



## Conference Topic Codes

Topic 1	General and mathematical aspects of statistical physics
Topic 2	Phase transitions and critical phenomena
Topic 3	Nonequilibrium processes
Topic 4	Soft matter
Topic 5	Fluids and interfacial phenomena
Topic 6	Nonlinear dynamics
Topic 7	Quantum systems
Topic 8	Disordered and glassy systems
Topic 9	Biophysics and biologically motivated problems
Topic 10	Interdisciplinary topics in statistical physics

## Parallel Sessions Program Table

### July 22 (Monday)

Place	305	404	505	506
<b>Session-Topic</b>	<b>A1-Topic3</b>	<b>B1-Topic6</b>	<b>C1-Topic4</b>	<b>D1-Topic2</b>
<b>Chair</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>
13:30~13:45	T. Sagawa	J.-F. Pinton	E. Del Gado	W. Krauth
13:45~14:00				
14:00~14:15	A. Aharony	K.J. Lee	E. Opsomer	W. Jacobs
14:15~14:30	C. Kwon		J. Lagerwall	C. E. Santos
14:30~14:45	S. Deffner	Y.-Y. Tsai	M. Telo da Gama	K. Kang
14:45~15:00	J. Camunas	J. Andrade Jr.	G. Scalia	Y. Sumino

<b>Session-Topic</b>	<b>A2-Topic10</b>	<b>B2-Topic7</b>	<b>C2- Topic9</b>	<b>D2-Topic2</b>
<b>Chair</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>
15:20~15:35	S. Redner	K. Kobayashi	J. Gore	T. Mori
15:35~15:50				
15:50~16:05	M. San Miguel	Y. Utsumi	J. Krug	R. Tamura
16:05~16:20	E. Ben-Naim	Y. W. Park	T. Mora	S. Gupta
16:20~16:35	N. Fricke	M. Labousse	P. Kumar	M. Ha
16:35~16:50	M. Da Luz	M. Kohl	S. Ahnert	J. Um

<b>Session-Topic</b>	<b>A3-Topic10</b>	<b>B3-Topic8</b>	<b>C3-Topic9</b>	<b>D3-Topic1</b>
<b>Chair</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>
17:10~17:25	H. Herrmann	H. G Katzgraber	O. Biham	J. de Gier
17:25~17:40	B. Kahng			
17:40~17:55	S. Boettcher	P. Contucci	L.-H. Tang	J. Perk
17:55~18:10	H.-H. Jo	D. Yllanes	A. Jelic	K. Motegi
18:10~18:25	A. Ishii	J. Yeo	D. Pearce	V. Mangazeev
18:25~18:40	B.-H. Wang	P. Urbani	D. Reguera	F. Alcaraz



### July 23 (Tuesday)

Place	305	404	505	506
<b>Session-Topic</b>	<b>A4-Topic9</b>	<b>B4-Topic5</b>	<b>C4-Topic3</b>	<b>D4-Topic7</b>
<b>Chair</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>
13:30~13:45	O. Hallatschek	J. Yeomans	S.-i. Sasa	E. Altman
13:45~14:00				
14:00~14:15	J. Tailleur	H.K. Pak	H. Spohn	S. Tanaka
14:15~14:30	O. Dauchot	L. Lebon	S. Sabhapandit	O. Castro
14:30~14:45	M. Schick	J. Indekeu	G. Schuetz	H. Tajima
14:45~15:00	F. Schmid	A. Puisto	T. Takagi	M. Ohzeki

Session-Topic	A5-Topic10	B5-Topic4	C5-Topic3	D5-Topic8
<b>Chair</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>
15:20~15:35	A. Gabrielli	P. Pincus	A. Polkovnikov	Y. Fyodorov
15:35~15:50				
15:50~16:05	M. Cristelli	H. Makse	D. Mukamel	K. Suzuki
16:05~16:20	J. da Gama Batista		S. Nakamura	L. Luo
16:20~16:35	I. Vodenska	H. D. Ou-Yang	P. Hurtado	P. Holdsworth
16:35~16:50	T. Galla	J.-F. Metayer	A. Solon	N. Araujo

Session-Topic	A6-Topic10	B6-Topic6	C6-Topic2	D6-Topic8
<b>Chair</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>
17:10~17:35	Y. Tu	M. Clerc	D. Dhar	V. Martin-Mayor
17:35~17:40				
17:40~17:55	K.-I. Goh	S. Altmeyer	T. Kimura	A. Gordillo-Guerrero
17:55~18:10	M. Porter	T. Dauxois	J. Koivisto	D. Stariolo
18:10~18:25	T. Kawamoto	L. Chew	Z. Bertalan	D. Miedema
18:25~18:40	B. Brinkman	K.E. Lee	L. Laurson	D. Giri

