

23rd International Conference on Statistical Physics of the International  
Union for Pure and Applied Physics (IUPAP) Conference Center,  
Genova, Italy,  
July 9-13, 2007



# Programme General Time Table

	Monday 9/7	Tuesday 10/7	Wednesday 11/7	Thursday 12/7	Friday 13/7	
8.30	Registration					
9.00	Opening L. Pietronero	Parallel Sessions. Topics: <b>8A, 9A, 11B, 1B</b>	Chair: J. Lebowitz Plenary: <b>A. Vespignani</b>	Chair: D. Dhar Plenary: <b>J. Cardy</b>	Parallel sessions. Topics: <b>1D, 3D, 7D, 11E</b>	
9.10						
9.20						
9.30	Chair D. Mukamel Plenary: <b>J.P. Bouchaud</b>		Plenary: <b>R. Grimm</b>	Plenary: <b>C. Jarzynski</b>		
9.40						
9.50						
10.00						
10.10	Coffee break		Coffee break	Coffee break		Coffee break
10.20						
10.30	Chair: G. Parisi Plenary: <b>S. Leibler</b>		Parallel sessions. Topics: <b>3B, 5A, 6B, 10B</b>	Coffee break		Coffee break
10.40						
10.50						
11.00						
11.10						
11.20						
11.30						
11.40		Plenary: <b>A. Montanari</b>		Chair: M.E. Fisher <b>Young Scientist Award</b> <b>Boltzmann Ceremony</b>  Lecture: <b>K. Binder</b> 11.30-12.20  Lecture: <b>G. Gallavotti</b> 12.20-13.10	Chair: P. Chaikin Plenary: <b>H.N. Lekkerkerker</b>	
11.50						
12.00						
12.10						
12.20						
12:30-14:00	Lunch	Lunch	Lunch 13.10	Lunch	Lunch	
14.00-15:30	Poster session Topic: 1, 2, 8	Poster session Topic: 3, 4, 5	Free afternoon	Poster session Topic: 6, 7, 9	Poster session Topic: 10, 11	
15.30-17:00	Parallel sessions. Topics: <b>1A, 3A, 6A, 11A</b>	Parallel sessions. Topics: <b>8B, 4B, 7B, 10C</b>		Parallel sessions. Topics: <b>1C, 3C, 7C, 10D</b>	Parallel sessions. Topics: <b>5C, 3E, 7E, 10E</b>	
17.00-17.30	Coffee break	Coffee break		Coffee break	Coffee break	
17.30-19:00	Parallel sessions. Topics: <b>2A, 4A, 7A, 10A</b>	Parallel Sessions. Topics: <b>2B, 4C, 9B, 11C</b>		Parallel sessions. Topics: <b>5B, 6C, 9C, 11D</b>	Parallel sessions. Topics: <b>2C, 3F, 8C, 11G</b>	
19.10-20.00		Human Rights session		Women in physics session	Closing Session	

## Parallel Sessions Time Table

### Captions:

Topic 1	General aspects of statistical physics, thermodynamics, rigorous results and exact solutions.
Topic 2	Phase transitions and critical phenomena (equilibrium)
Topic 3	Nonequilibrium systems: driven systems, transport theory, relaxation phenomena, random processes.
Topic 4	Pattern formation in systems out of equilibrium: growth processes, fracture, hydrodynamic instabilities, chemical reactions etc.
Topic 5	Dynamical systems and turbulence.
Topic 6	Liquid matter and interfacial phenomena: atomic, molecular and ionic fluids, freezing, metastable liquids, wetting, surface effects, confined systems etc.
Topic 7	Soft condensed matter: polymers, liquid crystals, microemulsions, foams, membranes, colloids, granular materials etc.
Topic 8	Quantum systems: quantum phase transitions, strongly correlated fermions, Bose-Einstein condensation, mesoscopic quantum phenomena, localization, etc.
Topic 9	Disordered and glassy systems: percolation systems, spin glasses, structural glasses, glass transition, etc.
Topic 10	Biologically motivated problems: biological networks, molecular motors, dynamics at the scale of the cell, evolution models, protein-folding models, statistical modelling of biological data etc.
Topic 11	Interdisciplinary topics in statistical physics: networks, econophysics, traffic flow, algorithmic problems, astrophysical applications, etc.

### PLEASE NOTE:

Due to the granular nature of the topical sessions and to specific logistic problems of some authors a topic session may occasionally contain papers originally submitted for another topic.

<b>Monday 9/7 PM Session; h. 15.00-17.30</b>				
<b>Topic</b>	<b>1A</b>	<b>3A</b>	<b>6A</b>	<b>11A</b>
	<b>Scirocco</b>	<b>Maestrale</b>	<b>Levante</b>	<b>Grecale</b>
<b>Chair</b>	T. Guttman	A. Politi	H.E. Stanley	M.M. Telo da Gama
<b>15.30-15.45</b>	<b>H. Tasaki</b>	<b>A. Dhar</b>	<b>M. Barbosa</b>	<b>D. Chowdhury</b>
<b>15.45-16.00</b>				
<b>16.00-16.15</b>	F.C. Alcaraz	S. Lepri	<b>F. Sciortino</b>	N.R. Moloney
<b>16.15-16.30</b>	M.T. Batchelor	J. Lukkarinen		J. Davidsen
<b>16.30-16.45</b>	F. Capasso	E. Foulaadvand	E. Chacon	H. Meyer-Ortmanns
<b>16.45-17.00</b>	R. Santachiara	L. Laurson	M. Rovere	J.P. Neirotti

<b>Monday 9/7 PM Session; h. 17.30-19.00</b>				
<b>Topic</b>	<b>2A</b>	<b>4A</b>	<b>7A</b>	<b>10A</b>
	<b>Scirocco</b>	<b>Levante</b>	<b>Maestrale</b>	<b>Grecale</b>
<b>Chair</b>	M. Kosterlitz	M.J Alava	H.J. Herrmann	D. Bensimon
<b>17.30-17.45</b>	<b>D. Achlioptas</b>	<b>J.S. Andrade</b>	<b>T. Aste</b>	M. Manosas
<b>17.45-18.00</b>				P. Virnau
<b>18.00-18.15</b>	S. Perez-Gaviro	<b>L. Mahadevan</b>	<b>D. Lohse</b>	T. Ferraro
<b>18.15-18.30</b>	M. Caselle			S.C. Park
<b>18.30-18.45</b>	A.A. Fedorenko	J. Vollmer	A. Puglisi	R. Ramaswamy
<b>18.45-19.00</b>	D. Dhar	F. Brau	H.M. Wyss	M.H. Jensen

<b>Tuesday 10/7 AM Session h. 09.00-10.30</b>				
<b>Topic</b>	<b>8A</b>	<b>9A</b>	<b>11B</b>	<b>1B</b>
	<b>Levante</b>	<b>Maestrale</b>	<b>Grecale</b>	<b>Scirocco</b>
<b>Chair</b>	F. Capasso	D. Sherrington	H. Takayasu	C. Tsallis
<b>09.00-09.15</b>	<b>B. Althshuler</b>	<b>P.G. Wolynes</b>	<b>A. Benyoussef</b>	<b>S. Ruffo</b>
<b>09.15-09.30</b>				
<b>09.30-09.45</b>	H. Obuse	N. Schupper	A. Cavagna	A. Giuliani
<b>09.45-10.00</b>	Y. Hatsugai	F. Sausset	A. Schadschneider	U. Tirnakli
<b>10.00-10.15</b>	G. Schehr	D. Dominguez	S. Rambaldi	J. Naudts
<b>10.15-10.30</b>	S. Balibar	M. Weigel	M.M. Telo Da Gama	G. Mussardo

