# IUPAP C17: Commission on Quantum Electronics Report for the IUAP 2014 GA in Singapore

# 1. Commission Membership 2011-2014

## **Officers:**

Chair, Prof. Victor Zadkov (2011)(2008)

Vice-Dean, Faculty of Physics

Vice-Director, International Laser Center M.V.Lomonosov Moscow State University

Moscow 119992, RUSSIA

Phone: +7(495)939-23-71; E-mail: zadkov@phys.msu.ru\_

**Vice Chair,** Prof. Deborah Kane (2011) Department of Physics and Astronomy

Faculty of Science

Macquarie University NSW 2109

**AUSTRALIA** 

Phone: +61-20-9850-8907; Fax: +61-2-9850-

8115

E-mail: deb.kane@mq.edu.au

**Secretary,** Prof. Cristina Masoller (2011) Departament de Física i Enginyeria Nuclear Universitat Politecnica de Catalunya

Colom 11

Terrassa 08222, Barcelona

SPAIN

Tel: +34 937398507; Fax: +34 937398500

Email: cristina.masoller@upc.edu

### **Members:**

Prof. Nicolas Cerf (2011)
Faculte des Sciences Appliquees
Universite Libre de Bruxelles (ULB)
Campus du Solbosch CP165/59

50 Ave F D Roosevelt

BELGIUM

Tel: +3226502858 Fax: +3226502941

Email: nicolas.Cerf@ulb.ac.be

Prof. Gong Qihuang (2011) Department of Physics Peking University Beijing 100871

CHINA

Tel: +86 10 6276 5884 Fax: +86 10 6275 2540

Email: <a href="mailto:qhgong@pku.edu.cn">qhgong@pku.edu.cn</a>

Dr. Tamas Kiss (2011)

Res. Inst. for Solid State Physics and Optics

**Hungarian Academy of Sciences** 

Konkoly-Thege u. 29-33

**HUNGARY** 

Tel: +36 1 3922222 ext. 1394;

Email: tkiss@szfki.hu

Prof. Sergio Carlos Zilio (2011) Instituto de Fisica de Sao Carlos Universidade de Sao Paulo

Av. Trabalhador Sao Carlense 400

Sao Carlos, SP 13566-590

BRAZIL

Tel: +55 16 3373 9807 Fax: +55 16 3373 8085 Email: zilio@ifsc.usp.br

Prof. Ci-Ling Pan (2011)
Department of Physics
National Tsing Hua University

Hsinchu City TAIWAN

Tel: +886 3 5742275; Fax: +886 3 5723052

Email: <a href="mailto:clpan@phys.nthu.edu.tw">clpan@phys.nthu.edu.tw</a>

Prof. Narayana Rao Desai (2011)

School of Physics University of Hyderabad Hyderabad-500 046

INDIA

Tel: +91 040 23134335 Email: <a href="mailto:dnrsp@uohyd.ernet.in">dnrsp@uohyd.ernet.in</a> Katsumi Midorikawaa (2011) (2008) Laser Technology Laboratory, RIKEN Hirosawa 2-1, Wako-shi, Saitama 351-0198,

JAPAN

Tel: +81 48 467 9492; Fax: +81 48 462 4682

Email: kmidori@riken.jp

Prof. Change Hee Nam (2011) Department of Physics

KAIST - Korea Advanced Institute of Science

& Technology

Yuseong-gu, Daejeon 305-701

Republic of Korea Tel: +82 42 350

2534;Email: chnam@kaist.ac.kr

Prof. Yuri Galperin (2011) Department of Physics PO Box 1048, Blindern 0316 Oslo, NORWAY Tel: +47 22 85 64 95

Email: iouri.galperine@fys.uio.no

Prof. Martin McCall (2011) Imperial College London, SW7 2AZ

UK, Tel: +44 020 7594 7749; Email: <u>m.mccall@imperial.ac.uk</u>

Prof. Jason Petta (2011)
Department of Physics

Princeton University Jadwin Hall

Princeton, New Jersey 08544, USA

Tel: +01 609 258 4400; Fax: +01 609 258 1124 Email: petta@princeton.edu

# 2. IUPAP Prize for Young Scientists

The IUPAP Commission on Quantum Electronics C17 ran the Young Scientist Prizes in Quantum Electronics in 2013 for outstanding contributions to quantum electronics and its applications. These are the two prizes awarded only once every two years, and recognize the very highest level of achievements in fundamental and applied research.