### July 25 (Thursday)

Place	305	404	505	506
<b>Session-Topic</b>	<b>A7-Topic10</b>	<b>B7-Topic5</b>	<b>C7-Topic8</b>	<b>D7-Topic1</b>
<b>Chair</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>
13:30~13:45	T. Geisel	L. Cipelletti	L. Zdeborova	P. Le Doussal
13:45~14:00	M. Mezard			
14:00~14:15	P. Holme	M. Tsubota	E. Towlson	T. Sasamoto
14:15~14:30	D.-S. Lee		J. Sung	P. Pearce
14:30~14:45	L. Rocha	V. Sokhan	S. Dorosz	H. Rieger
14:45~15:00	F. Altarelli	S. Madruga	F. Krzakala	Z. Kalay

Session-Topic	A8-Topic5	B8-Topic9	C8-Topic7	D8-Topic1
<b>Chair</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>
15:20~15:35	U. Täuber	J. Fineberg	E. Kim	B. Doyon
15:35~15:50				
15:50~16:05	H. Zhang	C. Rascon	D. Poletti	Chihiro Matsui
16:05~16:20	K. Nagai	N. Vandewalle	M. Mendoza Jimenez	S. Rutkevich
16:20~16:35	M. Barma	B. Kim	L. Jaubert	K. Kanazawa
16:35~16:50	S.E. Maeng	S.H. Ebrahimpour Rahbari	S. Sho	B. Yoshida

Session-Topic	A9-Topic3	B9-Topic4	C9-Topic7	D9-Topic2
<b>Chair</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>
17:10~17:25	C. Kollath	A. Johner	M. Oshikawa	T. Xiang
17:25~17:40				
17:40~17:55	K. Totsuka	W. Janke	E. Kaminishi	F. Schmidt
17:55~18:10	X. Guan	S. Komura	A. Edelman	T. Garoni
18:10~18:25	H. Quan	C. Sousa Dias	Y.-K. Huang	T. Nemoto
18:25~18:40	J. Stevenson	Y. Kantor	H.-Q. Zhou	W. Guo



### July 26 (Friday)

Place	305	404	505	506
<b>Session-Topic</b>	<b>A10-Topic10</b>	<b>B10-Topic6</b>	<b>C10-Topic1</b>	<b>D10-Topic8</b>
<b>Chair</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>
13:30~13:45	M. Gonzáles	B. Hof	A. Kuniba	S. Nagel
13:45~14:00				
14:00~14:15	A. P. Masucci	H. Posch	J. Jacobsen	E. Teomy
14:15~14:30	H. Youn	V. Lucarini	J.O. Lee	F. Paillusson
14:30~14:45	Y.-Y. Ahn	J. Martinez Mercado	H. Nakanishi	H. Ohta
14:45~15:00	R.-Q. Li	M. Nowak	S. Todo	D. Asenjo-Andrews

Session-Topic	A11-Topic10	B11-Topic4	C11-Topic2	D11-Topic7
<b>Chair</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>
15:20~15:35	B.J. Kim	D. Levine	S. Rychkov	J. Moore
15:35~15:50				
15:50~16:05	K. Yakubo	M. Nespoulous	K. Sakai	H. van Beijeren
16:05~16:20	E. Arcaute	Y. Levin	M. Weigel	M. Suzuki
16:20~16:35	R. Andrade	David Zwicker	I. Alam	O. Entin-Wohlman
16:35~16:50	Ken Schrenk	P. Gonzalez de Prado Salas	H. Au-Yang	S. Garmon

Session-Topic	A12-Topic9	B12-Topic5	C12-Topic3	D12-Topics
<b>Chair</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>	<b>TBA</b>
17:10~17:25	A. Walczak	Y. Couder	J.D. Noh	K. Takeuchi
17:25~17:40				
17:40~17:55	M. Peyrard	K. Okumura	E. Gudowska-Nowak	B. Altaner
17:55~18:10	S. Kumar	R. Nomura	O. Cohen	A. Lamberg
18:10~18:25	S.-C. Hong	N. Bernardino	S. Ito	F. Hucht
18:25~18:40	C. Hyeon	J.S. Lee	H. Zhao	S.J. Park



# Daily Program

## July 22 (Monday), 2013

Time	Session	Room	Place
08:30~09:00	Opening	1F, Grand Conference Hall	Cultural Center (CC)
09:00~09:50	Plenary Talk 1	1F, Grand Conference Hall	
09:50~10:40	Plenary Talk 2	1F, Grand Conference Hall	
10:40~11:00	Break	1F&2F, Lobby	
11:00~12:30	Poster Session 1	2F, Lobby	
12:30~13:30	Lunch	Restaurant	Multimedia Lecture Building (MLB)
13:30~15:00	Parallel Session 1: A1, B1, C1, D1	305, 404, 505, 506	
15:00~15:20	Break		
15:20~16:50	Parallel Session 2: A2, B2, C2, D2	305, 404, 505, 506	
16:50~17:10	Break		
17:10~18:40	Parallel Session 3: A3, B3, C3, D3	305, 404, 505, 506	

### Plenary Talk 1

<b>09:00~09:50</b>	<b>PT 1</b> <b>Chair:</b>	<b>Place: 1F, Grand Conference Hall, CC</b>
09:00	Statistical properties of granular materials near jamming <i>Robert Behringer (Duke Univ, USA)</i>	