<b>Tuesday 10/7 AM Session h. 11.00-12.30</b>				
<b>Topic</b>	<b>3B</b>	<b>5A</b>	<b>6B</b>	<b>10B</b>
	<b>Grecale</b>	<b>Levante</b>	<b>Scirocco</b>	<b>Maestrale</b>
<b>Chair</b>	S. Redner	A. Robledo	S. Dietrich	M.H. Jensen
<b>11.00-11.15</b>	<b>A. Bray</b>	<b>R. Pandit</b>	<b>L. Demirel</b>	<b>E. Domany</b>
<b>11.15-11.30</b>				
<b>11.30-11.45</b>	J.M. Kosterlitz	<b>S. Succi</b>	<b>B. Ocko</b>	A. Hanke
<b>11.45-12.00</b>	A. Sicilia			B. Burghardt
<b>12.00-12.15</b>	D.P. Landau	E. Guillard	D. Vandembroucq	A.G. Cherstvy
<b>12.15-12.30</b>	G.M. Schuetz	A. Seminara	A. Milchev	L.A. Mirny

<b>Tuesday 10/7 PM Session 15.30-17.00</b>				
<b>Topic</b>	<b>8B</b>	<b>4B</b>	<b>7B</b>	<b>10C</b>
	<b>Scirocco</b>	<b>Levante</b>	<b>Grecale</b>	<b>Maestrale</b>
<b>Chair</b>	H. Nishimori	W. Van Saarloos	P. Tartaglia	E. Domany
<b>15.30-15.45</b>	<b>K. Schoutens</b>	<b>H. Hilhorst</b>	<b>A. Sood</b>	T. Harada
<b>15.45-16.00</b>				S. Cebrat
<b>16.00-16.15</b>	A.V. Syromyatnikov	<b>S. R. Quake</b>	V. Martin-Mayor	M.R. Evans
<b>16.15-16.30</b>	D.C. Cabra		A.E. Cervantes Martinez	A.B. Kolomeisky
<b>16.30-16.45</b>	G.E. Santoro	S. Tanaka	M. Fuchs	
<b>16.45-17.00</b>		A.A. Nepomnyashchy	A.K. Dasmahaptra	

<b>Tuesday 10/7 PM Session 17.30-19.00</b>				
<b>Topic</b>	<b>2B</b>	<b>4C</b>	<b>9B</b>	<b>11C</b>
	<b>Scirocco</b>	<b>Levante</b>	<b>Maestrale</b>	<b>Grecale</b>
<b>Chair</b>	A. Coniglio	S. Zapperi	A. Zippelius	B. Kahng
<b>17.30-17.45</b>	<b>A. Gambassi</b>	<b>M.C. Miguel</b>	<b>J. Kurchan</b>	<b>M.E.J. Newman</b>
<b>17.45-18.00</b>				
<b>18.00-18.15</b>	M.E. Fisher	H.J. Herrmann	S. Ramaswamy	M. Hinczewski
<b>18.15-18.30</b>	A. De Candia	D. Bonamy	V. Dupuis	H. Agrawal
<b>18.30-18.45</b>	T. Abete	M.J. Alava	<b>L. de Arcangelis</b>	S.N. Dorogovtsev
<b>18.45-19.00</b>	K. Jain	C.E. Maloney		M. Pretti

<b>Thursday 12/7 PM Session 15.30-17.00</b>				
Topic	1C	3C	7C	10D
	Levante	Maestrale	Scirocco	Grecale
Chair	P. Gaspard	J. Krug	M. Zannetti	T. Hwa
15.30-15.45	M. Aizenman	M. Barma	M. Kardar	Q. Ou-Yang
15.45-16.00				
16.00-16.15	N. Macris	P. Sollich	C. Holm	O. Biham
16.15-16.30	P. Kleban		W. Paul	S. Sumedha
16.30-16.45	H. Hong	R.J. Harris	A. Fasolino	S. Cocco
16.45-17.00	D. Kleinhans	G. Bel	S.V. Buldyrev	S.K. Baek

<b>Thursday 12/7 PM Session 17.30-19.00</b>				
Topic	5B	6C	9C	11D
	Levante	Scirocco	Maestrale	Grecale
Chair	R. Pandit	E. Tosatti	V. Dotsenko	A. Erzan
17.30-17.45	R. Livi	F. Bresme	S. Franz	D. Farmer
17.45-18.00				
18.00-18.15	B. Eckhardt	M. Napiorkowski	C. Toninelli	I. Kondor
18.15-18.30		R. Teshigawara		
18.30-18.45	P. Manneville	M. Rauscher	M.A. Moore	K.Y.M. Wong
18.45-19.00	F. Ginelli	A.M. Maciolek	S. Boettcher	M. Marsili

<b>Friday 13/7 AM Session 09.00-10.30</b>				
Topic	1D	3D	7D	11E
	Levante	Maestrale	Grecale	Scirocco
Chair	D. Dhar	M. Barma	G. Franzese	P. Grassberger
09.00-09.15	Y. Kafri	T. Sasamoto	K. Kremer	R. Golestanian
09.15-09.30	P.A. Pearce			
09.30-09.45	A. Procacci	J. Krug	A. Scala	T. Antal
09.45-10.00	J. De Gier	S. Sasa	A.J. Moreno	H. Takayasu
10.00-10.15	P. Gaspard	T. Speck	S. Bastea	K.I. Goh
10.15-10.30	I. Junier	M.A. Munoz	G.E. Schroder-Turk	C. Valeriani

Friday 13/7 PM Session 11.00-12.30				
Topic	4D	6D	9D	11F
	Levante	Scirocco	Maestrale	Grecale
Chair	B. Sapoval	G. Ruocco	I. Giardina	M. Marsili
11.00-11.15	D. Queré	M. Mueller	G. Biroli	T. Tanaka
11.15-11.30				
11.30-11.45	R. Cuerno	Th. Hiester	T. Jorg	D. Sherrington
11.45-12.00	J.N. Aqua	E. Tosatti	C. Giberti	V. Van Kerrebroeck
12.00-12.15	L. Angheluta	K. Bohinc	O. Melchert	J.J. Schneider
12.15-12.30	A. Chatterji	E. Caupin	T. Aspelmeier	H. Nishimori

Friday 13/7 PM Session 15.30-17.00				
Topic	5C	3E	7E	10E
	Levante	Maestrale	Grecale	Scirocco
Chair	M.A. Munoz	H. Fogedby	M. Rovere	R. Golestanian
15.30-15.45	H. Chaté	M.J. De Oliveira	A. Petri	S. Hell
15.45-16.00				
16.00-16.15	J. Tailleur	U. Seifert	V. Narayan	R. De
16.15-16.30	M. Verma		P. Pfliederer	S. Ares
16.30-16.45	M. Martins Afonso	P.M. Goldbart	P. Hebraud	A.M. Klein
16.45-17.00	J. Kalda	G.M. Buendia	B. Sapoval	T.Hwa (30 min)

Friday 13/7 PM Session 17.30-19.00				
Topic	Scirocco	Maestrale	Levante	Grecale
	2C	3F	8C	11G
	Scirocco	Maestrale	Levante	Grecale
Chair	F. Colaiori	C. Castellano	E. Cappelluti	A. Baldassarri
17.30-17.45	V. Vitelli	H. Park	T. Senthil	F. Sylos Labini
17.45-18.00				
18.00-18.15	R.M. Ziff	K. Takeuchi	V.N. Ryzhov	G. Caldarelli
18.15-18.30	G. Tarjus	O. Dauchot	L.N. Oliveira	
18.30-18.45	K. Uzelac	A. Zoia	T. Roskilde	B. Toth
18.45-19.00	F.D. Nobre	Y. Park	F. Anfuso	B. Tadic

# Scientific Program

## *Monday 9<sup>th</sup> July*

08.30	Registration	
09.00	Opening: <b>L. Pietronero</b>	Auditorium
09.30	Plenary Lecture: <b>J.P. Bouchaud</b>	Auditorium
10.20	Coffee Break	
10.50	Plenary Lecture: <b>S. Leibler</b>	Auditorium
11.40	Plenary Lecture: <b>A. Montanari</b>	Auditorium
12.30	Lunch	
14.00	Poster Session, Topic: <b>1, 2, 8</b>	Module 8 (I, II, III floor)
15.30	Oral Contributions: Parallel sessions <b>1A, 3A, 6A, 11A</b>	Scirocco, Maestrale, Levante, Grecale
17.00	Coffee Break	
17.30- 19.00	Oral Contributions: Parallel sessions <b>2A, 4A, 7A, 10A</b>	Scirocco, Levante, Maestrale, Grecale

