.

The ICA has been reviewing the governance for some years with a view to a structure that better allows for representation throughout the membership. The revisions to the by laws, which involve a balance of dedicated seats from the three main geographical regions plus open seats on the 15 member board was accepted at the 2013 General Assembly with voting effective immediately. The benefit of the new governance was immediately obvious from the number of nominees for the positions which was greater than in previous years.

The new board effective 1 October 2013 comprises representatives from the following countries: Australia, China, Germany, Canada and Spain in the executive, and Brazil, Denmark, France, Italy, Japan, Korea, Poland, Slovakia, UK and USA. It is also relevant to note that there are 3 females on the board with one being the President.

2. ICA Congress The major activity for the ICA is the congress held every 3 years. The last was held in Sydney, Australia in 2010 which was followed by the ICA held in Montreal, Canada in mid 2013. This 5 day congress was a joint undertaking between the Canadian and US acoustical societies and with 2300 registrants, over 1600 technical papers, and 49 Exposition booths, ICA 2013 was one of the biggest meetings in acoustics ever. The statistics show that 25% of the participants, 25% of the general organising committee and 9% of the technical organising committees were female. The next ICA will be held in Argentina in 2016.

3. Early Career Awards and Young Scientist Grants The ICA allocates the majority of its annual budget to encourage acoustics activities. The prestigious "ICA Early Career Award" was presented at the ICA Congress to Tapio Lokki from Finland, who presented a plenary lecture on "Sensory evaluation of concert hall acoustics". With additional support from the American Acoustical Society, 30 "Young Scientist Conference Attendance Grants" were awarded to assist the participation by young researchers in the congress. There was an overwhelming number of applications for this support in 2013 and the selection process is being reviewed for the future ICA.

4. Symposium Support Annually, the ICA provides support for specialist symposia which provide opportunities for those working in particular areas of acoustics to meet. The guidelines for selection require some international involvement and there is priority for developing countries. The meetings supported for 2013 include:

- Acoustics 2013 New Delhi (Indo-French Conference), November 10 - 15 (New Delhi, India)
- International Symposium on Room Acoustics (ISRA), June 9-11 (Toronto, Canada)
- European Symp Environmental Acoustics and Noise Mapping, October 1 (Valladolid, Spain)
- Winter School on Therapeutic Ultrasound, March 17-22 (Les Houches, France)

5. International Year of Sound The ICA is undertaking the initial steps towards an International Year of Sound in 2019 and looks forward to the support from IUPAP.

6. IUPAP Conferences At the current time from the IUPAP site the *only* meetings that are listed under each organization are those which have been approved by IUPAP. So the implication is that there is no activity for the ICA which is clearly not the case. We again request that IUPAP implements that on the "Meetings" webpage for each commission/affiliate commission additional text saying that those meetings listed below are only those that have been directly supported/endorsed by IUPAP and give the commission/affiliate commission web page for details of other activities.

Marion Burgess
ICA Secretary General 2008-2013
ICA President 2013-2016

AC.4.

International Union of Pure and Applied Physics (IUPAP)
Affiliated Commission AC-4: Medical Physics
[International Commission on Medical Physics Committee, IComMP]

Fridtjof Nüsslin, Chair

Report on Activities from Sept-2012 to Oct-2013

Background

The International Organization for Medical Physics (IOMP) represents over 18,000 medical physicists worldwide and has 83 national member organizations. The mission of IOMP is to advance medical physics practice worldwide by disseminating scientific and technical information, fostering the educational and professional development of medical physics and promoting the highest quality medical services for patients.

Medical Physics is a branch of Applied Physics that applies scientific principles, methods and techniques in practice and research for the prevention, diagnosis and treatment of human diseases with the specific goal of improving human health and well-being. The profession Medical Physicist has been recognized by the International Labor Organization (ILO) in 2010 as a professional group listed in the ILO classification system ISCO-08 under '*Physicists and Astronomers*'. To strengthen Medical Physics science within IOMP and to link IOMP to IUPAP the International Commission on Medical Physics (IComMP) has been established which has been approved as IUPAP Affiliated Commission AC-4.

