

**International Union of Pure and Applied Physics 28th General Assembly,
Nanyang Technological University (NTU), Singapore, 05 - 07 November 2014**

1. Welcome

- 1.1. IUPAP President Cecilia Jarlskog welcomed everyone to the General Assembly at the Nanyang Technological University (NTU) in Singapore. She commended the Institute of Advanced Studies of NTU for jointly hosting the C&CC meeting and the 28th IUPAP General Assembly.
- 1.2. Cecilia introduced Professor Bertil Andersson, the President of the NTU, who officially welcomed the 28th IUPAP GA delegates to the NTU campus in the tropical climate of Singapore. During his welcome address, Professor Andersson presented a Global Perspective in a detailed historic account of the Development of Science in Singapore, with a special focus on role played by his institution, the NTU.

2. Adoption of Agenda and Approval of Minutes

The draft Agenda of the 28th General Assembly was adopted without alteration, and the minutes of the 2011 General Assembly were adopted without changes.

Note that the documents considered by the General Assembly are available at <https://lu.app.box.com/s/wg69gbjg6rhri9jb12q0>

3. Presidential address

- 3.1. Cecilia Jarlskog gave a brief history of the IUPAP, tracing it back to its launch in 1922, and subsequently the first General Assembly which was held in 1925. The first General Assembly of the IUPAP noted the increase in the number of physics publications in subsequent years.
- 3.2. Cecilia remarked that the nature of the IUPAP General Assemblies of the past was somewhat different in that people had presented scientific papers. However, such tradition has not been abandoned completely in that the agenda items of the modern day IUPAP General Assembly still include a couple of scientific talks.
- 3.3. The president reported that since the last General Assembly held in London in November 2011, a total of four C&CC meetings had been held; with two meetings held in 2012, one in February 2012 in Cape Town, South Africa, and the other in October 2012 in Rio de Janeiro, Brazil. Cecilia thanked Rudzani Nmutudi and Marcia Barbosa who were the respective hosts of the Cape Town and the Rio C&CC meetings of 2012. The third C&CC meeting was held at CERN in Switzerland in October 2013, and the fourth was in Singapore on the two days before this General Assembly.
- 3.4. Cecilia informed the General Assembly that following the February 2012 C&CC meeting in Cape Town, the then IUPAP Secretary General, Robert Kirby Harris had to step down on account of ill-health. Subsequently Stuart Palmer, also from the IOP in London, was appointed to succeed Bob in the position of Secretary General of IUPAP.
- 3.5. In her address, President Jarlskog also informed the General Assembly of the imminent move of the IUPAP secretariat and administrative office from the Institute of Physics (IOP) in London to the Institute of Advanced Studies at the NTU in Singapore. She remarked that she viewed the move as being in the broader interest of IUPAP, citing "very dynamic

forces” that are at play in Singapore as something that portend well for the future growth of physics.

- 3.6. Cecilia paid a special tribute to the late Alan Astbury who served as the President of the IUPAP during the 2005 – 2008 term. An accomplished physicist who served his presidential term with distinction, Astbury passed away in July 2013, after serving the IUPAP for an uninterrupted period of nine years. Amongst some of his finest accomplishments in the service of IUPAP, Astbury managed during his presidential term to recruit a total of eleven countries to join IUPAP, with Singapore as one of his recruits. He also worked very hard to introduce the IUPAP Young Scientist Prize (YSP) Award, of which no less than 110 prizes conferred to young Physicists across virtually all IUPAP commissions. Cecilia concluded her tribute to Alan by stressing that she thought Alan also dedicated a lot of his efforts to address gender issues within the Physics community. She requested the General Assembly to observe a moment of silence as a tribute to Alan Astbury.
- 3.7. The president concluded her opening address with an account of how the IUPAP offices had always moved since its formation in 1922 in Paris where the offices were based for 40 years, with the US and the UK as the two recent hosts. Cecilia invited Professors Phua Kok-Khoo and Kwek Leong Chuan of the Institute of Advanced Studies at NTU to give a brief introduction of the Institute for Advanced Studies of NTU, and formal welcome of the C&CC delegates.