08.30 **Registration**

09.00 **Opening: L. Pietronero, Chairman, Hall: Auditorium**

**Plenary Session, Chair: D. Mukamel, Hall: Auditorium**

09.30 **J.P. Bouchaud**, *Growth of amorphous long-range order in viscous liquids and the glass transition*  
Cea Saclay, France

**Plenary Session, Chair: G. Parisi, Hall: Auditorium**

10.50 **S. Leibler**, *Noise, information and survival: some lessons from microbes*  
Rockefeller Univ, New York, USA

- 11.40 **A. Montanari**, *Phase Transitions and Gibbs Measures in Information and Communication Systems*  
Stanford University and Ecole Normale Supérieure., Paris, France

**12.30-14.00 Lunch Break**

**Session 1A, Topic 1, Chair: T. Guttman, Hall: Scirocco**

- 15.30 **H. Tasaki**, *Hubbard model and the origin of Ferromagnetism*  
Gakushuin Univ., Tokyo, Japan
- 16.00 **F.C. Alcaraz**, *Density-functional formulations for quantum chains*  
Instituto de Fisica De Sao Carlos, Universidade de Sao Paulo, Brazil
- 16.15 **M.T. Batchelor**, *Bethe Ansatz integrable models and cold quantum matter: the atomic Fermi gas*  
Department of Theoretical Physics and Mathematical Sciences Institute, The Australian National University, Canberra, Australia
- 16.30 **F. Capasso**, *Experimental investigation of the Casimir effect with non-trivial boundary conditions*  
School of Engineering and Applied Sciences, Harvard University, Cambridge MA, USA
- 16.45 **R. Santachiara**, *Entanglement properties and moment distributions of a system of hard-core anyons on a ring*  
LPT-ENS, Paris, France

**Session 3A, Topic 3, Chair: A. Politi, Hall: Maestrale**

- 15.30 **A. Dhar**, *Heat conduction in harmonic and anharmonic lattices*  
Raman Research Inst., Bangalore, India
- 16.00 **S. Lepri**, *Anomalous heat transport in one-dimensional many-particles models*  
Istituto dei Sistemi Complessi ISC-CNR, Sesto Fiorentino, Italy
- 16.15 **J. Lukkarinen**, *Anomalous energy transport in the FPU-beta chain*  
Zentrum Mathematic, TU Munich, Germany
- 16.30 **E. Foulaadvand**, *Characteristics of asymmetric simple exclusion process in the presence of quenched spatial disorder*  
Department of Physics, Zanjan University, Iran
- 16.45 **L. Laurson**, *1/f noise and avalanche scaling: Theory and applications in non-equilibrium systems*  
Helsinki University of Technology, Finland

**Session 6A, Topic 6, Chair: H.E. Stanley, Hall: Levante**

- 15.30 **M. Barbosa**, *Thermodynamic, Dynamic and Structural Anomalous Behavior of Simple Liquids*  
UFRGS, Porto Alegre, Brazil
- 16.00 **F. Sciortino**, *Empty Liquids and Ideal Gels*  
"Sapienza" University of Rome, Italy
- 16.30 **E. Chacon**, *Molecular diffusion at liquid surfaces*  
Instituto de Ciencia de Materiales de Madrid, Spain
- 16.45 **M. Rovere**, *Phase diagram of a fluid confined in a fractal porous materials*  
Università Roma Tre, Dipartimento di Fisica, Roma, Italy

**Session 11A, Topic 11, Chair: M.M. Telo Da Gama, Hall: Grecale**

- 15.30 **D. Chowdury**, *Intra-cellular traffic: Bio-molecular motors on filamentary tracks*  
Department of Physics, Indian Inst. of Technology, Kanpur, India
- 16.00 **N.R. Moloney**, *Extreme value statistics in correlated systems*  
Eötvös University, Budapest, Hungary
- 16.15 **J. Davidsen**, *Networks of recurrent events, a theory of records, and an application to finding causal signatures in seismicity*  
Department of Physics and Astronomy, University of Calgary, Alberta, Canada
- 16.30 **H. Meyer-Ortmanns**, *Spin dynamics as an approach to social balance and an optimization problem of computer science*  
Jacobs University Bremen, Germany
- 16.45 **J.P. Neirotti**, *Inference through replication*  
NCRG, Aston University- United Kingdom

**Session 2A, Topic n. 2, Chair: M. Kosterlitz, Hall: Scirocco**

- 17.30 **D. Achlioptas**, *Constraint Satisfaction Problems: From Physics to Algorithms*  
Univ. of California Santa Cruz, USA
- 18.00 **S. Perez-Gavero**, *The spin glass transition of the three dimensional Heisenberg spin glass*  
Universidad de Zaragoza, Spain
- 18.15 **M. Caselle**, *String theory description of the interface free energy*  
Dip. Fisica Teorica dell'Università di Torino and INFN Torino, Italy

- 18.30 **A.A. Fedorenko**, *A functional renormalization group approach to systems with long-range correlated disorder*  
CNRS-Laboratoire de Physique Théorique de l'Ecole Normale Supérieure,  
Paris, France
- 18.45 **D. Dhar**, *Entropy of covering hypercubical lattice in  $d$  dimensions by long rigid rods*  
Tata Institute of Fundamental Research, Mumbai, India

**Session 4A, Topic 4, Chair: M. Alava, Hall: Levante**

- 17.30 **J.S. Andrade**, *Particle transport and flow in irregular structures*  
Univ. Fed. do Ceará, Fortaleza, Brazil
- 18.00 **L. Mahadevan**, *Soft hydraulics: physics and physiology of gels, cells and tissues*  
Harvard Univ., Cambridge, USA
- 18.30 **J. Vollmer**, *Instabilities and pattern formation in phase-separating fluids*  
MPI Dynamics & Self Organization Germany
- 18.45 **F. Brau**, *Spark ionization fronts as Laplacian moving boundaries: boundary approximation and solutions*  
CWI, Amsterdam, The Netherlands

**Session 7A, Topic 7, Chair: H. J. Hermann, Hall: Maestrale**

- 17.30 **T. Aste**, *Insights into disorder: the structure of granular materials*  
Australian Nat. Univ., Canberra, Australia
- 18.00 **D. Lohse**, *Impact on soft sand: Void collapse and jet formation*  
Univ. of Twente, The Netherlands
- 18.30 **A. Puglisi**, *A Granular Brownian Ratchet Model*  
"Sapienza", Università di Roma, Italy
- 18.45 **H.M. Wyss**, *Rheological probes of the relaxation dynamics of densely packed soft colloids*  
Harvard University, HSEAS, Cambridge, MA, USA

**Session 10A, Topic 10, Chair: D. Bensimon, Hall: Grecale**

- 17.30 **M. Manosas**, *Force-induced misfolding in RNA*  
Department de Física Fundamental, Universitat de Barcelona, Spain
- 17.45 **P. Virnau**, *Knots in Proteins, DNA and Polymers: Statistics, Function and Evolution*  
Johannes Gutenberg University Mainz, Department of Physics, Germany

- 18.00 **T. Ferraro**, *A spin lattice model for eukaryotic directional sensing*  
Dipartimento di Scienze Fisiche, Università di Napoli Federico II, Napoli, Italy
- 18.15 **S.C. Park**, *Clonal interference in large populations*  
Institute for Theoretical Physics, University of Cologne, Cologne Germany
- 18.30 **R. Ramaswamy**, *Effective mechanisms for the synchronization of stochastic oscillators*  
School of Physical Sciences, Jawaharlal Nehru University, New Delhi, India
- 18.45 **M.H. Jensen**, *Oscillations and temporal signalling in cells*  
The Niels Bohr Institute, Copenhagen, Denmark