### Plenary Talk 2

<b>09:50~10:40</b>	<b>PT 2</b> <b>Chair:</b>	<b>Place: 1F, Grand Conference Hall, CC</b>
09:50	Biological strategies of motility <i>Massimo Vergassola (Inst Pasteur, France)</i>	

### Parallel Session 1

<b>13:30~15:00</b>	<b>A1-Topic3</b> <b>Chair:</b>	<b>Place: 305, MLB</b>
13:30	Fluctuation theorem for information exchanges <i>Takahiro Sagawa (Kyoto Univ, Japan)</i>	
14:00	Full-counting statistics for molecular junctions: fluctuation theorem and singularities <i>Amnon Aharony (Ben Gurion and Tel Aviv Univ, Israel)</i>	
14:15	Anomalous entropy production under irreversible momentum-dependent force <i>Chulan Kwon (Myongji Univ, Republic of Korea)</i>	
14:30	Information, entropy, and the second law <i>Sebastian Deffner (Univ of Maryland, USA)</i>	
14:45	Free energy measurements of ligands binding nucleic acids using fluctuation theorems <i>Joan Camunas (Univ de Barcelona, Spain)</i>	

**13:30~15:00 B1-Topic6 Place: 404, MLB****Chair:**

- 13:30 Turbulence and dynamics in the lagrangian reference frame, using smart particles  
*Jean-François Pinton (CNRS & ENS de Lyon, France)*
- 14:00 Collective dynamics of biological cells  
*Kyoung Jin Lee (Korea Univ, Korea)*
- 14:30 Defect mediated dust acoustic wave turbulence  
*Ya-Yi Tsai (Natl Cent Univ, Chinese Taipei)*
- 14:45 Optimal synchronizability of bearings  
*Jose Andrade Jr. (Univ Fed do Ceara, Brazil)*

**13:30~15:00 C1-Topic4 Place: 505, MLB****Chair:**

- 13:30 Soft matter in construction  
*Emanuela Del Gado (ETH Zurich, Switzerland)*
- 14:00 Phase transitions in driven granular systems under microgravity conditions  
*Eric Opsomer (GRASP Univ of Liege, Belgium)*
- 14:15 Phase transitions and configurational reordering under topological constraints in liquid crystal shells  
*Jan Lagerwall (Seoul Natl Univ, Republic of Korea)*
- 14:30 Bonded boojum-colloids in nematic liquid crystals  
*Margarida Telo da Gama (Univ de Lisboa, Portugal)*
- 14:45 Liquid crystal phase of graphene oxide  
*Giusy Scalia (Seoul Natl Univ, Republic of Korea)*

**13:30~15:00 D1-Topic2 Place: 506, MLB****Chair:**

- 13:30 Melting in two dimensions: new algorithms, new insights  
*Werner Krauth (Ecole Normale Supérieure, France)*
- 14:00 Predicting phase behavior in multicomponent mixtures  
*William Jacobs (Univ of Cambridge, United Kingdom)*
- 14:15 General approach for studying first-order phase transitions  
*Carlos Eduardo Santos (Univ Fed do Parana, Brazil)*
- 14:30 Non-equilibrium phase transitions and equilibrium textures of charged chiral rods (fd-viruses)  
*Kyongok Kang (Forschungszentrum Juelich, Germany)*
- 14:45 Swarming behavior of self-propelled rods with internal memory  
*Yutaka Sumino (Aichi Univ of Educ, Japan)*

**Parallel Session 2****15:20~16:50 A2-Topic10 Place: 305, MLB****Chair:**

- 15:20 Dynamics of consensus and influence-propagation  
*Sidney Redner (Boston Univ, USA)*
- 15:50 Voter model, opinion diffusion and mobility networks  
*Maxi San Miguel (IFISC (CSIC-UIB), Spain)*
- 16:05 Scaling laws for first passage exponents  
*Eli Ben-Naim (Physical Review E, USA)*
- 16:20 Scale-free enumeration of self-avoiding walks on critical percolation clusters  
*Niklas Fricke (Univ of Leipzig, Germany)*
- 16:35 Sum over paths, interference and superdiffusion in quantum walks  
*Marcos Da Luz (Univ Fed do Parana, Brazil)*

**15:20~16:50 B2-Topic7 Place: 404, MLB****Chair:**

- 15:20 Nonequilibrium current fluctuation in quantum coherent conductors  
*Kensuke Kobayashi (Osaka Univ, Japan)*
- 15:50 Work fluctuation theorem for a classical circuit coupled to a quantum conductor  
*Yasuhiro Utsumi (Faculty of Engineering, Mie Univ, Japan)*



- 16:05 Carbon nanoelectronics - The zero M resistivity and more  
*Yung Woo Park (Seoul Natl Univ, Republic of Korea)*
- 16:20 A macroscopic wave-particle system in a harmonic potential well: a double quantization  
*Matthieu Labousse (ESPCI ParisTech, France)*
- 16:35 Spin dynamics in two-dimensional Fermi gases  
*Michael Kohl (Univ of Cambridge, United Kingdom)*