4. Secretary General’s Report

- 4.1. The Secretary General, Stuart Palmer, gave a report summarising activities since 2012 when he took over from his predecessor Robert Kirby-Harris. Palmer thanked the IUPAP Associate Secretary General Rudzani Nemutudi for helping to make his job easier.
- 4.2. Commenting on the imminent move of the IUPAP administrative offices from the UK to Singapore, Palmer emphasised that the IOP was looking forward to co-operating and working hard with the NTU colleagues to facilitate the transition. He paid a special tribute to the IOP team, led by Ms Williamina Lazaro, for the time they dedicated in the past six years as administrative hosts of the IUPAP. Palmer assured the Assembly that IOP is committed to safeguarding the IUPAP accounts for the duration of their time in the UK.

5. IUPAP Financial Report

- 5.1. Bruce McKellar presented to the General Assembly the IUPAP financial report in three parts; with the first part reflecting both the budget forecasts and the actuals for the financial period 2012 – 2014. The 2014 “actuals” were projected only as estimates, with the net return to the reserve fund expected to be in the order of €160 000. The reserve fund was €812 284 as at 1 January 2012, and €896 749 as at end of 2013. The reserve fund is expected to be €964 000 by 1 January 2015.
- 5.2. The second part of the financials presented the proposed budget for 2015 – 2017; based on the assumption of a 3% per annum increase in membership dues. Accordingly, the projected income was forecast at €444 517 for 2015, €457 853 for 2016, and €471 859 for 2017. The presented budget forecast restored the conference support back to the level of 2012.
- 5.3. The third part of the financial report was a recommendation to the General Assembly that membership dues for 2015 to 2017 be increased based on an annual 3% inflationary related rate. The recommended dues were €2 082 for 2015, €2144 for 2016, and € 2208 for 2017.

6. IUPAP Conference Support

- 6.1. Rudzani Nemetudi presented a report summarising a list of conferences supported by IUPAP for the period 2011 – 2014 with the attendant breakdown of funding levels per conference category across commissions. He emphasised the move by council in its budgeting forecast to work towards restoring the conference support allocation back to the 2012 levels.

7. Presentation of Slates for Commissions and Executive Council

- 7.1. IUPAP president elect Bruce McKellar presented to the General Assembly the slate of the Executive Council nominees together with the individual citations for President designate (Kennedy Reed, USA), Secretary General (Ko-Khoo Phua, Singapore), Associate Secretary General (Rudzani Nemetudi, South Africa), and five Vice Presidents at Large (VPALs) Francis Allotey (Ghana), Wenlong Zhan (China Beijing), Vitaly Kveder (Russia) Alex Hansen (Norway), and Monica Pepe-Altarelli (Switzerland).
- 7.2. Bruce McKellar also presented the slate for IUPAP Commission chairs and Commission membership; after which presentation he invited comments from the delegates.
- 7.3. A delegate from Australia remarked that there seemed to be a mechanism in place to address the geographic distribution when populating the slates, but there did not seem to be a well-defined one to address the issue of gender disparity. Bruce acknowledged that the issue of gender representation remained a challenge that council continues to address as evidenced by the introduction within council of the position of gender champion. It was agreed that the IUPAP Working Group on Women in Physics would have to actively work in consultation with council to offer ideas on how to find women physicists who are prepared to serve on commissions and other IUPAP positions. It was noted that 51/252 commissioners are women, and at 20% that representation needs to be improved, especially as there are two commissions with no female commissioners.
- 7.4. A delegate from Austria pointed out that there was a need for all National Liaisons to be encouraged to nominate more candidates than they have shares. Cecilia remarked that this was indeed communicated to all National Liaisons who were advised to forward roughly 1.3 x the number of shares, but some National Liaison Committees still did not respond.
- 7.5. The French and Belgian delegates who wanted to know why some of their nominees were not on the slate were advised that these were not the only two cases where the nominees could not make it to the top 14; but re-nominations were indeed allowed from the Assembly floor if they were seconded. Bruce stated that he would also consider proposals for variation of the slates if they were supported by all of the representatives of the members whose nominees were involved in the variation and by the Chair of the Commission involved.
- 7.6. An error was pointed out on C19 slate where the gender of nominee number 6 from India was wrongly stated.

