

**Scientific Report on an ESF-sponsored conference
on ‘Interacting Particle Systems’**

Villa Finaly, Florence, Italy

27-31 August 2012

Organising Committee : A.Asselah (Paris-Est), P.Dai Pra(Padova), G.Giacomin (Paris-Diderot), P.Picco (Aix-Marseille), E.Saada (Paris-Descartes), L.Zambotti (Paris-P.& M.Curie).

Scientific Committee : Joel Lebowitz (Rutgers, USA), Pablo Ferrari (Buenos Aires, Argentina), S.R.S. Varadhan (NYU, USA).

Abstract During 5 days, 76 probabilists gathered at Villa Finaly to discuss recent developments in the field of Interacting Particle Systems. Each day, 6 talks took place from 9:00 am to 16:30 pm. Then, all mathematicians gathered for about an hour to discuss mathematics informally at tea-time. The format of the meeting, the quality of the participants, and the efficiency of Villa Finaly staff, made the meeting very stimulating and well organized.

Scientific Summary. The field of Interacting Particle Systems is a branch of probability whose ambition is to model phenomena in which many particles or agents follow the local stochastic rules. The aim is to describe the collective phenomena that result.

Some of the best experts in the field were among our participants. We were particularly happy to have the following senior well-known scientists:

- Bernard Derrida (ENS Paris)
- Pablo Ferrari (Buenos Aires)
- Frank den Hollander (Leiden)
- Enzo Olivieri (Roma)
- Errico Presutti (Roma)
- Balint Toth (Budapest)
- S.R.S. Varadhan (NYU)

We had also a large group of brilliant confirmed scientists among whom:

- Thierry Bodineau (Paris)
- Pietro Caputo (Roma)
- Louis Renato Fontes (Sao Paolo)
- Tom Mountford (Lausanne)
- Fraydoun Rezakhanlou (Berkeley)

- Timo Seppailanen (Madison)

We had the chance to have very promising young researchers such as

- Ian Corwin (Cambridge)
- Hubert Lacoïn (Paris)
- Milton Jara (Rio)

Last, but not least, we had four shorter communications sessions for young researchers , having just finished their doctoral thesis:

- D.Valesin
- A.Gershenfeld
- C. Lucas
- A. Vandeberg-Rodes.

Finally, we had a poster session, which permitted doctoral fellows to present their research. This was very interesting.

All this has been put online on the website of the conference:
<http://ips.math.cnrs.fr/index.html>

Speakers

Marton Balazs (Budapest)
Pietro Caputo (Roma)
Ian Corwin (Cambridge MA)
Bernard Derrida (ENS Paris)
Pablo Ferrari (Buenos Aires)
Alberto Gandolfi (Florence)
Milton Jara (IMPA)
Claudio Landim (Rio, Rouen)
Tom Mountford (EPF Lausanne)
Fraydoun Rezakhanlou (Berkeley)
Cristina Toninelli (Paris)
Daniel Valesin (Lausanne)
S.R.S. Varadhan (NYU)

Thierry Bodineau (Paris)
Francis Comets (Paris)
Frank den Hollander (Leiden)
Alessandra Faggionato (Roma)
A. Gaudillère (Marseille)
Antoine Gershenfeld (Paris)
Hubert Lacoïn (Paris)
Cyrille Lucas (Paris)
Errico Presutti (Roma II)
Sunder Sethuraman (Tucson)
Balint Toth (Budapest)
Alex Vandenberg (Los Angeles)
Nikos Zygouras

Finacial report for 76 participants

Expenses:36,250 euros

Lodging at Villa Finaly	26 participants	13,030
Lodging at Hotel Botticelli	12 participants	6,820
Lodging at Hotel 7 Santi	18 participants	2,800
Lunch and coffees	76 participants	8,200
Guided tours of Florence	4x200 +170	970
Conference Room	5x700	3,500
Renting of Whiteboards		480
Miscaleneous		450

Grants: 36,250 euros

Laboratoire LAMA UMR8050:	3,600
Laboratoire LPMA UMR7599	1,500
Laboratoire MAP5 UMR8145	1,500
University P7	1,850
University UPEC	4,000
University Paris Descartes:	4,000
European Science Foundation	9,650
GDRE CNRS GREFI-MEFI :	10,350