**15:20~16:50 C2-Topic9 Place: 505, MLB**

**Chair:**

- 15:20 Cooperation, cheating, and collapse in microbial populations  
*Jeff Gore (MIT, USA)*
- 15:50 How predictable is evolution?  
*Joachim Krug (Univ of Cologne, Germany)*
- 16:05 Diffusion of public goods in bacterial colonies, and its impact on cooperation  
*Thierry Mora (Ecole Normale Supérieure, France)*
- 16:20 A tale of two phenotypes: cell fates of Escherichia coli and their reversibility under high pressure  
*Pradeep Kumar (Rockefeller Univ, USA)*
- 16:35 The complexity, modularity and evolution of self-assembling structures in biology  
*Sebastian Ahnert (Univ of Cambridge, United Kingdom)*

**15:20~16:50 D2-Topic2 Place: 506, MLB**

**Chair:**

- 15:20 Phase transitions in systems with non-additive long-range interactions  
*Takashi Mori (Univ of Tokyo, Japan)*
- 15:50 Second-order phase transition in Heisenberg model on triangular lattice with competing interactions  
*Ryo Tamura (Natl Inst for Materials Sci (NIMS), Japan)*
- 16:05 Nonequilibrium first-order phase transitions in the Kuramoto model in presence of inertia and noise  
*Shamik Gupta (Univ Paris-Sud, France)*
- 16:20 Dynamic finite-size scaling and universality issues in synchronization  
*Meesoon Ha (Chosun Univ, Republic of Korea)*
- 16:35 Connectivity-disorder effect on collective synchronization  
*Jaegon Um (KIAS, Republic of Korea)*

**Parallel Session 3**

**17:10~18:40 A3-Topic10 Place: 305, MLB**

**Chair:**

- 17:10 Packing of wires in cavities and growing surfaces  
*Hans Herrmann (Computational Phys, ETH Zurich, Switzerland)*
- 17:25 Continuous and discontinuous transitions in explosive percolation models  
*Byungnam Kahng (Seoul Natl Univ, Republic of Korea)*
- 17:40 Nature of discontinuous transitions in ordinary percolation on hyperbolic lattices  
*Stefan Boettcher (Emory Univ, USA)*
- 17:55 Bursty human dynamics: circadian pattern, task execution, and context  
*Hang-Hyun Jo (Aalto Univ, Finland)*
- 18:10 Mathematical model of hit phenomena as a theory for stochastic processes of collective human evidents in the society  
*Akira Ishii (Tottori Univ, Japan)*
- 18:25 Dynamics and statistical mechanics investigation for human behaviors  
*Bing-Hong WANG (Univ of Sci and Technology of China, China)*

**17:10~18:40 B3-Topic8 Place: 404, MLB**

**Chair:**

- 17:10 Four decades of frustration: advances, algorithms and applications in spin-glass physics  
*Helmut G Katzgraber (Texas A&M, USA)*
- 17:40 The spin glass phase and its mean field picture: rigorous results and perspectives.  
*Pierluigi Contucci (Univ of Bologna, Italy)*
- 17:55 The spin-glass transition in a field: results from Janus in  $D = 4$ , with a glimpse at  $D = 3$   
*David Yllanes (Univ Roma La Sapienza, Italy)*



- 18:10 Renormalization group study of the growing length scale in p-spin glass models  
*Joonhyun Yeo (Konkuk Univ, Republic of Korea)*
- 18:25 Quasi-equilibrium construction for long time glassy dynamics  
*Pierfrancesco Urbani (Sapienza and Paris-Sud Univrsities, Italy)*

**17:10~18:40 C3-Topic9 Place: 505, MLB**

**Chair:**

- 17:10 Information processing in genetic regulatory networks  
*Ofer Biham (Hebrew Univ, Israel)*
- 17:40 Noise propagation in biochemical networks: beyond the master equation  
*Lei-Han Tang (Hong Kong Baptist Univ, Hong Kong)*
- 17:55 Superfluid transport of information in turning flocks of starlings  
*Asja Jelic (ISC-CNR, Univ Roma La Sapienza, Italy)*
- 18:10 The role of projection in the control of bird flocks  
*Daniel Pearce (Univ of Warwick, United Kingdom)*
- 18:25 Statistical physics of viral capsid assembly  
*David Reguera (Univ de Barcelona, Spain)*

**17:10~18:40 D3-Topic1 Place: 506, MLB**

**Chair:**

- 17:10 Rigorous results for integrable lattice models using discrete parafermions  
*Jan de Gier (Univ of Melbourne, Australia)*
- 17:40 Superintegrable chiral Potts model: parafermionic generalization of Ising model  
*Jacques Perk (Oklahoma State Univ, USA)*
- 17:55 Quantum inverse scattering approach to the totally asymmetric simple exclusion process  
*Kohei Motegi (Okayama Inst for Quantum Phys, Japan)*
- 18:10 A three-dimensional integrable lattice model with positive Boltzmann weights  
*Vladimir Mangazeev (The Australian Natl Univ, Australia)*
- 18:25 Nonlocal exclusion process on a ring and conformal invariance  
*Francisco Alcaraz (Univ de Sao Paulo, Brazil)*