## Tuesday 10<sup>th</sup> July

09.00	Oral Contributions: Parallel Sessions <b>8A, 9A, 11B, 1B</b>	Levante, Maestrale, Grecale, Scirocco
10.30	Coffee Break	
11.00	Oral Contributions: Parallel Sessions, <b>3B, 5A, 6B, 10B</b>	Grecale, Levante, Scirocco, Maestrale
12.30	Lunch	
14.00	Poster Session, Topic: <b>3, 4, 5</b>	Module 8 (I, II, III floor)
15.30	Oral Contributions: Parallel sessions <b>8B, 4B, 7B, 10C</b>	Scirocco, Levante, Grecale, Maestrale
17.00	Coffee Break	
17.30	Oral Contributions: Parallel sessions <b>2B, 4C, 9B, 11C</b>	Scirocco, Levante, Maestrale, Grecale
19.10	Humans Rights Session	Maestrale

### Session 8A, Topic 8, Chair: F. Capasso, Hall: Levante

- 09.00 **B. Althshuler**, *Many-Body Localization*  
Columbia Univ. New York, USA
- 09.30 **H. Obuse**, *Conformal Invariance in Two-Dimensional Electron Systems with Quenched Disorder*  
Condensed Matter Theory Laboratory, Riken, Wako, Saitama, Japan
- 09.45 **Y. Hatsugai**, *Gauge Dependent Local Order Parameters of Quantum Disordered States*  
Institute of Physics, University of Tsukuba, Tennodai Tsukuba, Ibaraki, Japan
- 10.00 **G. Schehr**, *Strong-Disorder Fixed Point in the Dissipative Random Transverse-Field Ising Model*  
Laboratoire de Physique Théorique, Université de Paris Sud, France
- 10.15 **S. Balibar**, *Supersolidity and disorder in quantum crystals*  
Laboratoire de Physique Statistique ENS, Paris, France

**Session 9A, Topic 9, Chair: D. Sherrington, Hall: Maestrale**

- 09.00 **P.G. Wolynes**, *The Theory of Glasses*  
Univ. of California, San Diego, USA
- 09.30 **N. Schupper**, *Direct Identification of the Glass Transition: Growing Length Scale and the Onset of Plasticity*  
Weizmann Institute of Science, Rehovot, Israel
- 09.45 **F. Sausset**, *Geometric Frustration and the glass transition: the Lennard-Jons liquid on the hyperbolic plane*  
LPTMC, University Pierre et Marie Curie, CNRS, Paris, France
- 10.00 **D. Dominguez**, *Aging dynamics and effective temperature of the vortex glass in superconductors*  
Centro Atomico Bariloche, S.C. de Bariloche, Argentina
- 10.15 **M. Weigel**, *Defect energies and spin stiffness for continuous spin glasses*  
Department of Mathematics, Heriot-Watt University, Edinburgh, UK

**Session 11B, Topic 11, Chair: H. Takayasu, Hall: Grecale**

- 09.00 **A. Benyoussef**, *Disorder Effect On The Traffic Flow Behavior*  
University Mohammed V, Rabat, Morocco
- 09.30 **A. Cavagna**, *Three-dimensional reconstruction of starlings in flight: an experimental investigation of collective behaviour*  
ISC-CNR and SMC-INFM, Rome, Italy
- 09.45 **A. Schadschneider**, *Empirical results for traffic flow on ant trails: absence of jammed phase*  
Institute for Theoretical Physics, Universitaet zu Koeln, Cologne Germany
- 10.00 **S. Rambaldi**, *Physics of the City Lab: an exponential car mobility law*  
Physics of the City Lab, Dep. of Physics, University of Bologna, Italy
- 10.15 **M.M. Telo Da Gama**, *Sustained oscillations in simple epidemic models*  
Departemento de Fisica e Centrio de Fisica Teorica e Computacional, Faculdade de Ciencias da Universidade de Lisboa, Lisboa, Portugal.

**Session 1B, Topic 1, Chair: C. Tsallis, Hall: Scirocco**

- 09.00 **S. Ruffo**, *Dynamics and thermodynamics of systems with long-range interactions*  
Univ.,of Firenze, Italy.
- 09.30 **A. Giuliani**, *Spin models with long range competing interactions: striped nature of the ground states*  
Princeton University, USA

- 09.45 **U. Tirnakli**, *Central limit behaviour of deterministic dynamical systems*  
Department of Physics, Ege University, Izmir, Turkey
- 10.00 **J. Naudts**, *Average entanglement in a microcanonical ensemble*  
Departement Fysica, Universiteit Antwerpen, Antwerpen, Belgium
- 10.15 **G. Mussardo**, *Two-dimensional statistical models away from their integrable lines*  
Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste, Italy

**10.30-10.50 Coffee Break**

**Session 3B, Topic 3, Chair: S. Redner, Hall: Grecale**

- 11.00 **A. Bray**, *Exact results in two-dimensional coarsening*  
School of Physics and Astronomy Univ. of Manchester, UK
- 11.30 **J.M. Kosterlitz**, *State Selection by Stochastic Noise*  
Dept. Physics, Brown University, Providence, USA
- 11.45 **A. Sicilia**, *Domain growth morphology in 2d*  
Université Pierre et Marie Curie, Paris VI, Paris, France
- 12.00 **D.P. Landau**, *Monte Carlo simulations of domain growth in 2-dim compressible Ising models*  
Center for Simulation Physics, The University of Georgia, USA
- 12.15 **G.M. Schuetz**, *Boundary-induced phase transitions in two-component lattice gases*  
Institut fuer Festkoerperforschung, Forschungszentrum Juelich, Germany

**Session 5A, topic 5, Chair: A. Robledo, Hall: Levante**

- 11.00 **R. Pandit**, *Dynamic multiscaling in turbulence*  
Indian Institute of Science, Bangalore, India
- 11.30 **S. Succi**, *Lattice Boltzmann across scales: from turbulence to DNA translocation*  
IAC-CNR, Roma, Italy
- 12.00 **E. Guillard**, *How fast is homogenization in large-scale chaotic mixers?*  
Service de Physique de l'Etat Condensé, DSM, CEA, Saclay, Gif-Sur-Yvette, France
- 12.15 **A. Seminara**, *The large-scale anisotropy of passive scalar turbulence*  
Dep. of Physics, University Of Genova, Genova, Italy

**Session 6B, Topic 6, Chair: S. Dietrich, Hall: Scirocco**

- 11.00 **L. Demirel**, *Polymer and nanoparticle based superhydrophobic surfaces: supports for optical microcavities of liquid microdroplets*  
Koc Univ., Istanbul, Turkey
- 11.30 **B. Ocko**, *Liquids on the Nanoscale*  
Brookhaven Nat. Lab, Stony Brook, USA
- 12.00 **D. Vandembroucq**, *Frozen capillary waves on glass surfaces: an AFM study*  
Laboratoire SVI, Unité Mixte CNRS/Saint Gobain, Paris, France
- 12.15 **A. Milchev**, *Capillary Filling in Polymer-Brush-Coated Nanotubes-Molecular Dynamics Results*, Institute of Physical Chemistry  
Bulgarian Academy of Sciences, Sofia, Bulgaria

**Session 10B, Topic 10, Chair: M. H. Jensen, Hall: Maestrale**

- 11.00 **E. Domany**, *Genomic Instabilities, DNA copy number changes and Cancer*  
Weizmann Institute, Rehovot, Israel
- 11.30 **A. Hanke**, *Denaturation Transition of Stretched DNA*  
Department of Physics, University of Texas at Brownsville, TX, USA
- 11.45 **B. Burghardt**, *Designability of RNA secondary structures*  
Institut fuer Theoretische Physik, Universitaet Goettingen, Goettingen, Germany
- 12.00 **A.G. Cherstvy**, *Electrostatic interactions between DNA duplexes and nucleosome core particles*  
Max Planck Institut fuer Physik komplexer Systeme, Dresden, Germany
- 12.15 **L.A. Mirny**, *How does a protein find its site on DNA?*  
Division of Health Science and Technology, Dept. of Physics, MIT, Cambridge, USA