8. Questions to a Panel of Outgoing IUPAP Commission Chairs

- 8.1. Cecilia invited all Chairs of IUPAP Commissions and Affiliated Commissions for a brief open discussion to share their experiences and ideas with the delegates of the General Assembly.

- 8.2. The discussions with the commission chairs covered a wide ranging spectrum of IUPAP-relevant and related issues, including name changes for Commissions 4 and 17, as well as open access which was specifically highlighted as an important area for IUPAP to focus attention on because of the potential threat of some forms of open access to small physics departments since there are large amounts of monies involved. It was agreed that in the end the position IUPAP takes on open access should be in the broader interest of the scientific community, and in line with the principle of promoting equitable access to scientific information for the benefit of society at large.
 - 8.3. During the discussion, Bill Phillips, representing Commission 2, spoke about the need for Physicists to better measure the Gravitational Constant G as recommended in the proposed GA resolution for the establishment under the aegis of C2 of a special Working Group on Gravitational Constant G.
 - 8.4. Discussion on the IUPAP Young Scientist Prize (YSP) highlighted that most commissions were implementing the YSP Award despite a few challenges regarding its publicity and the attendant difficulty in attracting more high quality applicants. Commissions that have been relatively successful in implementing the YSP were encouraged to share ideas with those commissions that are still encountering difficulties.
 - 8.5. The representative of IUPAP-affiliated International Commission on Optics (AC1), Duncan Moore, shared with the General Assembly the planned AC1 activities to celebrate the 2015 International Year of Light which was endorsed (at its proposal phase) by IUPAP through a special resolution at the 2011 General Assembly in London. Moore further referred delegates to the "Light2015" weblink for details of celebratory activities planned by ICO throughout the world.
 - 8.6. Marion Burgess, the president of the IUPAP-affiliated International Commission on Acoustics (ICA) informed the General Assembly that following on the success of the ICO in getting the UNESCO to endorse the "2015 International Year of Light" proposal, the ICA had since initiated a campaign for the International Year of Sound.
- 9. Questions to and Discussion with a panel of Chairs of Working Groups and Inter-Union Representatives**
- 9.1. **ApPIC (WG10):** The chair of Astroparticle Physics International Committee Michel Spiro gave a brief update of the activities of the Working Group (10). In line with its mandate from the 2011 General Assembly, ApPIC is liaising extensively with national and international organs to assess and promote global priorities for the field of Astroparticle Physics. The membership of the Working Group has now been formalized into a 14 member committee chaired by Michel Spiro of France with Karl-Heinz Kampert, the Chair of C4 as the ex-officio member.
 - 9.2. **Working Group on Energy (WG12):**
 - 9.2.1. The Working Group on Energy is gradually establishing communication networks and collaborative frameworks with committees such as SCOPE (Scientific Committee on Problems of Environment) which counts IUPAP as one of its union members.
 - 9.2.2. Two committee meetings have been held; one in Tokyo (2013), and the other in Oslo in 2014.
 - 9.2.3. Printable briefs on selected energy topics are being prepared with the Canadian Science pages used as a template model. Examples of IUPAP Energy plans were shown together with publication plans.

9.2.4. The IUPAP-SCOPE Energy pages are planned to be published in batches of 4.

9.2.5. Delegates commented on the need for the Energy Working Group to exercise political neutrality when dealing with global Energy issues and the different and peculiar challenges they pose in the various regions of the world.

9.2.6. The prolongation of the Working Group on Energy was agreed by the General Assembly.

9.3. Women in Physics Working Group (WG5)

9.3.1. The WIP-WG5 organized a successful 5th IUPAP International Conference on Women in Physics held in Waterloo, Canada, on 5-8 August 2014.

9.3.2. Amongst the list of recommendations and resolutions that came out of the Waterloo conference was the urgent need for National Liaisons to facilitate the sharing of insights and successful strategies for inclusion and advancement of women in Physics, with a clear focus on the necessity to adapt the shared international material (in order) to be cognizance of, and where necessary conform with, local circumstances.

9.3.3. The WIP Waterloo conference reiterated the need to promote gender equity at all levels of practice in the field of physics. The conference also called for continuation of regular updates of the Global Survey of Physicists last presented in 2011 at the Stellenbosch WIP conference.