## July 23 (Tuesday), 2013

Time	Session	Room	Place
09:00~09:50	Plenary Talk 3	1F, Grand Conference Hall	Cultural Center (CC)
09:50~10:40	Plenary Talk 4	1F, Grand Conference Hall	
10:40~11:00	Break	1F&2F, Lobby	
11:00~12:30	Poster Session 2	2F, Lobby	Multimedia Lecture Building (MLB)
12:30~13:30	Lunch	Restaurant	
13:30~15:00	Parallel Session 4: A4, B4, C4, D4	305, 404, 505, 506	
15:00~15:20	Break		
15:20~16:50	Parallel Session 5: A5, B5, C5, D5	305, 404, 505, 506	
16:50~17:10	Break		
17:10~18:40	Parallel Session 6: A6, B6, C6, D6	305, 404, 505, 506	

### Plenary Talk 3

**09:00~09:50** **PT 3** **Place: 1F, Grand Conference Hall, CC**  
**Chair:**

09:00 Top eigenvalue of a random matrix: Large deviations  
*Satya Majumdar (CNRS, LPTMS, Univ Paris-Sud, France)*

### Plenary Talk 4

**09:50~10:40** **PT 4** **Place: 1F, Grand Conference Hall, CC**  
**Chair:**

09:50 Percolation approaches to resistance switching phenomena and related nonvolatile memories  
*Tae Won Noh (Seoul Natl Univ, Republic of Korea)*

### Parallel Session 4

**13:30~15:00** **A4-Topic9** **Place: 305, MLB**  
**Chair:**

13:30 The acceleration of epidemic outbreaks by long range jumps  
*Oskar Hallatschek (UC Berkeley, USA)*

14:00 Motility-induced phase separation in active matter  
*Julien Tailleur (CNRS - Univ Paris Diderot, France)*

14:15 Interplay between hard core repulsion and self propulsion in active matter  
*Olivier Dauchot (CNRS - ESPCI ParisTech, France)*

14:30 A raft for both leaves of the plasma membrane  
*Michael Schick (Univ of Washington, USA)*

14:45 Statistical physics of lipid rafts  
*Friederike Schmid (Inst of Phys, Johannes Gutenberg-Univ Mainz,, Germany)*

**13:30~15:00** **B4-Topic5** **Place: 404, MLB**  
**Chair:**

13:30 Stirring by microswimmers  
*Julia Yeomans (Univ of Oxford, UK)*





- 14:00 Electrical power generation by mechanically modulating electrical double layers  
*Hyuk Kyu Pak (Pusan Natl Univ, Republic of Korea)*
- 14:15 Dynamics of a drop trapped inside a horizontal circular hydraulic jump  
*Luc Lebon (CNRS / Univ Paris 7, France)*
- 14:30 Renormalization group study of thermal fluctuation effects on infinite-order wetting phase transitions.  
*Joseph Indekeu (KU Leuven, Belgium)*
- 14:45 Transient shear banding of time dependent fluids  
*Antti Puisto (Aalto Univ, Finland)*

**13:30~15:00 C4-Topic3 Place: 505, MLB**  
**Chair:**

- 13:30 Steady state thermodynamics  
*Shin-ichi Sasa (Kyoto Univ, Japan)*
- 14:00 Structure factors of Hamiltonian chains and nonlinear fluctuating hydrodynamics  
*Herbert Spohn (Technical Univ Munich, Germany)*
- 14:15 Fluctuations and large deviations in some nonequilibrium systems  
*Sanjib Sabhapandit (Raman Res Inst, Bangalore, India)*
- 14:30 Exact matrix product solution for the boundary-driven Lindblad XXZ-chain  
*Gunter Schuetz (Forschungszentrum Juelich, Germany)*
- 14:45 Commuting phase flows in the tropical periodic Toda lattice  
*Taichiro Takagi (Natl Defense Acad, Japan)*

**13:30~15:00 D4-Topic7 Place: 506, MLB**  
**Chair:**

- 13:30 Many body localization in one dimension as a dynamical renormalization group fixed point  
*Ehud Altman (Weizmann Inst of Sci, Israel)*
- 14:00 Entanglement spectra of two-dimensional quantum systems  
*Shu Tanaka (Univ of Tokyo, Japan)*
- 14:15 Universal corrections to the entanglement entropy from gapped spin chains: a numerical study  
*Olalla Castro Alvaredo (City Univ London, United Kingdom)*
- 14:30 A new version of information thermodynamics using entanglement measure  
*Hiroyasu Tajima (Univ of Tokyo, Japan)*
- 14:45 Measurement-based quantum computation protected by symmetry breaking states  
*Masayuki Ohzeki (Kyoto Univ, Japan)*

**Parallel Session 5**

**15:20~16:50 A5-Topic10 Place: 305, MLB**  
**Chair:**

- 15:20 A network analysis and new metrics for countries competitiveness and products complexity from the world trade web  
*Andrea Gabrielli (ISC-CNR, Rome, Italy)*
- 15:50 A new metrics for country fitness and product complexity: measuring the growth potential and technological development of countries  
*Matthieu Cristelli (ISC-CNR, Inst for Complex Systems, Italy)*
- 16:05 Dynamics of trust in networks and systemic risk  
*Joao Da Gama Batista (Ecole Cente Paris, France)*
- 16:20 Distress propagation in coupled foreign exchange and stock market networks  
*Irena Vodenska (Boston Univ, USA)*
- 16:35 Statistical physics of piecewise deterministic processes: theory and application to the resilience of semi-arid ecosystems  
*Tobias Galla (Univ of Manchester, United Kingdom)*

