

Commission on Computational Physics (C20) Report, 2015-2017

1) C20 Commission Members/Associate Members/Observer

Chair: Hai-Qing Lin (China)

Vice-chair: David P. Landau (US)

Secretary: Joan Adler (Israel)

Members:

Richard Liska (Czech Republic);

Priya Mahadezvan (India);

Hans Fangohr (UK);

Maria-Roser Valent (Germany);

Masatoshi Imada (Japan);

Lev Shchur (Russia);

Suklyun Hong (Korea);

Georg Kresse (Austria);

Mark Brachet (France)

Ronald Dickman (Brazil);

Constantia Alexandrou (Cyprus)

Associate members

Nithaya Chetty (South Africa);

Rodolphe Vuilleumier (France);

Yuan Ping Feng (Singapore)

Observer

Alex Hansen

2) Conference on Computational Physics (CCP) and Others

The Conference on Computational Physics (CCP) is held every year under the auspices of the C20 Commission for Computational Physics of the International Union of Pure and Applied Physics (IUPAP).

CCP2015 was successfully held at the Indian Institute of Technology Guwahati, Assam, India from 2 to 5 December 2015, organized by Professors Sitangshu Bikas Santra of the Indian Institute of Technology at Guwahati and Purusattam Ray of the Institute for Mathematical Sciences in Chennai at the IIT campus in Guwahati.

In addition to IUPAP sponsoring and endorsing the event, the American Physical Society (APS), Association for Asia Pacific Physical Society (AAPPS) and the European Physical Society (EPS) are also sponsors and active collaborators. Around 350 physicists and researchers around the world are expected to participate in this conference to discuss the latest developments in the field of computational physics and their applications in widely varied research fields such as nuclear and particle physics, astrophysics and cosmology, accelerator and plasma physics, atomic, molecular and optical physics, condensed matter theory, strongly correlated systems, nano sciences, complex system, chaos and statistical physics, quantum computation, computational biology, fluid mechanics, oceanography, geophysics, computational physics education, etc.

The conference report form can be accessed on the following IUPAP web link:

<http://iupap.org/sponsored-conferences/conference-report-form/>

CCP2016 was successfully held at St George's Hotel Pretoria, South Africa, 10-14 July 2016, organized by Prof. Nithaya Chetty and Prof. Brian Masara and hosted by the South African Institute of Physics. More information could be found on <http://events.saip.org.za/conferenceDisplay.py?confId=72>. The organizer has submitted the conference report to IUPAP.

CCP2017 was held in Paris, France, 09-13 July 2017, in the Jussieu campus (Latin Quarter) of the University Pierre et Marie Curie – Sorbonne, organized by Prof. Rodolphe Vuilleumier, Marco Saitta, and Riccardo Spezia. The conference had Plenary Lectures, Topical Symposia and Poster Sessions. More information could be found at the website <https://ccp2017.sciencesconf.org/>.

CCP2018 is going to be held in Davis, California, organized by Prof. Barry Klein, possibly July 29-Aug 02, 2018.

CCP2019 is going to be held in Hong Kong, China, organized by Prof. Ruiqin Zhang, President of Physical Society of Hong Kong and Hong Kong physicists.

Other Conferences

(a) Conference “Computer Simulations in Physics and beyond” was successfully held 06-10 September 2015 in Moscow, Russia, organized by Professor Lev Shehur of Landau Institute for Theoretical Physics, Scientific Center in Chernogolovka and National Research University Higher School of Economics. Details could be found in: <http://csp2015.ac.ru>.

(b) C20 submitted a supporting letter to IUPAP for the endorsement of ICCP10, which was

organized by University of Macau in January 2017.

3) Young Scientist Prize

Year: 2014

Winner: *Professor Mathieu Salanne, Université Pierre et Marie Curie, Paris, France*

Citation: For the development of appropriate methods to allow realistic atomistic simulation of molten salts and ionic liquids in situations of relevance to electrochemistry.”

The prize was presented at the CCP2015 in India, as Dr Salanne could not attend the CCP2014.

Year: 2015

Winner: *Dr. Wei-Min Wang at Laser-plasma physics of the Institute of Physics, Chinese Academy of Sciences, China*

Citation: For his significant achievements in computational plasma physics with applications to advanced schemes of inertial confined fusion and novel laser-plasma based particle accelerators and radiation sources.”

The prize was presented at the CCP2016 in South Africa, because Dr. Wang cannot attend CCP2015 due to visa problem.

Year: 2016

Winner: *Dr. Jianwei Sun at Temple University (then, now at University of Texas at El Paso), USA*

Citation: For his innovative and deep achievements in developing efficient and accurate density functionals for computation in quantum chemistry, materials science, and condensed matter physics”.

The prize was presented at the CCP2016 in South Africa.

Year: 2017

Winner: *Dr. Glen Evenbly at The University of Sherbrooke, Canada.*

Citation: For conceptual advances, development, refinement and application of tensor network renormalization for the efficient simulation of quantum many-body systems.

The prize was presented at the CCP2017 in Paris, France.