9.3.4. The working group on Women in Physics submitted that the annual International Women in Physics Day be endorsed.

10. Public Lectures by Professor Antonio Helio de Castro Neto and William Phillips

10.1. A series of special public lectures by eminent scientists were featured as part of the main program of the 28th IUPAP General Assembly. Two such lectures were delivered at the end of the first day of the General Assembly.

10.2. The first of the public lectures was presented by Professor Antonio Castro Neto of the National University of Singapore under the title "From Graphene to Phosphorene: the 2D zoo". Professor Castro Neto extended at the end of his presentation an invitation to delegates to visit the Graphene Research Center the following day.

10.3. The second public lecture was presented by the 1997 Physics Nobel Laureate and member of C2, Professor William D. Phillips from the University of Maryland and National Institute of Standards and Technology (NIST) under the title "Time, Einstein and the coolest stuff in the universe". Professor Phillips explained the concept of time dilation and how caesium atoms can be manipulated to present the best clocks. With his ever entertaining presentation style "Bill's" fascinating lecture was well received and most applauded by learners and the general members of the public who attended it in numbers.

Day 2: 6 November 2014

- 11. IUPAP Shares:** The Second Day of the General Assembly began with President Cecilia Jarlskog requesting a delegate from South Korea to speak briefly to the General Assembly regarding plans by South Korea to increase their shares. The South Korean delegate, quoting the president of the Physical Society of South Korea, confirmed to the General Assembly that South Korea requested the increase of its IUPAP share allocation from 7 to 10. In the intervening brief discussion that followed, the Assembly was advised that Mexico wished to its shares from 1 to 2, and China Beijing wished to increase its shares from 12 to 15. These requests greeted with acclamation and were implemented into the resolutions presented to the General Assembly.

12. Introduction of the Proposed Resolutions of the 28th IUPAP General Assembly

A total of 14 proposed resolutions were introduced to the General Assembly together with attendant recommendations by the IUPAP Executive Council. The papers presented to the General Assembly are available at <https://lu.app.box.com/s/wg69gbjg6rhri9jb12q0>

Vigorous discussion followed on many of the resolutions. Except where comments are made against a resolution, that resolution was to be brought forward unchanged for voting on 7 Nov 2014

12.1 Resolution 1. IUPAP Dues for 2015 to 2017

12.2 Resolution 2: Increases in Shares

12.3 Resolution 3. Commission on Policy and Finance

12.4 Resolution 4. Preliminary Endorsement of Conferences

12.5 Resolution 5. Extension of the Mandate of Working Groups

12.6 Resolution 7. Commission C17 Laser Physics and Photonics

12.7 Resolution 8. Advisory Working Group on Soft Matter

12.8 Resolution 9. IUPAP Prize for Outstanding Contributions to the Improvement of Physics Research and/or Education in one or more Developing Countries

12.9 Resolution 10. Open Data

The original recommendation from Working Group 2 was discussed and the resolution to be brought forward is to refer the matter back to the Working Group to develop a mechanism through which the IUPAP could assist the Physics Community in the ongoing debate about open data.

12.10 Resolution 11. Working Group 12 on Energy

12.11 Resolution 12. Advisory Working Group on the Newtonian Constant of Gravitation

12.12 Resolution 13. Advisory Working Group on Accelerator Science

12.13 Resolution 14. Working Group 5 on Women in Physics

The original resolutions proposed were discussed and the working group was asked to bring forward modified resolutions for consideration tomorrow

12.14 Resolution 15 to Restore the name of Commission 4 back to its original title of Commission on Cosmic Rays

After vigorous discussion of the proposal by the US National Liaison Committee to restore the title of C4 back to Commission on Cosmic Rays it was decided to put the resolution to a vote immediately and the proposed resolution was not carried

13. Re-Nominations to Slate for Commissions and Executive Council

- 13.1. Bruce McKellar reported that, following negotiations between the French and Brazilian delegates, and the Chair of C4, the Brazilian physicist on the slate for C4 was replaced by a French physicist.
- 13.2. Following discussions with Bruce McKellar, Ghana withdrew its initial proposal to replace one C13 nominee with another member (also from Ghana).
- 13.3 The French delegation re-nominated their candidate to the slate for C20. This renomination was supported by other delegations and on 7 Nov 2014 there will be a ballot for the members of C20.
- 13.4 The Italian delegation re-nominated their candidates for C5 and C15 but these re-nominations were not supported by any other delegation, and no further ballot will be held for those Commissions