**15:20~16:50 B5-Topic4 Place: 404, MLB**  
**Chair:**

- 15:20 Instability of polyion suspensions  
*Philip Pincus (UCSB, USA)*
- 15:50 Viral influence spreading in social networks  
*Hernan Makse (CUNY, USA)*



- 16:20 Colloidal osmotic bulk modulus of a polymer-crowded colloidal suspension  
*H. Daniel Ou-Yang (Lehigh Univ, USA)*
- 16:35 A local view on sheared granular matter  
*Jean-Francois Metayer (OIST, Japan)*

**15:20~16:50 C5-Topic3 Place: 505, MLB**

**Chair:**

- 15:20 Universal dynamics near continuous phase transitions  
*Anatoli Polkovnikov (Boston Univ, USA)*
- 15:50 Drive Induced interface phase transition  
*David Mukamel (The Weizmann Inst of Sci, Israel)*
- 16:05 Nonequilibrium phase transitions and nonequilibrium critical point from ADS/CFT correspondence  
*Shin Nakamura (Nagoya Univ, Japan)*
- 16:20 Spontaneous symmetry breaking at the fluctuating level in classical and quantum systems  
*Pablo Hurtado (Univ of Granada, Spain)*
- 16:35 Revisiting the flocking transition using active spins  
*Alexandre Solon (MSC. Lab, Univ Paris Diderot, France)*

**15:20~16:50 D5-Topic8 Place: 506, MLB**

**Chair:**

- 15:20 Freezing phenomena and extremes in disordered multifractals:  
from  $1/f$  noises to Riemann zeta-function and decaying Burgers turbulence  
*Yan Fyodorov (Queen Mary, London, UK)*
- 15:50 Rheology of granular flow via mode-coupling theory  
*Koshiro Suzuki (Canon Inc., Japan)*
- 16:05 Transport properties of vortices in the two-dimensional gauge glass  
*Liang Luo (Beijing Computational Sci Res Ctr, China)*
- 16:20 Spin fractionalization on a pyrochlore lattice  
*Peter Holdsworth (Ecole Normale Supérieure de Lyon, France)*
- 16:35 Fracturing ranked surfaces  
*Nuno Araujo (ETH Zurich, Switzerland)*

**Parallel Session 6**

**17:10~18:40 A6-Topic10 Place: 305, MLB**

**Chair:**

- 17:10 Nonequilibrium physics in biochemical networks: the energy cost of adaptation  
*Yuhai Tu (IBM T. J. Watson Res Ctr, USA)*
- 17:40 Multiplex networks: structure and dynamics  
*Kwang-II Goh (Korea Univ, Republic of Korea)*
- 17:55 Core-periphery structure in networks  
*Mason Porter (Univ of Oxford, United Kingdom)*
- 18:10 A stochastic model of local information diffusion on an online social network  
*Tatsuro Kawamoto (Univ of Tokyo, Japan)*
- 18:25 Forecasting large earthquakes using small-quake correlations  
*Braden Brinkman (Univ of Illinois at Urbana-Champaign, USA)*

**17:10~18:40 B6-Topic6 Place: 404, MLB**

**Chair:**

- 17:10 Dissipative localized states with shield-like phase structure  
*Marcel Clerc (Univ de Chile, Chile)*
- 17:40 Symmetry-breaking Hopf bifurcations to 1-, 2-, and 3-tori in small-aspect-ratio counter-rotating Taylor-Couette flow  
*Sebastian Altmeyer (Max-Planck-Inst for Dynamics and Self-Organization, Germany)*
- 17:55 Parametric subharmonic instability for internal waves  
*Thierry Dauxois (CNRS & ENS Lyon, France)*
- 18:10 Two coupled brownian motors subjected to chaotic noise  
*Lock Chew (Nanyang Technological Univ, Singapore)*



18:25 Noise-induced phase transitions and critical fluctuations in collective dynamics of neuronal networks  
*KyoungEun Lee (Aveiro Univ, Portugal)*

**17:10~18:40 C6-Topic2 Place: 505, MLB**

**Chair:**

17:10 Modelling proportionate growth  
*Deepak Dhar (TIFR, India)*

17:40 Scaling behavior of Euler products and random matrix theory  
*Taro Kimura (RIKEN, Japan)*

17:55 Fluctuations in fracture: scaling and predictability  
*Juha Koivisto (Aalto Univ, Finland)*

18:10 Challenges to the predictive power of the ubiquitous Weibull distribution in fracture statistics  
*Zsolt Bertalan (ISI Foundation, Italy)*

18:25 The average avalanche shape: universality beyond mean field  
*Lasse Laurson (Aalto Univ, Finland)*

