

C11 Report to IUPAP Commission Chairs and Executive Committee

April 2015

Juan Fuster, Chair C11 Commission

C11 Officers:

Chair: Juan Fuster (2014) (2011), Spain

Vice-Chair: Heidi Schellman (2014)(2011), USA

Secretary: Soo-Bong Kim (2014)(2011), Korea

C11 Members:

Martin Schnabl (2014) Czech Republic

Zhizhong Xing (2014) China

Amol Dighe I(2014) ndia

Dezső Horváth (2014) Hungary

Mark Lancaster (2011) United Kingdom

Mihoko Nojiri (2014) Japan

Vladimir Kekelidze (2011) Russian Federation

Raymond Volkas (2014) Australia

Sergio Novaes (2011) Brazil

Per Olof Hulth (2014) Sweden

Florencia Canelli (2014) Switzerland

C11 Associate Members:

Johannes Knapp (C4)

Jean-Michel Poutissou (C12)

Thanu Padmanabhan (C19)

Note: We regret to inform that Professor Per Olof Hulth passed away on March 2015

Activities:

The 37th International Conference on High Energy Physics (ICHEP 2014) (<http://www.ichep2014.es>) was hosted by IFIC in Valencia, Spain July 2-9. For its 37th edition, ICHEP went for the first time to Spain. ICHEP 2014 attracted a total of 967 scientists from 53 countries, with the largest delegation of 193 participants coming from Spain. The women participation was 198. The scientific programme in Valencia consisted of parallel and plenary sessions. In the 15 parallel sessions, 538 experimental and theoretical communications were presented, covering most of the areas in the field. A summary of the results discussed in these sessions was then given in 55 talks in the 42 plenary sessions that took place in the second half of the conference. The scientific programme was completed with the display of more than 200 posters that summarized the work of young researchers. The presence of young scientists was large. The 60th CERN anniversary and Industrial session complemented the programme. A large number of outreach activities was organized during and before the conference with 18 topical seminar and outreach talks. The exposition "Accelerating Science" from CERN

was brought to Valencia and got more than 244.000 visitors at the Arts and Science Museum of Valencia. A total of 52 grants were awarded to young scientists to cover their attendance to the meeting.

The third Technology and Instrumentation conference (TIPP 2014) (<http://www.tipp2014.nl/index.html>) was held in June in Amsterdam. A total of 448 people attended of whom 77 were women, 53 were from the US, 79 from the Netherlands. The scientific programme in Amsterdam consisted of parallel and plenary sessions. There were a total of 229 parallel talks in 5 parallel tracks, 19 plenary talks and 170 posters. It was notice that a significant amount of posters didn't show up (59) due to the fact only oral presentations could be covered from their home Institutes. Better format and more weight to poster presentations should be considered for future conferences. An industry session took place. Several outreach activities and a public lecture completed the dissemination programme. Prices for best oral and posters were awarded.

Neutrino 2014 (<http://neutrino2014.bu.edu/>) was held in Boston in early June. 549 attended of whom 85 were women. 287 of the participants were from outside the US. Of particular note this year was a presentation by IceCube on the first detection of high-energy astrophysical neutrinos, a long sought goal of neutrino telescopes. The RENO experiment announced the first observation of an unanticipated component in the reactor neutrino flux.

The annual meeting of the IUPAP C11 Commission was held on July 5, 2011 at the Conference Center during the ICHEP conference. At this meeting, the commission reviewed recently sponsored conferences, discussed the upcoming conferences seeking sponsorship, reviewed progress on upcoming conferences and selected the location of future conferences. The list of selected upcoming sponsored IUPAP conferences is:

- 2015, International Symposium on Lepton Photon Interactions at High Energies (LP2015) in Ljubjana (Slovenia), August 17-22, 2015;
- 2016, The 38th International Conference on High Energy Physics (ICHEP 2016) in Chicago (USA), August 3-9 2016;
- 2017, International Symposium on Lepton Photon Interactions at High Energies (LP2015) in Guangzhou (China);
- 2017, TIPP 2017 at IHEP Beijing (China);
- 2018, The 38th International Conference on High Energy Physics (ICHEP 2018) in Seoul (Korea).

The C11 Chair Hiroaki Aihara and Vice-Chair Francois Le Diberder finished their term. A unanimous and warm recognition of their service was expressed by the committee. Juan Fuster was nominated as Chair, Heidi Schellman as Vice-Chair and Soo-Bong Kim as Secretary.

The 2014 IUPAP C11 Young Scientist Prizes were awarded at the ICHEP 2014 conference in Valencia to:

- Claude Duhr, IPPP Durham. For his outstanding contributions to elementary particle theory, in particular, to formal developments in quantum field theory and their applications to precision calculations in collider phenomenology.
- Kersten Tackmann, DESY. For her outstanding contributions to experimental high energy physics, in particular, to the discovery of the Higgs Boson via its gamma gamma decay mode with the ATLAS experiment.

The 2016 IUPAP C11 Young Scientist Prizes will be awarded at the ICHEP conference in Chicago. The biennial C11 prizes honor achievement by two young scientists in the fields of experimental and theoretical particle physics. The deadline for nominations for the 2016 prizes will be January 15, 2016.

IUPAP C11 also sponsored the 5th International Particle Accelerator Conference (IPAC) June 15-20 in Dresden, Germany (<http://www.ipac14.org/>) The annual IPAC conference covers accelerator physics and technologies.

Associates:

New associate members from other IUPAP Commissions need to be nominated from the C4, C12 and C19 Commissions. In addition to these traditional members in the C11 Commission other associate members from the ICFA group and the new Accelerator Science group (if finally created) will also be nominated.

New Accelerator Science Group at IUPAP

Over the past year there has been discussion on a proposed IUPAP Commission or Working Group on accelerator science. Juan Fuster was asked by Roy Rubinstein (secretary of ICFA, the International Committee for Future Accelerators) to express the C11 opinion on this topic. Juan Fuster joined the ICFA meeting in Newport News, VA, USA in February 2015 and the C11 members later held a phone meeting to discuss the issue. The C11 commission members expressed a positive view the creation of a new IUPAP Working Group in Accelerator Science.

Complementarity with the existing ICFA Working Group is needed to avoid duplication. The C11 commission foresees the new Group as a bottom-up approach to be managed by the accelerator scientist community whereas ICFA is a more top-down body mainly concerned with the coordination by laboratories of large future experimental facilities. ICFA is mainly focused on the future of Particle Physics whereas the new Group should cover much broader domains of the accelerator science. Such a new group should have strong links to ICFA and C11.