14. Reports on other Organizations (ICSU, UNESCO)

14.1 ICSU Report

- 14.1.1 Kennedy Reed, who served as IUPAP Union representative on ICSU for the period 2012 – 2014, gave a report on ICSU activities for the period 2011 -2014. Reed highlighted the active role ICSU has played in the Rio+20 Conference on Sustainable Development organized under the aegis of the United Nations and held in Rio de Janeiro, Brazil on 20 – 22 June 2012. ICSU continues to form an integral part of follow-up activities which include developing a set of Sustainable Development Goals which are commensurate with the core objectives of the Future Earth Program.
 - 14.1.2 Reed also reported on the outcome of the ICSU independent review conducted in 2013 one of whose major highlights was the recommendation for ICSU to work towards regaining its position as the organization that speaks for the international scientific community. The report of the review also highlighted the need for ICSU to work out formal collaborative agreements with established organizations for global science, including TWAS, IAP, and IAC.
 - 14.1.3 ICSU also hosted in 2013 in Paris a meeting of its affiliate Union members at which a range of pertinent issues were discussed, including the need to explore or strengthen areas of interdisciplinary collaboration and fostering linkages between Unions and ICSU Regional Offices. IUPAP was represented at the Paris ICSU-Unions meeting by Bruce McKellar and Stuart Palmer.
- 14.2 The representative of UNESCO had hoped to attend as an observer, but was unable to do so. In her absence, there was no discussion of the relations between UNESCO and IUPAP**

15. Laboratory Visits

After lunch delegates visited physics laboratories in Singapore

16. The General Assembly banquet was held on the evening of 6 Nov 2014

Day 3: 7 November 2014**17. Re-nominations to Slate for Commissions and Executive Council**

- 17.1 The proposal by France to re-nominate a candidate to C20 had been seconded and was brought forward to be resolved by a vote. A total of 104 votes were cast, with 64 in favour of retaining the C20 slate as originally proposed by council. The slate for C20 proposed by Council was retained.
- 17.2 Because of the vigorous discussion of the balance between shares and positions on Commissions it was agreed that the number of positions on Commissions of members, as determined by the 2014 General Assembly, be recorded in the minutes. That distribution of the 251 positions determined by the GA is given in the table. (One position on C2 is ex officio reserved for the director of the Bureau International des Poids et Mesures (BIPM) and is not determined by the GA. The number of Commissioners determined by the GA is $18 \times 14 - 1 = 251$)

MEMBER	SHARES	TOTAL COMMISSIONERS	FEMALE COMMISSIONERS
Algeria	1	1	1
Argentina	1	3	2
Australia	4	6	2
Austria	2	2	1
Belgium	4	4	
Brazil	8	9	3
Cameroon	1	1	
Canada	8	11	2
Chile	1		
China: Beijing	12	16	
China: Taipei	5	5	2
Colombia	1	1	
Costa Rica	1		
Croatia	1	1	
Cuba	1		
Cyprus	1	1	1
Czech Republic	4	6	1
Denmark	3	3	
Egypt	1		
Estonia	1	1	
Ethiopia	1		
Finland	3	3	
France	15	15	5

MEMBER	SHARES	TOTAL COMMISSIONERS	FEMALE COMMISSIONERS
Ghana	1	1	
Greece	1		
Hungary	3	3	
India	8	12	3
Iran	1	1	
Ireland	1	1	1
Israel	2	2	1
Italy	12	9	3
Japan	15	16	1
Kenya	1		
Korea	7	11	
Latvia	1		
Lithuania	1	1	1
Mexico	1	2	
Netherlands	4	3	
New Zealand	1	1	
Norway	3	2	
Peru	1		
Philippines	1	1	
Poland	4	3	
Portugal	1		
Romania	1		
Russia	18	17	1
Saudi Arabia	1		
Senegal	1		
Singapore	1		
Slovak Republic	1	1	
Slovenia	1	1	
South Africa	3	5	1
Spain	8	7	2
Sweden	8	6	1
Switzerland	4	5	2
Tunisia	1	1	1
UK	15	17	4
USA	18	18	8
TOTALS	247	251	51

18. Election of Commission Members and Commission Officers

- 18.1 Bruce McKellar moved that the updated slates for the Commission Officers be accepted. All Commission officers' slates were unanimously accepted by the General Assembly.
- 18.2 Bruce McKellar moved that the slate for the executive council members be accepted. The proposed new executive council members slate was unanimously accepted by the General Assembly.