Membership of AC-4

IOMP Officers:

Kin Yin Cheung (President IOMP)
Slavik Tabakov (Vice-President)
Fridtjof Nüsslin (Past-President IOMP, IComMP/AC-4 Chair)
Madan Rehani (Secretary General IOMP)
Anchali Krisanachinda (Treasurer)

IOMP Committee Chairs

William Hendee (Science, SC)
John Damilakis (Education & Training, ETC)
Raymond Wu (Professional, PRC)
Tae Suk Suh (Publication, PC)

Associate Members from IUPAP Commissions:

Kenichi Yoshikawa (Chair C6, Biological Physics)
Paulo Murilo de Castro Oliveira (C13, Physics for Development)
Robert Lambourne (C14, Physics Education)

3 external scientists co-opted by IComMP:

to be elected at the AC 4 meeting 1st Sept 2013 in Brighton / UK

Activities

1. Mission and Objectives revised:

Objectives of AC 4:

- (1) to promote medical physics in its scientific and professional aspects in the physics community by interaction with the IUPAP commissions,
- (2) to specifically link to the C6 commission "Biological Physics" ,
- (3) to apply for support of the ICMP congress series,
- (4) to participate in the IUPAP Young Scientist Award program

Mission of AC 4:

The mission of IOMP is to advance medical physics practice worldwide by disseminating scientific and technical information, fostering the educational and professional development of medical physicists, and promoting the highest quality medical services for patients.

2. International Conference on Medical Physics (ICMP13):

This year the IOMP is celebrating its 50th anniversary. Therefore the ICMP is to be held close to its birth place Harrogate in the UK, from 1st – 4th Sept 2013 in Brighton (<http://www.icmp2013.org/>). The theme of the conference is NEW HORIZONS – GLOBAL AND SCIENTIFIC. The program covers the whole spectrum of subjects medical physicists and engineers are engaged in, it is a showcase of the innovative power of the medical physics community.

3. AC 4 meeting in Brighton:

The opportunity of the ICMP13 which is attended by a majority of commission members is used to hold a business meeting.

4. Joint Symposium AC 4 & C 6 in Brighton:

Incorporated in the program of the ICMP13 is a symposium “From Molecules to Life – Approaches of Biological Physics and Medical Physics in Cancer” which is jointly organized by the AC-4 (F.Nüsslin) and the C6 (Biological Physics, Chair Kenichi Yoshikawa). The objectives of the symposium are to understand the cross linking of biological & medical physics concepts applied in the diagnosis and treatment of cancer, and to explore perspectives of joint research activities in biological physics and medical physics.

5. Young Scientists Award 2012 & 2013

The winners of the IUPAP Young Scientist Award have been selected according to the rules of the IOMP Awards & Honors Committee (Chair Tomas Kron). The awardees are: Magdalena Stoeva (2012) and Ferdinand Schweser (2013). The citation for the certificate reads:

Dr. Magdalena Stoeva, Associate Professor in the Medical University, Plovdiv, Bulgaria, is awarded the IUPAP Young Scientist Medal for her significant contributions to international Medical Physics journals and Medical Physics e-Learning.

Dr. Ferdinand Schweser, Research Associate in the Medical Physics Group at the Friedrich Schiller University, Jena, Germany, is awarded the IUPAP Young Scientist Medal for his significant contributions to medical physics research into Magnetic Resonance Imaging.

6. International Day of Medical Physics:

With the intention to promote the medical physics in the public the *International Day of Medical Physics* has been created as an annual event which in remembrance of the birthday of Marie Sklodowska Curie (7.11.1867) is to be celebrated every year at the 7th November. The national and regional organizations of the IOMP are challenged to organize events, lectures, symposia mainly aiming to attract the science community at large and the public.

7. Medical Physics International – New web IOMP Journal:

IOMP is very pleased to announce release of the First issue of *Medical Physics International*, the official Journal of IOMP. This journal is web based and readers are referred to http://mpijournal.org/content_currentissue.aspx

Munich August 16, 2013

Fridtjof Nüsslin
Chair AC-4
Past-President IOMP