**17:10~18:40 D6-Topic8 Place: 506, MLB**

**Chair:**

17:10 Taming large fluctuations in disordered systems  
*Victor Martin-Mayor (Univ Complutense de Madrid, Spain)*

17:40 The Cardy-Jacobsen conjecture is valid in three dimensions  
*Antonio Gordillo-Guerrero (Univ of Extremadura, Spain)*

17:55 Nematic and stripe glass phases in two dimensional systems with competing interactions  
*Daniel Stariolo (Univ Fed do Rio Grande do Sul, Brazil)*

18:10 Dynamic phase transition in a kinetically constrained model for traffic  
*Daniel Miedema (Univ of Amsterdam, Netherlands)*

18:25 Single polymer gating of channels under a solvent gradient  
*Debaprasad Giri (Indian Inst of Technology (BHU), Varanasi, India)*



## July 24 (Wednesday), 2013

Time	Session	Room	Place
09:00~09:50	Young Scientist Award & Boltzmann Ceremony	1F, Grand Conference Hall	Cultural Center (CC)
09:50~10:40	Boltzmann Presentation 1	1F, Grand Conference Hall	
10:40~11:20	Boltzmann Presentation 2	1F, Grand Conference Hall	

### Boltzmann Presentation 1

**09:50~10:40**    **BP 1**    **Place: 1F, Grand Conference Hall, CC**  
**Chair:**

09:50    Instabilities and chaos in nonequilibrium systems: interaction of experiment and theory  
*Harry L. Swinney (Univ of Texas at Austin, USA)*

### Boltzmann Presentation 2

**10:40~11:20**    **BP 2**    **Place: 1F, Grand Conference Hall, CC**  
**Chair:**

10:40    To what extent is it possible to extend thermodynamics to nonequilibrium?  
*Giovanni Jona-Lasinio (Sapienza – Univ di Roma, Italy)*



## July 25 (Thursday), 2013

Time	Session	Room	Place
09:00~09:50	Plenary Talk 5	1F, Grand Conference Hall	Cultural Center (CC)
09:50~10:40	Plenary Talk 6	1F, Grand Conference Hall	
10:40~11:00	Break	1F&2F, Lobby	
11:00~12:30	Poster Session 3	2F, Lobby	Multimedia Lecture Building (MLB)
12:30~13:30	Lunch	Restaurant	
13:30~15:00	Parallel Session 7: A7, B7, C7, D7	305, 404, 505, 506	
15:00~15:20	Break		
15:20~16:50	Parallel Session 8: A8, B8, C8, D8	305, 404, 505, 506	
16:50~17:10	Break		
17:10~18:40	Parallel Session 9: A9, B9, C9, D9	305, 404, 505, 506	

### Plenary Talk 5

<b>09:00~09:50</b>	<b>PT 5</b>	<b>Place: 1F, Grand Conference Hall, CC</b>
	<b>Chair:</b>	
09:00	CFT and SLE and 2D statistical physics <i>Stanislav Smirnov (Univ Geneve, Switzerland)</i>	

### Plenary Talk 6

<b>09:50~10:40</b>	<b>PT 6</b>	<b>Place: 1F, Grand Conference Hall, CC</b>
	<b>Chair:</b>	
09:50	Long-range entanglements: from new states of quantum matter to a unified origin of light and electrons <i>Xiao-gang Wen (PITP/MIT, Canada)</i>	

### Parallel Session 7

<b>13:30~15:00</b>	<b>A7-Topic10</b>	<b>Place: 305, MLB</b>
	<b>Chair:</b>	
13:30	I got rhythm... <i>Theo Geisel (Göttingen, Germany)</i>	
13:45	Bayesian approach to discrete tomography <i>Marc Mezard (Univ Paris Sud - CNRS, France)</i>	
14:00	From temporal to static networks, and back <i>Petter Holme (Sungkyunkwan Univ, Republic of Korea)</i>	
14:15	Crossover in the fluctuation scaling of evolving regulatory networks <i>Deok-Sun Lee (Inha Univ, Republic of Korea)</i>	
14:30	Bursts of vertex activation and epidemics in evolving networks <i>Luis Rocha (Catholic Univ of Louvain, Belgium)</i>	
14:45	Large deviations and optimization of cascade processes on graphs <i>Fabrizio Altarelli (Politecnico di Torino and Collegio Carlo Alberto, Italy)</i>	

**13:30~15:00 B7-Topic5 Place: 404, MLB****Chair:**

- 13:30 Decoupling of viscosity and structural relaxation time in supercooled colloidal hard spheres  
*Luca Cipelletti (Univ Montpellier 2, France)*
- 14:00 Hydrodynamic instability and turbulence in quantum fluids  
*Makoto Tsubota (Osaka City Univ, Japan)*
- 14:30 Development of electronically coarse-grained model for the next generation of materials simulation  
*Vlad Sokhan (Natl Phys Lab, United Kingdom)*
- 14:45 Stability and bifurcations in films of binary mixtures with diffuse interfaces  
*Santiago Madruga (Polytechnic Univ of Madrid, Spain)*