19. Resolutions presented on 6 Nov and modified as agreed were brought forward to be decided:

19.1 Resolution 1. IUPAP Dues for 2015 to 2017

On the recommendation of Commission C1: Commission on Finance, and in agreement with the Resolutions of the 27th General Assembly of IUPAP, the 28th General Assembly of IUPAP resolved that dues for 2015 to 2017 be adjusted based on the G20 OECD annual inflation rate (for 2013) of 3% which will set the dues as follows:

for 2015: 2082 EUR
 for 2016: 2144 EUR
 for 2017: 2208 EUR

19.2. Resolution 2: Increases in Shares

On the recommendation of the Executive Council and at the request of the respective members of IUPAP, the 28th General Assembly resolved to increase the shares of the following members

Member	Present Shares	New Shares
The Chinese Physical Society, Beijing	12	15
South Korea	7	10
Mexico	1	2

19.3. Resolution 3. Commission on Policy and Finance

On the recommendation of the Executive Council the 28th General Assembly of IUPAP resolved

- A. to rename Commission C1: Commission on Finance as C1: Commission on Policy and Finance
- B. to task C1 with advising the Executive Council and the General Assembly on issues related to policy and finance.
- C. to mandate the Commission on Policy and Finance concerning policy
- a. to follow actively ongoing work in IUPAP's Commissions and Working Groups.
 - b. to identify the need for changes or additions to goals and policy of the Union and to advise the Executive Council and the General Assembly on actions to be taken.
 - c. to advise on issues that might arise in the interactions of IUPAP with other entities
 - d. such as UNESCO and the International Council of Science

- d. to take part in planning of the meetings of the IUPAP Council and General Assembly.
 - e. to advise the Administration of the Union on the policies adopted by the Executive Council and the General Assembly.
- D. to mandate the Commission on Policy and Finance concerning finance
- a. to make recommendations to the Executive Council and the General Assembly on policy concerning dues, contracts and other sources of income.
 - b. to recommend action to be taken in the case of arrears of dues.
 - c. to recommend to the General Assembly policy on expenditure so as to fulfil the aims of the Union.
 - d. to examine the auditors reports and make recommendations to the General Assembly on the choice of the future external audit group.
- E. That the members of C1 shall be the following officers of IUPAP
- _ President (Chair)
 - _ Past President
 - _ President Designate
 - _ Secretary-General
 - _ Associate Secretary-General

19.4. **Resolution 4. Preliminary Endorsement of Conferences**

On the recommendation of the Executive Council the 28th General Assembly of IUPAP Resolves

- A. to authorise the Executive Council to establish a procedure for granting IUPAP endorsement to conferences which are recommended by Commissions.
- B. to authorise the Executive Council to grant permission to endorse conferences to use the IUPAP logo on their website.
- C. to require that eventual consideration of a conference for IUPAP support, be independent of whether or not it has been endorsed.

19.5. **Resolution 5. Extension of the Mandate of Working Groups**

On the recommendation of the Executive Council the 28th General Assembly of IUPAP Resolves

- A. that the mandate for all working groups is extended to the 29th General Assembly
- B. that the Executive Council be delegated the authority to renew the membership of any working group on the advice of the Chair (of the working group).

19.6. **Resolution 6. IUPAP Associated Organisations**

On the recommendation of Commission C13 the 28th General Assembly of IUPAP resolves

- A. that the Executive Council is delegated to revise the Statutes of the Union to introduce a new category of members, Associated Organisations to improve contacts with related organisations.