The 2013 winners of these prizes are listed below:

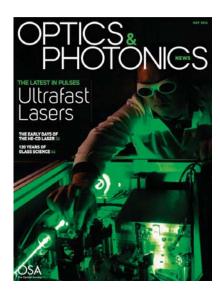
- The 2013 IUPAP Young Scientist Prize in Quantum Electronics (Applied Aspects) is awarded to Professor Nickolas Vamivakas, Professor at the Institute of Optics, University of Rochester, NY, USA. The Prize is awarded to Professor Vamivakas "For seminal contributions to extending the domain of experimental quantum optics from atomic to solid-state systems".
- The 2013 IUPAP Young Scientist Prize in Quantum Electronics (Fundamental Aspects) is awarded to Dr. Kin Fai Mak, Kavli Institute at Cornell for Nanoscale Science, Cornell University, NY, USA. The Prize is awarded to Dr. Mak "For ground-breaking contributions to the measurement and physical understanding of the novel optical properties of atomically thin 2D materials".

The award ceremony was hosted by the International Optics&Photonics Taiwan Conference in Zhongli, Taiwan, on December 5-7, 2013 (<a href="http://optic2013.dop.ncu.edu.tw">http://optic2013.dop.ncu.edu.tw</a>).

This event was publicized in the EPS e-news in January 2014 and in May 2014 issue of the OSA Optics and Photonics News magazine.

Next call for the UPAP C17 Young Scientist Prizes in Quantum Electronics will be launched in the end of this 2014 year-beginning of 2015. Also, the agreement has been reached with

the European CLEO/EQEC 2015 in Munich, Germany, that the award ceremony for these prizes will be hosted at this meeting.



## Backscatter

#### HONORS AND AWARDS

## IUPAP C17 Young Scientist Prizes

The International Union of Pure and Applied Physics Commission on Quantum Electronics (IUPAP C17) awarded the 2013 Young Scientist Prizes in Quantum Electronics Optics & Photonics Taiwan International Conference in Zhongli, Taiwan (OPTIC 2013). The prize for applied aspects was given to Nickolas Vamivakas, University of Rochester, U.S.A., for "seminal contributions to extending the domain of experimental quantum optics from atomic to solid-



state systems," and the prize for fundamental aspects was awarded to **Kin Fai Mak**, Cornell University, U.S.A., for "ground-breaking contributions to the measurement and physical understanding of the novel optical properties of atomically thin 2-D materials."

## 3. Associated members of C17

At the IUPAP Executive Council and Committees Chairs meeting in October 2012 C17 made a proposal, which had been approved, for the European Physical Society (EPS) as an associated member of the commission. Two persons from the EPS were named as the representatives:

John Dudley, President of the EPS, former chair of the QEOD/EPS David Lee, Secretary General, EPS

This associative membership will tighten the relationships between the IUPAP and the EPS in the scope of C17 via its communication through the QEOD/EPS.

## 4. Sponsored conferences by C17

The commission sponsored in 2011 the V Rio De La Plata Workshop on Laser Dynamics and Nonlinear Photonics 2011, organized in Uruguay.

The commission also supported an application for the next VI Rio De La Plata Workshop in 2013, but the application was not supported at the IUPAP Executive Council and Committees Chairs meeting in October 2012. We failed because of the rigid position of the IUPAP Executive Council who considers REGIONAL meetings as not eligible for the support. Word "regional" meeting means in the current IUPAP interpretation that series of events is organized always in the same region of the World, for instance in Latin America, which is the case for the Rio De La Plata Workshop. And it does not matter that these meetings are REALLY international. It is also worth to note that this rule, as a matter of fact, is not always followed when Executive Council makes a decision and among sponsored by the IUPAP meetings you may find examples that clearly do not fit this rule.

By and large, key problem with sponsoring conferences by C17 is that we do not have a major conference in our field that we regularly can sponsor and make plans in advance. This could be either IQEC, which is basically not very much interested in such small amount of money, or any other international conference on laser physics and photonics that travels around the world. It would be, for instance, Laser Physics conference, which has a wide scope, some 700+ attendees, and travels all over the World. This option has been already discussed with the organizers of this meetings, but so far they have not submitted any application.

## 5. Changing the name of the commission

The on-going efforts to align C17 with the research topics of modern optics and photonics were strongly supported at the previous GA of IUPAP in London in 2011. According to its recommendation a working group was set up who suggested to rename the present name of the commission "Quantum Electronics" with the more relevant name "Laser Physics and Photonics".

# 6. Commission Membership Nominations for the Future Term

Detailed consideration was given to the nominations made by the National Liaison Committees. Further discussion centered on the need for national and gender representation, and also the need for members who would be actively involved in the work of the Commission. After discussion and respective voting, a slate of 14 nominees and 1 reserve was recommended to the Selection Committee by the C17 commission.