

## **IUPAP C16 Report 2016**

### **Commission Meeting 2016**

A C16 Commission meeting was held during the ICPP (International Congress on Plasma Physics) meeting in Taiwan on June 27, 2016. Four committee members including the chair, vice chair and secretary etc. and one associate member (the organizer of ICPP 2016) were present and discussed the conference application cases to be sponsored by the IUPAP in 2017 along with other issues.

### **IUPAP Young Scientist Prize in Plasma Physics**

The C16 awarded the 2016 Young Scientist Prize in plasma physics to Dr. Sam Vinko (University of Oxford, United Kingdom). The citation reads "In recognition of his seminal contributions in using the world's first hard X-ray free electron laser to create and diagnose solid density plasmas, and for new insights into the electronic structure and collisional dynamics of such systems". The award was given by the Chair of the C16 Commission at the 2016 ICPP meeting. The laureate also gave an invited talk at the meeting.

This year the selection rules were modified in more strict manner with all applications required to include a CV with a complete list of publications marked with citation number, three to five reference letters, three representative papers and the reason for nomination etc. The C16 was very pleased to receive ten very competitive applications with outstanding academic achievements and the winner was selected by the C16 members under the chairmanship of L. N. Hau.

According to the IUPAP only three winners shall be awarded for the Young Scientist Prize by each commission in its three years term. The C16 has awarded two winners in 2015 and one winner in 2016. As a result, it is concluded at the 2016 commission meeting that no selection on the YSP in plasma physics will be held in 2017. It is also concluded that the future selection rules for the YSP in plasma physics shall be decided by the new commission.

### **EPS/IUPAP 2016 Student Poster Prize**

The C16 continues to co-sponsor the EPS-Division of Plasma Physics Student Poster Prize. The 43th EPS-DPP conference on plasma physics was held at Leuven, Belgium during July 4-8, 2016. The student poster prizes (PPCF/EPS/IUPAP prize) are jointly sponsored by the EPS, IUPAP and PPCF

(the international journal of plasma physics and controlled fusion) awarded to Arkaprava Bokshi (York University) for “The self-consistent response of linear micro-instabilities to profile evolution”, Mark Coughlan (QUB) for “Ultra-fast dynamics of crystals irradiated by few-ps proton pulses”, Cristian Sommariva (CEA/IRFM) for “Modeling runaway electron dynamics in realistic fields from 3D nonlinear MHD disruption simulations” and Hannah Willett (York University) for “The role of plasma instabilities in the onset of detachment in the York Linear Plasma Device”. The competition is only open to PhD students and the selection is judged by members of the conference program committee.

### **IUPAP Sponsored Conference - ICPP 2016**

The 18th International Congress on Plasma Physics (ICPP) was held at Kaohsiung City, Taiwan during June 27 - July 1, 2016. The chair of the meeting is Professor Frank Cheng of the National Cheng Kung University. The ICPP is the largest international conference on plasma physics and has traditionally been sponsored by the IUPAP since its first meeting held in Nagoya in 1980. There are 350 participants from 27 countries in the 2016 ICPP meeting with 81 students and 47 female participants. Two special issues have been under planned for publication in the Nuclear Fusion and Plasma Physics and Controlled Fusion journals. It was also decided at the meeting that the 2018 ICPP meeting will be held in Canada.

The ICPP committee and C16 have worked together to arrange an award ceremony for the YSP at the conference dinner event. The organizer acknowledged the sponsorship of IUPAP openly and the C16 chair also gave a brief speech stressing the support of IUPAP to the plasma community.

On the last day of the meeting the chair also organized a lunch event for the YSP winners of 2015 and 2016 by inviting the commission members (chair, vice chair, secretary and the representative member from Canada) and the former C16 chair to the meeting. Such an event has promoted the interaction between young and senior plasma scientists as well as the recognition of the importance of YSP to the outstanding young plasma physicists in terms of academic achievement and professional career.

### **2017 Conference Application**

This year there are four plasma conference applications submitted to the IUPAP as compared to the two applications of 2015. At the 2016 commission meeting the applications were reviewed and discussed by the commission members and the final decision on the sponsorship will be approved at the UPAP commission chair meeting to be held in Taipei in Oct of 2016.

1. The 8th International Conference on the Physics of Dusty Plasmas (5/21-5/26, 2017, Prague, Czech Republic).
2. The 8th International Conference on the Frontiers of Plasma Physics and Technology (4/3-4/7, 2017, Vina Del Mar, Chile).
3. International Conference on Inertial Fusion and Science Application (IFSA) (9/11-9/15, 2017, Saint Malo, France).
4. International Conference on Phenomena in Ionized Gases (7/9-7/14, 2017, Lisbon, Portugal).

### **The IUPAP Newsletter**

The C16 has been enthusiastic in contributing to the 2016 IUPAP newsletter by the following articles and reports.

March issue:

Start of Operations for the Stellarator Wendelstein 7-X Fusion Device  
France at the Forefront of Promoting Ultra-High Power Laser-Based Sciences

June Issue:

Monaco ITER International Fusion Energy Days MIIFED (8-11 February 2016)  
2016 C16 Young Scientist Award - Sam M. Vinko

September issue:

Conference Report on the 2016 ICPP