19.7. Resolution 7. Commission C17 Laser Physics and Photonics

On the recommendation of the Executive Council the 28th General Assembly of IUPAP resolves

- A. that the name of Commission C17 be changed from Quantum Electronics to Laser Physics and Photonics.

19.8. Resolution 8. Advisory Working Group on Soft Matter

On the recommendation of the Executive Council the 28th General Assembly of IUPAP resolves

- A. to establish an Advisory Working Group on Soft Matter, to be convened by a recognised expert on Soft Matter Physics,
- B. that the representatives of IUPAP Commissions C3, C6, C8, C10, C20 and a representative of IUPAP Affiliated Commission AC4 should constitute the nucleus of the Advisory Working Group on Soft Matter,
- C. to charge the Advisory Working Group on Soft Matter with the task of
 - a. recommending whether the field of Soft Matter Physics should be represented by a new Working Group or a new Commission, and
 - b. defining the mandate for this new body,
- D. to delegate to the Executive Council the authority to implement the recommendations of the Advisory Working Group on Soft Matter.

19.9. Resolution 9. IUPAP Prize for Outstanding Contributions to the Improvement of Physics Research and/or Education in one or more Developing Countries

On the recommendation of the Executive Council the 28th General Assembly of IUPAP resolves

- A. to task Commission C13 and Commission C14 to develop a proposal for an IUPAP Prize for Outstanding Contributions to the Improvement of Physics Research and/or Education in one or more Developing Countries, and
- B. to delegate to the Executive Council the authority to establish an IUPAP Prize for Outstanding Contributions to the Improvement of Physics Research and/or Education in one or more Developing Countries, with a target of presenting the first Prize at the 29th General Assembly.

19.10. Resolution 10. Open Data

On the recommendation of the Executive Council the 28th General Assembly of IUPAP resolves

- A. that the Working Group on Communication in Physics and the Executive Council are charged to develop a mechanism through which the IUPAP could assist the Physics Community in the ongoing debate about open data.

19.11. Resolution 11. Working Group 12 on Energy

On the recommendation of the Executive Council the 28th General Assembly of IUPAP resolves

- A. to mandate the Working Group on Energy to publicise the existence of Briefs on Energy, inclusive of disclaimers when deemed necessary, and to encourage Physical Societies to do the same.

19.12. Resolution 12. Advisory Working Group on the Newtonian Constant of Gravitation

On the recommendation of the Executive Council the 28th General Assembly of IUPAP resolves

- A. to mandate the Executive Council, in consultation with Commission C2, to establish an Advisory Working Group on the Newtonian Constant of Gravitation,
- B. to charge the Advisory Working Group On the Newtonian Constant of Gravitation with
 - a. fostering international scientific dialogue and cooperation in the physics of measurements of Gravitational Constant G ,
 - b. formulating a mission statement and mandate for a Working Group on the Newtonian Constant of Gravitation
 - c. recommending to the Executive Council the initial membership of the Working Group on the Newtonian Constant of Gravitation
- C. to delegate to the Executive Council the authority to establish the Working Group on the Newtonian Constant of Gravitation

19.13. Resolution 13. Advisory Working Group on Accelerator Science

Following the recommendation of the United States Liaison Committee of IUPAP the 28th General Assembly of IUPAP resolves

- A. to establish an Advisory Working Group on Accelerator Science that will advise Council on the mechanism for expanding the coverage of Accelerator Science by IUPAP
- B. to appoint Roy Rubinstein as the convenor of the Advisory Working Group on Accelerator Science,
- C. to ask Commissions C10, C11, C12, C16, and Affiliated Commission AC4, together with working Groups WG1 (ICFA), WG7 (ICUIL) and WG9 (ICNP) to nominate experts to constitute the membership of the Advisory Working Group on Accelerator Science.
- D. to charge the Advisory Working Group on Accelerator Science with
 - a. advising the Executive Council on the possible establishment of a new working group or a IUPAP Commission on Accelerator Science,
 - b. formulating the mission statement and mandate of the new working group or a IUPAP Commission on Accelerator Science,
 - c. recommending to the Executive Council the initial membership of the new working group or a IUPAP Commission on Accelerator Science,

- E. to delegate to the Executive Council the authority to establish a new working group or a IUPAP Commission on Accelerator Science,

