

Report on the activities of the C3 Commission Statistical Physics

The main activities of the C3 commission are:

- The organization of the (triennial) **Statphys** Conference.
- Selecting the recipient of the **Boltzmann medal**, the highest international recognition for outstanding research contributions to the field.
- Selecting the recipient of the **Young Scientist Award** in Statistical Physics.

Statphys 25

The Statphys25 meeting was held on July 22-26, 2013 at Seoul National University in Seoul, Korea. It attracted 850 participants from all over the world. The scientific program consisted of 10 plenary lectures, 46 invited talks, 194 contributed talks and 349 poster presentations. The conference website can be found here: <http://www.statphys25.org/>. Several informations about the meeting are available on the website, including those on scientific, organising and advisory committees, where previous and current members of C3 were heavily involved together with internationally known scientists in the field. At Statphys25 both the Boltzmann medal and the Young Scientist Prize of the IUPAP were delivered. A memorial session was held on July 24 honoring Kenneth G. Wilson, the first Boltzmann medalist and Nobel Prize in Physics, who recently passed away: <http://www.youtube.com/watch?v=-6LAR1Og4nE>.

The Boltzmann Medal

The Boltzmann medal is the most prestigious international prize in statistical physics. It is awarded every three years, with the formal presentation occurring during the Statphys conference. The jury consisted of all the members of the C3 Commission, as well as the previous Boltzmann medalists, the Chairman of the Statphys25 Conference (D. Kim) and the previous Chairman of C3 (H. Orland). For the 2013 round, nominations were due on September 1, 2012, and 17 were received. The jury agreed to award the prize jointly to Gianni Jona-Lasinio from the University La Sapienza (Rome, Italy) and Harry L. Swinney from the University of Texas Austin. Jona-Lasinio receives the award “for his seminal contributions to spontaneous symmetry breaking in particle physics and the theory of non-equilibrium fluctuations”, and Swinney is recognized “for his ingenious and challenging experiments which have had a large impact on many areas of statistical physics.”

Young Scientist Award in Statistical Physics

The Young Scientist Award in Statistical Physics has recently been established by the C3 Commission on Statistical Physics of the IUPAP. The Prize is aimed at recognizing outstanding achievements of scientists at early stages of their career in the broad field of Statistical Physics. Like the Boltzmann Medal, it is awarded every three years, with the formal presentation occurring during the Statphys conference. In this round 33 nominations were received: The C3 Commission selected Takahiro Sagawa (University of Tokyo) and Kazumasa Takeuchi (University of Tokyo) as the joint 2013 winners. Sagawa is recognized “for developing a comprehensive theoretical framework to characterize the thermodynamics of nonequilibrium systems

with feedback control” and Takeuchi wins the award “for his outstanding experiments on fluctuation properties of growing interfaces in turbulent liquid crystals.”

Extract from the minutes of the C3 Commission meeting held in Seoul on July 24 2013

The Chairman, Stefano Ruffo, informed the Commission that two bids to organize StatPhys26 were received, one for Lyon and a second one for Barcelona. The proposal to organize StatPhys26 in Lyon was presented by a group of French delegates: There was consensus in the Commission that this was a well-prepared strong bid and the Commission unanimously accepted the Lyon proposal: Hence Statphys26 will be held in Lyon on July 18-22, 2016. The mandates of the following members will expire in 2014: Ruffo, Yu, Diehl, Hermann, Procaccia, van Beijeren, Wofo. A long and careful discussion on the choice of new members, guided by the goals of realizing a good representation of the various statistical physics communities and their research fields in different geographical parts of the world and of increasing the number of female scientists in the Commission led to the proposal of the following new members: Lucilla **de Arcangelis**, Department of Information Engineering, Second University Naples Aversa, Italy; Jan **de Gier**, the University of Melbourne, Department of Mathematics and Statistics, Australia; Erwin **Frey**, Ludwig-Maximilians-Universität München, Faculty of Physics, Germany; Doochul **Kim**, Korea Institute for Advanced Study (KIAS), Seoul, Korea; José L. **Mateos**, National Autonomous University of Mexico, Department of Complex Systems, Mexico City, Mexico; Lei Han **Tang**, Hongkong Baptist University, Department of Physics, Hongkong, and Beijing Computational Science Research Center, China. The Executive Committee (Chair, Vice-Chair, Secretary) of C3 will also expire on 2014. After a careful discussion, the officers-elect are: Itamar **Procaccia (Chair)**, Julia **Yeomans (Vice Chair)**, and Rahul **Pandit (Secretary)**.

Moreover, since Africa will no more have a member in C3, it was felt necessary to ask for the addition of an Associate Member: Timoleon Crepin **Kofane** of the University of Yaoundé and a Member of the African Academy of Sciences. Concerning workshops to take place in 2014, the C3 Commission received two proposals: “Nonequilibrium Statistical Mechanics”, to be held at Florence University, Department of Physics and Astronomy may 26-30 2014; “International Conference on Nano Structures (ICNS5)”, to be held at Kish Island, Iran march 6-9 2014. The Commission was convinced that absence of discrimination is absolutely indispensable for IUPAP sponsorships of conferences: It seemed doubtful that this condition will be met by the Iranian proposal. Therefore, this sponsorship was not considered. On the other hand, the Florence proposal was well received and put in first priority.

Officers and members of the C3 Commission:

Stefano Ruffo, Chair (Italy)
Yu Lu, Vice-Chair (China)
Hans Werner Diehl, Secretary (Germany)
Henk van Beijeren (The Netherlands)
Jean-Francois Joanny (France)
Hans Herrmann (Switzerland)
Rahul Pandit (India)
Itamar Procaccia (Israel)

Mohammad Reza Ejtehadi (Iran)
Maxi San Miguel (Spain)
Masaki Sano (Japan)
Beate Schmittmann (USA)
Paul Wofo (Cameroon)
Julia Yeomans (UK)
Associate Members: Yu M. Romanovsky (Russia) and F. Alcaraz (Brasil)

Detailed contact info can be found at the Commission website, under
[http : //www.iupap.org/ c omm issions/ c 3/ m e m bers/index.ht m l](http://www.iupap.org/commissions/c3/members/index.html)

Florence, September 21 2014
Stefano Ruffo
Chair of C3