**12.30-14.00 Lunch Break**

**Session 8B, Topic 8, Chair: H. Nishimori, Hall: Scirocco**

- 15.30 **K. Schoutens**, *Superfrustration of charge degrees of freedom*  
Univ. of Amsterdam, The Netherlands
- 16.00 **A.V. Syromyatnikov**, *Bose-Einstein condensation of magnons in magnets with predominant ferromagnetic interaction*  
Petersburg Nuclear Physics Institute, Gatchina, St. Petersburg, Russia
- 16.15 **D.C. Cabra**, *Excitations with fractional spin less than 1/2 in frustrated magnetoelastic chains*  
Lab. de Physique Théorique, Université Louis Pasteur, Strasbourg, France

16.30 **G.E. Santoro**, *Quantum annealing of a random Ising chain*  
International School for Advanced Studies (SISSA), Trieste, Italy

**Sessions 4B, Topic 4, Chair: W. Van Saarloos, Hall: Levante**

15.30 **H. Hilhorst**, *Statistics of Voronoi tilings*  
Univ. of Paris sud, Orsay, France

16.00 **S.R. Quake**, *Microfluidic Pattern Formation*  
Stanford University, USA

16.30 **S. Tanaka**, *Patterns in dilute surfactant solutions induced by the viscoelastic phase separation and wetting*  
Hiroshima University, Japan

16.45 **A.A. Nepomnyashchy**, *Instabilities and pattern formation in diffusion-reaction systems with anomalous diffusion*  
Technion- Israel Institute of Technology, Haifa, Israel

**Session 7B, Topic 7, Chair: P. Tartaglia, Hall: Grecale**

15.30 **A. Sood**, *Spatio-Temporal rheochaos in the flow of micellar gels*  
Indian Inst. of Science, Bangalore, India

16.00 **V. Martin-Mayor**, *Phase diagram of a polydisperse soft-spheres model for liquids and colloids*  
Departamento de Fisica Teorica I, Universidad Complutense de Madrid, Spain

16.15 **A.E. Cervantes Martinez**, *Study of coarsening on aqueous foams stabilized by silica nanoparticles*  
Laboratoire de Physique des Solides, Université Paris Sud, Orsay, France

16.30 **M. Fuchs**, *Non-linear rheological properties of dense colloidal dispersions*  
Fachbereich Physik, University Konstanz, Konstanz, Germany

16.45 **A.K. Dasmahaptra**, *Effect of copolymer microstructure on single chain collapse*  
Department of Chemical Engineering, Indian Institute of Technology Bombay, India

**Session 10C, Topic 10, Chair: E. Domany, Hall: Maestrale**

15.30 **T. Harada**, *Intermittent fluctuations in a single cardiac cell*  
Dep. of Human and Artificial Intelligent Systems Univ. of Fukui, Japan

15.45 **S. Cebrat**, *Modelling the genetic phenomena responsible for sympatric speciation*  
Dep. of Genomics, Faculty of Biotechnology, Wroclaw Univ., Poland

16.00 **M.R. Evans**, *Modelling fungal hyphal growth with an exclusion process*  
School of Physics, University of Edinburgh, United Kingdom

- 16.15 **A.B. Kolomeisky**, *Channel-facilitated molecular transport across membranes: attraction, repulsion and asymmetry*  
Department of Chemistry, Rice University, Houston, Texas, USA

**17.00-17.30 Coffee Break**

**Session 2B, Topic 2, Chair: A. Coniglio, Hall: Scirocco**

- 17.30 **A. Gambassi**, *Relaxation phenomena at criticality*  
MPI fuer Metallforschung, Stuttgart, Germany
- 18.00 **M.E. Fisher**, *Near-critical electrolytes: are the charge-charge sum rules obeyed?*  
Institute for Physical Science and Technology, University of Maryland, MD, USA
- 18.15 **A. De Candia**, *Order-disorder transition in a model of colloidal particles*  
Università di Napoli, Dipartimento di Scienze Fisiche, Italy
- 18.30 **T. Abete**, *Percolation and irreversible gelation: statics and dynamics*  
Dipartimento di Scienze Fisiche, Università degli Studi di Napoli Federico II, Italy
- 18.45 **K. Jain**, *Relaxation times of unstable states in systems with long range interactions*  
Weizmann Institute of Science, Israel

**Session 4C, Topic 4, Chair: S. Zapperi, Hall: Levante**

- 17.30 **M.C. Miguel**, *Material yielding and irreversible deformation: the role of defects, geometry and disorder*  
Univ. de Barcelona, Spain
- 18.00 **H. Herrmann**, *Fragmentation and Fatigue*  
Institute for Building Materials (IFB), ETH, Zurich, Switzerland
- 18.15 **D. Bonamy**, *Model of crack growth in 3D disordered materials: Predictions on the scaling properties of fracture surfaces*  
Service de Physique et Chimie des Surfaces et Interfaces, DSM/DRECAM/SPCSI, CEA Saclay, Gif Sur Yvette, France

- 18.30 **M.J. Alava**, *Disorder and the statistical physics of size-scaling of material strength*  
Helsinki University of Technology, Laboratory of Physics, Finland
- 18.45 **C.E. Maloney**, *Spontaneous shear localization in a model brittle solid*  
The John Hopkins University, Department of Physics and Astronomy,  
Baltimore, MD, USA

**Session 9B Topic 9, Chair: A. Zippelius, Hall: Maestrale**

- 17.30 **J. Kurchan**, *A Landscape Analysis of Constraint Satisfaction Problems*  
ESPCI Paris, France
- 18.00 **S. Ramaswamy**, *Properties of fluids under strong confinement: a mode coupling approach*  
Centre for Condensed Matter Theory, Indian Institute of Science,  
Bangalore, India
- 18.15 **V. Dupuis**, *Slow dynamics and aging in glassy ferrofluids*  
Laboratoire des Liquides Ioniques et Interfaces Chargées, Université  
Pierre et Marie Curie, Paris, France
- 18.30 **L. de Arcangelis**, *Statistical properties and universality in earthquake and solar flare occurrence*  
Second University of Naples, Italy

**Session 11C, Topic 11, Chair: B. Kahng, Hall: Grecale**

- 17.30 **M.E.J. Newman**, *Complex structures in complex networks*  
Santa Fe Institute, USA
- 18.00 **M. Hinczewski**, *Unusual phase transitions in scale-free networks: algebraic order and griffiths singularities in small-world and fractal hierarchical lattices*  
Feza Gursev Institute, TUBITAK, Bosphorus University Istanbul, Turkey
- 18.15 **H. Agrawal**, *Topological phase transitions in networks give truncated power-law tails in degree distributions*  
Mechanical Engineering Group, Birla Institute of Technology and Science,  
Pilani, Rajasthan, India
- 18.30 **S.N. Dorogovtsev**, *Critical phenomena and finite-size effects in growing networks*  
Departamento de Fisica da Universidade de Aveiro, Portugal
- 18.45 **M. Pretti**, *Emergence of extensive  $q$ -regular subgraphs in random graphs: a statistical-physics approach*  
Dipartimento di Fisica, Politecnico di Torino, Italy

## Wednesday 11<sup>th</sup> July

09.00	Plenary Lecture: <b>A. Vespignani</b>	Auditorium
09.50	Plenary Lecture: <b>R. Grimm</b>	Auditorium
10.40	Coffee Break	
11.10	Young Scientist Award	Auditorium
11.20	Boltzmann Medal Ceremony	Auditorium
11.30	Boltzmann: <b>K. Binder</b>	Auditorium
12.20	Boltzmann: <b>G. Gallavotti</b>	Auditorium
13.10	Lunch	
14.40		Free Afternoon

### Plenary Session, Chair: J. Lebowitz, Hall: Auditorium

09.00 **A. Vespignani**, *Epidemic spreading and complex networks*  
Indiana Univ. Bloomington, USA

