

**Working Group 10 Report**  
**Astroparticle Physics International Committee**  
**Natalie Roe, ApPIC Chair**

**ApPIC mandate**

ApPIC was conceived to review the field of astroparticle physics on a regular basis, to engage in dialogue with and provide scientific advice to the Astroparticle International Forum (APIF), whose members are all members of funding agencies (with the exception of the chair) and to liaise with similar national and international bodies, in particular in road-mapping exercises.

**Dialogue with APIF**

APIF was established in 2011, while ApPIC was formed in 2013. Past ApPIC Chair M. Spiro reported to APIF in May 2014 following the first ApPIC meeting, but the expected connection between ApPIC and APIF had not been realized. APIF has undergone some changes in the past year, with the conclusion of OECD sponsorship period and a change in chair from M. Turner to R. Blandford. SLAC has undertaken the administrative support for APIF to replace the role formerly played by OECD.

The 2017 APIF meeting was held at SLAC National Laboratory in Menlo Park, California. APIF Chair R. Blandford invited ApPIC chair N. Roe to attend, where she gave a brief update on ApPIC mandate and recent activities, and solicited input from APIF on the membership of ApPIC. A useful exchange followed, with expressions of interest on the part of APIF members to continue a dialogue with ApPIC and the inclusion of a report from ApPIC report at future APIF meetings. There was interest in specific topics such as data policies and open source publication, and the complementarity of cosmology and particle physics especially with respect to neutrino physics. These are all topics on which ApPIC has been engaged.

**Consolidation of ApIC progress to date**

ApPIC has held three meetings in May 2014, April 2015 and September 2016. We have formulated messages on the following topics:

- Open data policies and data sharing;
- Multi-messenger high energy astrophysics;
- Complementarity of cosmology with neutrino physics

These topics have been shared with the community in presentations by M. Spiro on behalf of ApPIC at ICRC (July 2015), TAUP (Sept 2015), ICFA panel on neutrinos and the 2<sup>nd</sup> meeting on Large Neutrino Infrastructures (Feb. 2016) and at the 3<sup>rd</sup> meeting on Large Neutrino Infrastructures (June 2016). Feedback from the community has been received and incorporated.

A connection has also been established with ICFA (WG1) and there is an agreement that the chairs of ICFA and ApPIC will be invited to attend one another's meetings in alternate years. This connection has been strengthened in the past year through

participation of ApPIC in the triennial ICFA seminar. This prestigious, invitation-only meeting will be held in Ottawa, Canada in November, 2017. The ApPIC chair, N. Roe, was invited by the ICFA seminar chair, J. Bagger, to organize the Cosmology talks and to attend on behalf of ApPIC.

### **Recent Awards to ApPIC Members**

Christian Spiering was awarded the 2017 O’Cellaigh Medal by the IUPAP Commission on Astroparticle Physics.

Subir Sarkar was awarded the 2017 Homi Bhabha Prize by the IUPAP Commission on Astroparticle Physics.

### **Future ApPIC activities**

The ApPIC membership is due for renewal. M. Spiro has stepped down after serving for 3 years as the founding chair of ApPIC; while N. Roe has been confirmed as the next chair. Six members have retired or resigned due to other duties (R. Blandford, D. Geeseman, V. Rubakov, B. Sadoulet, C. Spiering, M. Spiro). We were all deeply saddened by the untimely death of ApPIC Secretary and esteemed colleague Pierre Binetruy. Consultations with other relevant IUPAP WGs and Commissions will be undertaken to identify suitable candidates. The future activities of ApPIC will be discussed once the membership has been updated and the next meeting in 2018 is organized.

### **Appendix: ApPIC membership**

Chair: Natalie Roe, USA  
Zhen Cao, China  
Eugenio Coccia, Italy  
Kunio Inoue, Japan  
Naba Mondal, India  
Angela Olinto, USA  
Natalie Roe, USA  
Sheila Rowan, GB  
Subir Sarkar, GB/Denmark  
Yoichiro Suzuki, Japan

Karl-Heinz Kampert, Germany, ex-officio as C4 Chair  
Ani Aprahamian, USA, Associate member (C12)