19.14. Resolution 14. Working Group 5 on Women in Physics

On the recommendation of IUPAP Working Group 5 on Women in Physics the 28th General Assembly of IUPAP resolves

- A. to charge the Working Group to organize the 6th IUPAP International Conference on Women in Physics,
 - B. to endorse an annual International Women in Physics Day, and
 - C. to support and encourage Physical Societies, through their National Liaisons, to facilitate the sharing of insights and successful strategies for inclusion and advancement of women in Physics.
- 19.15. It was confirmed that the resolution proposed by the US Liaison Committee concerning the name of C4 had been determined on 6 Nov and was not carried.

20. Introduction of President Designate

- 20.1. Cecilia Jarlskog introduced the new IUPAP president designate, Kennedy Reed from the Physics Division of the Lawrence Livermore National Laboratory, California, USA. Cecilia highlighted in her introduction the important role Reed had played in promoting Physics in Developing countries when he served as the chair of IUPAP Commission 13 on Physics for Development. Reed had served in various capacities under C13 for a total of 9 years, with the first three served as an ordinary member of C13. In turn, Reed indicated that he looked forward to rejuvenated activity within IUPAP, and was fully cognisant of the potential challenges ahead in the light of the move of IUPAP administrative offices from London to Singapore.

21. Some words from the New President

- 21.1. Cecilia Jarlskog introduced the new IUPAP president, Bruce McKellar from the School of Physics, University of Melbourne, Australia.
- 21.2. McKellar spoke of how he viewed the IUPAP as an organization of volunteers, which is how he strongly felt it should remain. In his acceptance remarks, McKellar also gave a brief break-down of the history of the IUPAP starting from 1922. He welcomed with sincere gratitude the expressions of interest by several IUPAP member states to increase the number of their IUPAP shares. This, he believed, was indicative that there are nations that acknowledge the value of their membership of IUPAP and the critical role that our Union is playing as we pursue our mission to “stimulate and facilitate international cooperation in physics and the worldwide development of science”. McKellar challenged delegates not to shy away from asking probing questions, including whether or not we have the right set of commissions, or if we have the right set of statues for our Union. Even more provocatively a question which begs to be asked, he continued, what will be the impact in the physics community worldwide if IUPAP ceased to exist?
- 21.3. McKellar highlighted the urgency for the Council to begin preparing for the 2022 celebration of the IUPAP centenary. The decision to establish the IUPAP centenary celebration committee, he explained, had been delayed until the occasion of the 28th General Assembly on account that it was not possible within the IUPAP membership structure to have someone within council who was to stay in the council until 2022 to

ensure consistent implementation of centenary celebration plans. But with the 28th General Assembly now concluded, and the Council membership confirmed, we now have such a council member in the person of Kennedy Reed, the President Designate who should remain within council until 2023.

21.4. Bruce concluded his remarks by thanking all the delegates together with the entire membership of IUPAP for entrusting him with the responsibility to lead the IUPAP in the next three years.

22. Final Remarks:

The outgoing president, Cecilia Jarlskog thanked all commission chairs and executive council officers for all the assistance she received during her tenure as IUPAP president. She specifically thanked Stuart Palmer and Williamina Lazaro for the administrative support they provided from the IOP offices in London, and acknowledged the wonderful job that Rudzani Nematudi had done in co-ordinating conferences from Cape Town. She wished the newly elected officers well, and looked forward to further contributing in the affairs of IUPAP in her new capacity as IUPAP past-president:

***General Assembly concluded: 7 November 2014 12:05 Singapore time
Minutes Prepared by Rudzani Nematudi (IUPAP Associate Secretary General)***

There were additional public lectures after the closure of the business meeting, which were a part of the General Assembly. These were

Prof Brian Schmidt (Nobel Laureate in Physics, 2011; Australian National University's Mount Stromlo Observatory) – *"The Accelerating Universe"*

Prof Tanya Monro (University of Adelaide) – *"The third photonics revolution: light as a measurement tool"*

Prof Chorng-Haur Sow (National University of Singapore; President, Institute of Physics Singapore) – *"The Professor's Suitcase of Science Wonders: Engaging Learners with Visual Demonstrations"*