09.50 **R. Grimm**, *Ultracold Fermi Gases*  
Univ. of Innsbruck, Austria

### 10.40-11.10 Coffee Break

11.10 **Young Scientist Award, Chair: M.E. Fisher, Hall: Auditorium**

11.20 **Boltzmann Medal Ceremony**

11.30 **K. Binder**, *Monte Carlo methods for the study of phase transitions and phase equilibria*  
Institute of Physics, Johannes Gutenberg University, Mainz, Germany

12.20 **G. Gallavotti**, *Boltzmann's heat theorem and fluctuation theorem: from order to chaos*  
"Sapienza" Università di Roma, Italy

### 13.10-14.40 Lunch Break

## Thursday 12<sup>th</sup> July

09.00	Plenary Lecture: <b>J.Cardy</b>	Auditorium
09.50	Plenary Lecture: <b>C. Jarzynski</b>	Auditorium
10.40	Coffee Break	
11.10	Plenary Lecture: <b>H.N. Lekkerkerker</b>	Auditorium
12.30	Lunch	
14.00	Poster Session, Topic: <b>6, 7, 9</b>	Module 8 (I, II, III floor)
15.30	Oral Contributions: Parallel sessions <b>1C, 3C, 7C, 10D</b>	Levante, Maestrone, Scirocco, Grecale
17.00	Coffee Break	
17.30	Oral Contributions: Parallel sessions <b>5B, 6C, 9C, 11D</b>	Levante, Scirocco, Maestrone, Grecale
19.10	Women in Physics Session	Maestrone

### Plenary Session, Chair: D. Dhar, Hall: Auditorium

- 09.00 **J. Cardy**, *Entanglement Entropy in Extended Quantum Systems*  
Univ. of Oxford, UK
- 09.50 **C. Jarzynski**, *Nonequilibrium work theorems: foundations and applications*  
Univ. of Maryland, USA

### 10.40-11.10 Coffee Break

### Plenary Session, Chair: P. Chaikin, Hall: Auditorium

- 11.10 **H.N. Lekkerkerker**, *Life at ultralow interfacial tension: wetting, waves and droplets in demixed colloid-polymer mixtures*  
Univ. of Utrecht, The Netherlands

### 12.30-14.00 Lunch Break

**Session 1C, Topic 1, Chair: P. Gaspard, Hall: Levante**

- 15.30 **M. Aizenman**, *Insights from statistical mechanics on the spectra and dynamics of operators with disorder*  
Princeton Univ., USA
- 16.00 **N. Macris**, *Exact solution of a p-spin glass model with gauge symmetry*  
Ecole Polytechnique Fédérale de Lausanne, Switzerland
- 16.15 **P. Kleban**, *Exact Factorization of Correlations in 2-D Critical Percolation*  
LASST and Department of Physics and Astronomy, University of Maine, Orono, ME, USA
- 16.30 **H. Hong**, *Anomalous finite-size scaling of synchronization on networks*  
Department of Physics, Chonbuk, National University Korea
- 16.45 **D. Kleinhans**, *Estimation of Drift and Diffusion function in presence of measurement noise*  
Institut fuer Theoretische Physik, Westfaelische Wilhelms Universitaet Muenster, Germany

**Session 3C, Topic 3, Chair: J. Krug, Hall: Maestrale**

- 15.30 **M. Barma**, *Clustering of sliding passive scalars driven by fluctuating surfaces*  
Tata Institute, Mumbai, India
- 16.00 **P. Sollich**, *Negative fluctuation-dissipation ratios and activated aging dynamics in kinetically constrained glass models*  
King's College Univ. of London, UK
- 16.30 **R.J. Harris**, *Fluctuation relations and the zero-range process*  
Universitaet des Saarlandes, Germany
- 16.45 **G. Bell**, *Ergodicity Breaking in the Continuous Time Random Walk*  
Chemistry Department, University of California, Santa Barbara, CA, USA

**Session 7C, Topic 7, Chair: M. Zannetti, Hall: Scirocco**

- 15.30 **M. Kardar**, *The elusiveness of polymer knots*  
MIT, Boston, USA
- 16.00 **C. Holm**, *Electrophoresis of short polyelectrolytes: the importance of hydrodynamic interactions*  
FIAS, J.W. Goethe University, Frankfurt/Main, Germany
- 16.15 **W. Paul**, *Gas, liquid and solid phases of a single flexible macromolecule*  
Institut fuer Physik, Johannes Gutenberg University, Mainz, Germany

- 16.30 **A. Fasolino**, *Ripples in graphene: Monte Carlo simulations compared to theory of tethered membranes*  
Institute for Molecules and Materials, Radboud University Nijmegen, Nijmegen, The Netherlands
- 16.45 **S.V. Buldyrev**, *A physical mechanism underlying the increase of aqueous solubility of nonpolar compounds and the denaturation of proteins upon cooling*  
Department of Physics, Yeshiva University, New York, NY, USA

**Session 10D, Topic 10, Chair: T. Hwa, Hall: Grecale**

- 15.30 **Q. Ou-Yang**, *Robustness and modular design of a biological network*  
Dept. of Physics, Peking Univ., China
- 16.00 **O. Biham**, *Stochastic simulations of genetic regulatory networks*  
Racah Institute of Physics, The Hebrew University, Jerusalem, Israel
- 16.15 **S. Sumedha**, *Population size effects in evolutionary dynamics on neutral networks*  
University of Paris-Sud, Orsay, France; CNRS, Orsay, France
- 16.30 **S. Cocco**, *On the inverse Ising problem: application to neural networks data*  
ENS Paris, France
- 16.45 **S.K. Baek**, *Memory-limited Strategies in Iterated Prisoner's Dilemma*  
Department of Physics, BK21 Physics Research Division and Institute of Basic Science, Sungkyunkwan University, Suwon, Rep. of Korea

**17.00-17.30 Coffee Break**

**Session 5B, Topic 5, Chair: R. Pandit, Hall: Levante**

- 17.30 **R. Livi**, *Synchronization in Spatially Extended Systems*  
Dipartimento di Fisica, Sesto Fiorentino, Italy
- 18.00 **B. Eckhardt**, *How does flow in a pipe become turbulent*  
Univ. of Marburg, Germany
- 18.30 **P. Manneville**, *Statistical properties of the turbulent-laminar transition in plane Couette flow*  
LadHyx, Ecole Polytechnique, Palaiseau, France
- 18.45 **F. Ginelli**, *Characterizing dynamics through covariant Lyapunov vectors*  
Service de Physique de l'Etat Condensé, CEA/Saclay, Gif sur Yvette, France

**Session 6C, Topic 6, Chair: E. Tosatti, Hall: Scirocco**

- 17.30 **F. Bresme**, *Nanoparticles at fluid interfaces*  
Imperial College, London, UK
- 18.00 **M. Napiorkowski**, *Line tension and wetting of chemically inhomogeneous substrates*  
Institute for Theoretical Physics, University of Warsaw, Warszawa, Poland
- 18.15 **R. Teshigawara**, *Wetting dynamics with evaporation and condensation*  
Department of Physics, Kyoto University, Japan
- 18.30 **M. Rauscher**, *Thin film dynamics influenced by thermal fluctuations*  
Max Planck Institute for Metals Research, Stuttgart, Germany
- 18.45 **A.M. Maciolek**, *Effective forces induced by fluctuating interface: exact results*  
Max Plank Institut fuer Metallforschung, Stuttgart, Germany

**Session 9C, Topic 9, Chair: V. Dotsenko, Hall: Maestrale**

- 17.30 **S. Franz**, *Glasses and spin glasses with long but finite interaction range*  
ICTP, Trieste, Italy
- 18.00 **C. Toninelli**, *Jamming percolation and glass transition in lattice models*  
Laboratoire de Probabilités et Modèles Aléatoires, Univ. Paris VI-VII, France
- 18.30 **M.A. Moore**, *Finite size corrections in the SK model*  
School of Physics and Astronomy, University of Manchester, Manchester, UK
- 18.45 **S. Boettcher**, *Simulations of Ising Spin Glasses on bond-diluted Lattices*  
Physics Dept., Emory University, Atlanta, GA, USA

