

## **Report on the work of the C3 committee during 2015-2016.**

The C3 committee for Statistical Physics is responsible for running the tri-yearly event of Stat Phys, which took place 26 times so far, with the average participation of about 1000 physicists in each such event. The event is moved every three years from continent to continent, with the last one (2016) taking place in Lyon, France, the previous one (2013) in Seoul, Korea, and the previous one (2000) in Australia.

During the Stat Phys conference the C3 committee also gives the Boltzmann Medal to outstanding Statistical Physicists that are chosen by vote of the committee members and the previous medalists. In addition, in the last three meetings we also awarded Young Scientists Prizes to highly promising younger colleagues. During the event of Stat Phys the C3 committee gets together for its “plenary” meeting that among other things is used to evaluate proposals for hosting the next Stat Phys meeting. In Lyon we have selected the proposal of Buenos Aires, Argentina, for the next venue of the event.

The minutes of the meeting of the C3 committee in Lyon are attached to this report as appendix 1.

In appendix 2 we attach the report on the highly successful Stat Phys 26 in Lyon.

**Appendix 1:** Minutes of the meeting of the C3 Commission held on Wednesday 20 July 2016 at 2 pm during STATPHYS 26 in Lyon, France

The following members were present:

Chair: Itamar Procaccia  
Vice-Chair: Julia Yeomans  
Secretary: Rahul Pandit  
Lucilla de Arcangelis  
Mohammad Reza Ejtehadi  
Erwin Frey  
Doochul Kim  
Jose L. Mateos  
Maxi San Miguel  
Masaki Sano  
Lei-Han Tang

The following members could not be present because of other professional commitments:

Daniel Bonn  
Jean-Francois Joanny  
Beate Schmittmann

The members of the C3 Commission discussed the following points.

1. Proposals for the next STATPHYS meeting. The following presentations were made:

A. Presentation for the next meeting in Argentina. See proposal for details.

B. Presentation for the next meeting in Mexico. See proposal for details.

C. Final decision: Argentina: Essentially Mexico has hosted STATPHYS before (in 2001) but Argentina has not hosted it so far.

2. Discussion of new members of the C3 Commission:

There was consensus on the following:

Chair: Rahul Pandit

Vice Chair: Maxi San Miguel

Secretary: Lucilla de Arcangelis

Other recommendations (for statistical physicists who might replace C3 Commission members who have served for two terms and who are not being nominated for the positions of Chair and Vice Chair):

Mogens Jensen (Copenhagen)

Kimmo Kaski (Finland)

Janos Kertesz (Hungary)

Tobias Galla (UK, Manchester) - Complex Systems (Econophysics) or Raymond Goldstein (UK, Cambridge)

Cristina Marchetti (USA, Syracuse)

Tetsuo Deguchi (Japan, Ochanmizu U) - Exactly solvable models

Thierry Dauxois (France, ENS, Lyon)

Shahin Rouhani (Iran)

Yariv Kafri (Israel, Technion)

The current Chair of the C3 Commission said he would discuss this with the scientists named above and also the IUPAP.

### 3. Support for Satellites and other meetings:

All recommendations have been accepted this year. It is suggested that we be active in getting support from IUPAP for other statistical physics meetings. The deadline for meetings in 2017 has passed already. The application deadline is June of a given year for a meeting in the next year.

4. The meeting ended with thanks to all the members of the Organizing Committee of STATPHYS 26, and especially Thierry Dauxois, the Chair of this Organizing Committee, all the members of the C3 Commission, and to the Chair of this Commission.

### **Appendix 2:** Summary of the Stat Phys 26 meeting

STATPHYS 26 the largest international conference in statistical physics, covering all aspects of statistical physics has been organized in Lyon, France from 18-22 July 2016. Organized every three years since 1945 by the International Union of Pure and Applied Physics (IUPAP), the conference covered a wide range of topics including traditional aspects of statistical mechanics, such as applications to hard and soft condensed matter, phase transitions, disordered systems and non-equilibrium physics, as well as emergent and modern applications such as turbulence, signal processing, complex systems and mathematics.

The conference took place at the Palais des Congrès de Lyon, a superb facility, including a main meeting room and a complete set of rooms for sessions, all within walking distance. It has hosted 1350 participants. In addition to many French delegates, the larger conference delegations were from Japan (119), Germany (94), United States (85), Italy (73) and South Korea (70). More than 50 nationalities were represented including participants from Georgia, Kuwait, New Zealand, Philippines or Uzbekistan.

The Boltzmann Medal for 2016 has been awarded during the Boltzmann Ceremony to Daan Frenkel and Yves Pomeau for their seminal contributions to Statistical Physics during their fabulous careers. Similarly, the Young Scientist Award for 2016 has been awarded during the conference to Lisa Manning

and Martin Lenz, recognizing their outstanding achievements as scientists at an early stage of their careers in the field of Statistical Physics.

In the unanimous opinion of the participants, the level of plenary talks and different contributions was outstanding. The posters Sessions, hosting nearly 700 presentations, were also a great success. New scientific collaborations have emerged from these numerous presentations, or thanks to discussions during walks in the beautiful close by Parc de la Tête d'Or, or even thanks to the gala in the reception rooms of the City Hall.

A moving Human rights session was organized, as well as a memorial talk for the previous Boltzman medalist Leo Kadanoff who passed away a few months ago. We also maintained a very friendly atmosphere throughout the conference: from the enthusiastic reception by the dynamic team of volunteers, through to the discovery of Lyon traboules. There were two official morning jogs around the Parc de la Tête d'Or and an intercontinental football tournament on Wednesday afternoon: team "Amerika" won the first Statphys World Cup!

Statphys26 has once again been a wonderful illustration of the international adventure that is Science. It has shown us that the mixing of backgrounds, approaches and origins is surely the way to go, taking us together towards uncharted territories and new discoveries. We are delighted that Statphys26 has ended in such a great success.

The C3 commission has announced that the next issue in the series, Statphys27, will be taking place for the first time in South America: Buenos Aires in Argentina.

#### **Report of the C3 committee for Statistical Physics - 2017**

C3 Chair, Itamar Procaccia was awarded the European Physical Society Prize for Statistical Physics 2017, and I was elected to the Academia Europaea. I do not know whether this is relevant for IUPAP but I thought I should tell you.

IUPAP supported this year (either in finance or in endorsement) three conferences around the world.

The Chair of the C3 committee participated in person in the event "Crossroads in Complex Systems", June 5-8, IFISC, Mallorca. The event was conducted with the highest standards in scientific terms, in gender balance and in the spirit of open discussion that we expect from events that are supported by IUPAP. Chapeu to the organizers.

The C3 committee has selected the next venue for the StatPhys meeting in 2019, in Buenos Aires, Argentina. Preliminary preparations have been conducted. We are pleased to bring this conference back to Latin America after many years. The Chair of the meeting will be Sylvina Ponce Dawson and we send her our best wishes for success in this highly non-trivial endeavor.

Itamar Procaccia,  
Chair, C3 Committee