

Commission C15: Atomic, Molecular and Optical Physics
Report (2014 –2017) for IUPAP 2017 GA and C&CC meeting in San Paulo*

Submitted by Toshiyuki Azuma (Chair)

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* This report covers the activities in the term from C&CC/GA at Singapore in November 2014 to C&CC/GA at San Paulo in October 2017.

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Associated members:

The International Commission for Optics (ICO) had been approved as an associated member of the commission since 2015.

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C15 Activities:

The major activities are summarized as the following three items.

1. IUPAP C15 Young Scientist Prize

The commission C15 runs the IUPAP Young Scientist Prize in Atomic, Molecular, and Optical (AMO) Physics. The C15 YSP winner has been selected after competitive ranking from about 30 nominations every year. The prize has been awarded annually alternating between the two major “flagship” conferences of the AMO Physics field regularly supported by IUPAP, ICPEAC (International Conference on Photonic, Electronic, and Atomic Collisions) or ICAP (International Conference on Atomic Physics).

2017: Johannes Feist (Condensed Matter Physics Center (IFIMAC), Universidad Autónoma de Madrid, Spain)

The prize was awarded for his outstanding contributions in modifications of molecular structure under strong light-matter coupling. He was invited to receive the award and provide the winner’s talk at ICPEAC 2017 in Cairns, Australia in 26 July - 1 August 2017.

2016: Yu-Ao Chen (University of Science and Technology of China at Shanghai, China)

The prize was awarded for his outstanding contributions on quantum information and simulation. He was invited to receive the award and provide the winner's talk at ICAP 2016 in Seoul, Korea in 24-29 July 2016.

2015: Gretchen K. Campbell (Joint Quantum Institute, National Institute of Standards and Technology and University of Maryland)

The prize was awarded for her outstanding contributions in toroidal Bose-Einstein condensates and its application to "atomtronic" circuits. She provided winner's talk by a recorded video officially prepared. at ICPEAC 2015 in Toledo, Spain in 22-28 July 2015.

2. Conference Support

The following conferences related with C15 were supported by IUPAP.

2017:

The 30th International Conference on Photonic, Electronic, and Atomic Collisions (ICPEAC 2017)

Location: Cairns, Australia

International Chair: Hossein Sadeghpour (Harvard University, USA)

Local Chair: Anatoli Kheifets (Australian National University, Australia)

Date: 24 July - 1 August 2017

Conference Type: A

2016:

The 25th International Conference on Atomic Physics (ICAP 2016)

Location: Seoul, Korea

Chair: (Donghyun Cho, Wonho Jhe, Seoul National University, Korea, and Young Soon Kim, Myongji University, Korea)

Date: 24 - 29 July 2016

Conference Type: A

The 18th International Conference on Physics of Highly Charged Ions (HCI 2016)

Location: Kielce, Poland

Chair: Marek Pajek (Jan Kochanowski University, Poland)

Date: 11 - 16 September 2016

Conference Type: B

2015:

The 29th International Conference on Photonic, Electronic and Atomic Collisions (ICPEAC 2015)

Location: Toledo, Spain

Date: 22 - 28 July 2015

International Chair: Roberto Rivarola (Instituto de Física Rosario, Argentina)

Local Chair: Fernando Martin (Universidad Autónoma de Madrid, Spain)

Conference Type: A

The 22nd International Conference on Laser Spectroscopy (ICOLS 2015)

Location: Sentosa Island in Singapore

Date: 28 June – 3 July 2015

Chair: Kai Dieckmann (National University of Singapore, Singapore)

3. C15 Commission Meeting

2017:

The commission meeting was held on 28 July 2017 during ICPEAC 2017. All of three Officers (T. Azuma, R. Rivarola, D. Vernhet) and two Members (D. Ding, J. Gorfinkiel) together with an ICPEAC International Secretary (E. Sockell) attended the meeting. The Officers explained the present activities including the funding

situation of IUPAP, and the ICPEAC International Secretary explained the how the IUPAP support was used for ICPEAC 2017. The committee exchanged opinions to encourage and stimulate future C15 activities.

2016:

The commission meeting was held on 28 July 2016 during ICAP 2016. The Chair explained the present activities including the funding situation of IUPAP, and the Member W. Jhe (co-chair of ICAP) explained the how the IUPAP support was used for ICAP2016.

2015:

The commission meeting was held on 24 July 2015 during ICPEAC 2015. All of three Officers (T. Azuma, R. Rivarola, D. Vernhet), four Members (D. Ding, T.F. Gallagher, J. Gorfinkiel, J. Hansen) with an ICPEAC Local Chair (F. Martin) attended the meeting. G. Pichler, a past Member, also joined it. The C15 Vice Chair R. Rivarola was also an International Chair of ICPEAC 2015. The officers explained the present activities including the funding situation of IUPAP. The ICPEAC Local Chair explained the how the IUPAP support was used for ICPEAC 2017.

Future schedule:

Next call for the 2018 IUPAP C15 YSP will be launched at the beginning of 2018. The C15 commission meeting and the winner's talk of the C15 YSP are scheduled during the coming ICAP 2018 at Barcelona, Spain.

The 30th International Conference on Photonic, Electronic and Atomic Collisions (ICAP 2018)

<http://icap2018.eu>

Location: Barcelona, Spain

Date: 22 - 27 July 2018

Local Chair: Maciej Lewenstein (The Institute of Photonic Sciences (ICFO), Spain)

Conference Type: A (expected)