**Session 11D, Topic 11, Chair: A. Erzan, Hall: Grecale**

- 17.30 **D. Farmer**, *Explaining supply and demand: structure vs. strategy*  
Santa Fe Institute, USA
- 18.00 **I. Kondor**, *Critical phenomena in portfolio selection*  
Collegium Budapest, Hungary
- 18.30 **K.Y.M. Wong**, *Models of Financial Markets with Extensive Participation Incentives*  
Hong Kong University of Science and Technology, Hong Kong
- 18.45 **M. Marsili**, *Coarsening in the Schelling segregation model*  
Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy

## Friday 13<sup>th</sup> July

09.00	Oral Contributions: Parallel Sessions <b>1D, 3D, 7D, 11E</b>	Levante, Maestrale, Grecale, Scirocco
10.30	Coffee Break	
11.00	Oral Contributions: Parallel Sessions <b>4D, 6D, 9D, 11F</b>	Levante, Scirocco, Maestrale, Grecale
12.30	Lunch	
14.00	Poster Session, Topic: <b>10, 11</b>	Module 8 (I, II, III floor)
15.30	Oral Contributions: Parallel sessions <b>5C, 3E, 7E, 10E</b>	Levante, Maestrale, Grecale, Scirocco
17.00	Coffee Break	
17.30- 19.00	Oral Contributions: Parallel sessions <b>2C, 3F, 8C, 11G</b>	Scirocco, Maestrale, Levante, Grecale
19.10	Closing Session	Maestrale

### Session 1D, Topic 1, Chair: D. Dhar, Hall: Levante

- 09.00 **Y. Kafri**, *DNA unzipping and the unbinding of directed polymers in a random media*  
Technion, Israel
- 09.15 **P.A. Pearce**, *Solvable Critical Dense Polymers*  
Department of Mathematics and Statistics, University of Melbourne, Australia
- 09.30 **A. Procacci**, *Cluster expansion for abstract polymer models. New bounds from an old approach*  
Dep. Matematica Icx Universidade Federal de Minas Gerais, Belo Horizonte, Brazil
- 09.45 **J. De Gier**, *Exact spectral gaps for the asymmetric exclusion process with boundaries*  
Department of Mathematics and Statistics University of Melbourne, Australia
- 10.00 **P. Gaspard**, *Time-reversal symmetry breaking in nonequilibrium statistical mechanics*  
Université Libre de Bruxelles, Belgium
- 10.15 **I. Junier**, *Free energy recovery of metastable states from a generalized fluctuation theorem*  
University of Barcelona, Barcelona, Spain

**Session 3D, Topic 3, Chair: M. Barma, Hall: Maestrale**

- 09.00 **T. Sasamoto**, *Determinantal structure of the 1D asymmetric exclusion process and KPZ fluctuations*  
Department of Mathematics and Informatics, Chiba University, Japan
- 09.30 **J. Krug**, *Records in a changing world*  
Institute for Theoretical Physics University of Cologne, Cologne, Germany
- 09.45 **S. Sasa**, *An equality related to the violation of a fluctuation-dissipation relation*  
University of Tokyo, Japan
- 10.00 **T. Speck**, *The Fluctuation-Dissipation theorem in nonequilibrium steady states*  
Institut fuer Theoretische Physik, Universitaet Stuttgart, Germany
- 10.15 **M.A. Munoz**, *Non-perturbative nature of a broad class of non-equilibrium phase transitions*  
Instituto de Fisica Teorica y Computacional Carlos III, Universidad de Granada, Spain

**Session 7D, Topic 7, Chair: G. Franzese, Hall: Grecale**

- 09.00 **K. Kremer**, *Simulation studies of soft matter: generic statistical properties and chemical details*  
MPI Mainz, Germany
- 09.30 **A. Scala**, *Assembly via shape-enhanced depletion interactions*  
Institute for Complex Systems (ISC), INFN-CNR, Roma, Italy
- 09.45 **A.J. Moreno**, *Anomalous glassy dynamics in polymeric and non-polymeric mixtures*  
Donostia International Physics Center, San Sebastian, Spain
- 10.00 **S. Bastea**, *Molecular dynamics of nanocolloidal suspensions*  
LLNL, USA
- 10.15 **G.E. Schroder-Turk**, *The morphology of the Gyroid phase in self-assemblies of hard pear-shaped particles*  
Universitaet Erlangen-Nuernberg, Erlangen, Germany

**Session 11E, Topic 11, Chair: P. Grassberger, Hall: Scirocco**

- 09.00 **R. Golestanian**, *Designing swimmers powered by chemical reactions*  
Institute for Theoretical Physics, University of Cologne, Cologne, Germany

- 09.30 **T. Antal**, *Exactly solvable models of molecular spiders*  
Program for Evolutionary Dynamics, Harvard University, Cambridge, MA, USA
- 09.45 **H. Takayasu**, *St. Petersburg paradox and Zipf's law*  
Sony Computer Science Laboratories, Japan
- 10.00 **K.I. Goh**, *Human disease: a complex network approach of human diseases*  
Seoul National University, Korea
- 10.15 **C. Valeriani**, *Classical Nucleation Theory cannot be used to determine solid-liquid interface free energies of crystals*  
FOM-AMOLF, Amsterdam, The Netherlands

**10.30- 11.00 Coffee Break**

**Session 4D, Topic 4, Chair: B. Sapoval, Hall: Levante**

- 11.00 **D. Queré**, *Wetting of microtextured surfaces*  
ESPCI Paris, France
- 11.30 **R. Cuerno**, *Coupled model for nanopattern formation and dynamics on ion-sputtered surfaces*  
Departamento de Matematicas and GISC, Universidad Carlos III de Madrid, Spain
- 11.45 **J.N. Aqua**, *Nonlinear evolution of a morphological instability in a strained epitaxial film*  
IRPHE, Marseille, France
- 12.00 **L. Angheluta**, *Physical mechanisms in the dynamics of stylolitic surfaces*  
Physics of Geological Processes, Dept. Physics, University of Oslo, Norway
- 12.15 **A. Chatterji**, *Epitaxial Growth in coherent, strained, asymmetric alloy films*  
Department of Physics, University of Toronto, ON, Canada

**Session 6D, Topic 6, Chair: G. Ruocco, Hall: Scirocco**

- 11.00 **M. Mueller**, *Phase transitions and interface fluctuations in double wedges and pyramids with competing surface fields*  
Univ. of Goettingen, Germany
- 11.30 **Th. Hiester**, *Dynamics of liquid-vapor interfaces on nanometer scales*  
University Erlangen-Nuernberg, dept. of Theoretical Physics, Erlangen, Germany
- 11.45 **E. Tosatti**, *Physics and nanofriction of nacl surfaces near the melting point*  
SISSA and CNR/INFM Democritos, Trieste, Italy

- 12.00 **K. Bohinc**, *Attraction between equally charged surfaces mediated by nanoparticles*  
Faculty of Electrical Engineering, University of Ljubljana, Ljubljana, Slovenia
- 12.15 **F. Caupin**, *Cavitation and equation of state in water at negative pressure*  
Laboratoire de Physique Statistique de l'Ecole Normale Supérieure (ENS), Paris, France

**Session 9D, Topic 9, Chair: I. Giardina, Hall: Maestrale**

- 11.00 **G. Biroli**, *Dynamic heterogeneity and the emergence of a growing length scale at the glass transition*  
Service de Physique Théorique Orme des Merisiers, Saclay, France
- 11.30 **T. Jorg**, *Some aspects of universality in spin glasses*  
Université Paris Sud, Orsay, France
- 11.45 **C. Giberti**, *Ultrametricity in Short Range Spin Glass*  
Università di Modena e Reggio Emilia, Italy
- 12.00 **O. Melchert**, *Fractal dimension of domain walls in two-dimensional Ising spin glasses*  
Georg August University Gottingen, Germany
- 12.15 **T. Aspelmeier**, *Free energy fluctuations and chaos in mean-field spin glasses*  
Institut fuer Theoretische Physik, Universitaet Gottingen, Germany

**Session 11F, Topic 11, Chair: M. Marsili, Hall: Grecale**

- 11.00 **T. Tanaka**, *Mean field theory of communication*  
Kyoto University, Japan
- 11.30 **D. Sherrington**, *Local attachment leading to power-law distributions in peer-to-peer networks*  
University of Oxford, United Kingdom
- 11.45 **V. Van Kerrebroeck**, *Finding long cycles in graphs*  
"Sapienza" Università di Roma, Italy
- 12.00 **J.J. Schneider**, *Optimization of packing Problems*  
Johannes Gutenberg University of Mainz, Germany
- 12.15 **H. Nishimori**, *Convergence properties of quantum annealing*  
Department of Physics, Tokyo Institute of Technology, Japan

**12.30-14.00 Lunch Break**

**Session 5C, Topic 5, Chair: M. A. Munoz, Hall: Levante**

- 15.30 **H. Chaté**, *Collective dynamics of active particles*  
Cea Saclay, France
- 16.00 **J. Tailleur**, *Probing rare physical trajectories with Lyapunov-Weighted Dynamics*  
Laboratoire PMMH, ESPCI, France
- 16.15 **M. Verma**, *Magnetic field generation and critical Reynolds and Prandtl numbers*  
Department of Physics, IIT Kanpur, India
- 16.30 **M. Martins Afonso**, *Fluid-particle separation in the Batchelor regime with the telegraph-noise model*  
The Weizmann Institute of Science, Rehovot, Israel
- 16.45 **J. Kalda**, *Anomalous scaling behaviour of sticky particles in compressible turbulent flows*  
CENS, Institute of Cybernetics, Tallinn University of Technology

**Session 3E, Topic 3, Chair: H. Fogedby, Hall: Maestrale**

- 15.30 **M.J. De Oliveira**, *Conservative ensembles for nonequilibrium lattice-gas systems*  
Univ. of Sao Paulo, Brazil
- 16.00 **U. Seifert**, *Stochastic thermodynamics: theory and experiments*  
Univ. of Stuttgart, Germany
- 16.30 **P.M. Goldbart**, *Phase-slip avalanching in the flow of superfluid helium-four through arrays of nanosize apertures*  
University of Illinois at Urbana-Champaign, Urbana, Illinois, USA
- 16.45 **G.M. Buendia**, *Nanostructures of Field-Driven Interfaces: Dependence On The Stochastic Dynamics*  
Universidad Simon Bolivar, Caracas, Venezuela

**Session 7E, Topic 7, Chair: M. Rovere, Hall: Grecale**

- 15.30 **A. Petri**, *Stochastic dynamics of a sheared granular medium*  
ISC-CNR, Roma, Italy
- 16.00 **V. Narayan**, *Long-lived Giant Number Fluctuations in a Granular Nematic*  
Indian Institute of Science, Bangalore, India
- 16.15 **P. Pfeleiderer**, *Novel Crystal Phase in Suspensions of Hard Ellipsoids*,  
*Institute for Physics*  
Johannes Gutenberg University, Mainz, Germany

- 16.30 **P. Hebraud**, *Jamming of a concentrated colloidal suspension under flow*  
IPCMS, Strasbourg, France
- 16.45 **B. Sapoval**, *Extreme and Smooth Gradient Percolation or Fractal Exponents without Fractals and Critical Fluctuations without Criticality*  
Laboratoire de Physique de la Matière Condensée, CNRS, Ecole Polytechnique, Palaiseau, France

**Session 10E, Topic 10, Chair: R. Golestanian, Hall: Scirocco**

- 15.30 **S. Hell**, *Breaking Abbe's barrier: Far field fluorescence microscopy with diffraction-unlimited resolution*  
MPI Biophys. Chem., Goettingen, Germany
- 16.00 **R. De**, *Dynamics of Cell Orientation*  
Weizmann Institute of Science, Rehovot, Israel
- 16.15 **S. Ares**, *Waves of gene expression in vertebrate segmentation*  
Max Planck Institute for the Physics of Complex Systems, Dresden, Germany
- 16.30 **A.M. Klein**, *The fate of cells in skin: from clonal analysis to cell kinetics*  
Department of Physics, Cavendish Laboratory, Cambridge, UK
- 16.45 **T. Hwa**, *Theory of bacterial growth control (30 min.)*  
Univ. of California, San Diego, USA

**Coffee Break 17.00-17.30**

**Session 2C, Topic 2, Chair: F. Colaiori, Hall: Scirocco**

- 17.30 **V. Vitelli**, *The mixed nature of the jamming transition of frictionless granular packings*  
Univ. of Penn., Philadelphia, USA
- 18.00 **R.M. Ziff**, *Crossing problems and thresholds in percolation and the Potts model*  
University of Michigan, USA
- 18.15 **G. Tarjus**, *Non-perturbative functional renormalization group for the random field  $O(N)$  model: the way out of dimensional reduction*  
LPTMC, Université P. et M. Curie/CNRS, Paris, France
- 18.30 **K. Uzelac**, *Short-time dynamics of the long-range Potts model*  
Dept. of Physics, University J. J. Strossmayer, Osijek, Croatia
- 18.45 **F.D. Nobre**, *Using Exact Relations in Damage-Spreading Simulations: Applications for the Two-Dimensional Potts and Ashkin-Teller Ferromagnets*  
Centro Brasileiro de Pesquisas Fisicas, Rio de Janeiro, RJ, Brazil

**Session 3F, Topic 3, Chair: C. Castellano, Hall: Maestrale**

- 17.30 **H. Park**, *Nonequilibrium phase transitions into absorbing states*  
Korea Institute of Adv. Studies, Seoul, Korea
- 18.00 **K. Takeuchi**, *Directed Percolation Criticality in Turbulent Liquid Crystals - Static and Dynamic Scaling*  
Department of Physics, The University of Tokyo, Japan
- 18.15 **O. Dauchot**, *Intensive thermodynamic parameters in nonequilibrium systems*  
SPEC, CEA Saclay, Gif sur Yvette, France
- 18.30 **A. Zoia**, *Distributions of passage times and distances along critical curves*  
Massachusetts Institute of Technology, Cambridge, USA
- 18.45 **Y. Park**, *Brownian motion of gas-fluidized ellipsoid particles*  
Department of Physics Myongji University, Yongin, Korea

**Session 8C, Topic 8, Chair: E. Cappelletti, Hall: Levante**

- 17.30 **T. Senthil**, *Quantum criticality beyond the Landau-Ginzburg-Wilson paradigm*  
Indian Institute of Science, Bangalore, India
- 18.00 **V.N. Ryzhov**, *Stability and vortex states in Bose-Fermi mixture with attraction between bosons and fermions*  
Institute for High Pressure Physics Russian Academy of Sciences, Troitsk, Moscow Region, Russia
- 18.15 **L.N. Oliveira**, *Universality and the temperature-dependent zero-bias conductance of nanodevices*  
Instituto de Fisica de Sao Carlos, University of Sao Paulo, Brazil
- 18.30 **T. Roscilde**, *Localization of ultracold bosons in optical lattices*  
Max Planck Institute for Quantum Optics, Garching, Germany
- 18.45 **F. Anfuso**, *Fragility of String Order*  
Institute of Theoretical Physics University of Cologne, Germany

**Session 11G, Topic 11, Chair: A. Baldassarri, Hall: Grecale**

- 17.30 **F. Sylos Labini**, *Statistical physics for cosmic structures*  
Centro Fermi and ISC-CNR, Italy
- 18.00 **G. Caldarelli**, *Self-organized network evolution coupled to extremal dynamics*  
Centre SMC, INFN-CNR, Roma, Italy
- 18.30 **B. Toth**, *The Epps effect revisited*  
Department of Theoretical Physics, University of Technology and Economics, Budapest, Hungary
- 18.45 **B. Tadic**, *Emergent Dynamic Phenomena on Networks*  
Department of Theoretical Physics, Jozef Stefan Institute, Ljubljana, Slovenia