**13:30~15:00 C7-Topic8 Place: 505, MLB****Chair:**

- 13:30 From crystal nucleation to fast data acquisition  
*Lenka Zdeborova (CEA Saclay, France)*
- 14:00 The globally integrative rich club of the *C. elegans* neuronal connectome  
*Emma Towlson (Univ of Cambridge, United Kingdom)*
- 14:15 Global interaction network of human gut microbiota  
*Jaeyun Sung (APCTP, Republic of Korea)*
- 14:30 Crystallization close to the glass transition: dynamic heterogeneities do not precede crystallization  
*Sven Dorosz (Univ of Luxembourg, Luxembourg)*
- 14:45 From statistical physics ... to matrix decomposition: phase diagrams, optimal bounds and efficient algorithms  
*Florent Krzakala (ESPCI, France)*

**13:30~15:00 D7-Topic1 Place: 506, MLB****Chair:**

- 13:30 Universal statistics for directed polymers and the Kardar Parisi Zhang equation: new tools from integrable systems and replica  
*Pierre Le Doussal (LPTENS École Normale Supérieure Paris, France)*
- 14:00 Exact stationary two-point function for the 1D KPZ equation  
*Tomohiro Sasamoto (Chiba Univ/TU Muenchen, Japan)*
- 14:15 Exact off-critical solution of generalized 2-d models of polymers and percolation  
*Paul Pearce (Univ of Melbourne, Australia)*
- 14:30 Intermittent search in spatially inhomogeneous environments  
*Heiko Rieger (Saarland Univ, Germany)*
- 14:45 Effects of confinement on statistics of encounter times in lattices and its implications for the kinetics of reversible reactions  
*Ziya Kalay (Kyoto Univ, Japan)*

**Parallel Session 8****15:20~16:50 A8-Topic9 Place: 305, MLB****Chair:**

- 15:20 Environmental vs. demographic variability in stochastic lattice predator-prey models  
*Uwe Täuber (Virginia Tech, USA)*
- 15:50 Long-range fluctuation correlation in collective motion  
*Hepeng Zhang (Shanghai Jiao Tong Univ, China)*
- 16:05 Vortex lattice formation of self-propelled particles  
*Ken Nagai (Univ of Tokyo, Japan)*
- 16:20 Condensation and intermittency in an open-boundary aggregation-fragmentation model  
*Mustansir Barma (Tata Inst of Fundamental Res, India)*
- 16:35 Impacts of compatibility to the organization of mutualistic networks  
*Seong Eun Maeng (Inha Univ, Republic of Korea)*



**15:20~16:50 B8-Topic5 Place: 404, MLB**

**Chair:**

- 15:20 How things slide: Rapid dynamics at the onset of friction  
*Jay Fineberg (Hebrew Univ, Israel)*
- 15:50 Phase transition of a meniscus in a capillary under the influence of gravity  
*Carlos Rascon (Univ Carlos III de Madrid, Spain)*
- 16:05 Magnetocapillary self-assembled systems : from clusters to swimmers  
*Nicolas Vandewalle (Univ of Liege, Belgium)*
- 16:20 Self-assembled chain-like water structures in nanoscopic water menisci observed by cantilever-based optical interfacial force microscopy  
*Byung Kim (Boise State Univ, USA)*
- 16:35 Wet granular matter under shear  
*Seyed Habibollah Ebrahimpour Rahbari (Shahid Madani Univ of Azarbayjan, Iran)*

**15:20~16:50 C8-Topic7 Place: 505, MLB**

**Chair:**

- 15:20 Supersolidity and plasticity of solid helium at low temperatures  
*Eunseong Kim (KAIST, Korea)*
- 15:50 Emergence of complex dynamics in quantum many-body open systems  
*Dario Poletti (Singapore Univ of Technology and Design, Singapore)*
- 16:05 Lattice kinetic models for quantum systems  
*Miller Mendoza Jimenez (ETH Zuerich, Switzerland)*
- 16:20 Spin liquids in 2D and 3D pyrochlores  
*Ludovic Jaubert (OIST, Japan)*
- 16:35 Thermal pure quantum formulation of statistical mechanics  
*Sugiura Sho (Univ of Tokyo, Japan)*

**15:20~16:50 D8-Topic1 Place: 506, MLB**

**Chair:**

- 15:20 Random loops and conformal field theory  
*Benjamin Doyon (King's Coll, London, UK)*
- 15:50 Superconformal field theory and supersymmetric sine-Gordon model with Dirichlet boundary conditions  
*Chihiro Matsui (Univ of Tokyo, JST-FIRST, Japan)*
- 16:05 Quantum inverse scattering and the exact  $n=\infty$  solution of the three-dimensional  $O(n)\varnothing^4$  model on a strip with free boundary conditions  
*Sergei Rutkevich (Univ Duisburg-Essen, Germany)*
- 16:20 Heat conduction induced by non-Gaussian athermal fluctuations  
*Kiyoshi Kanazawa (Yukawa Inst for Theoretical Phys, Kyoto Univ, Japan)*
- 16:35 Storing information in fractals  
*Beni Yoshida (California Inst of Technology, USA)*

**Parallel Session 9**

**17:10~18:40 A9-Topic3 Place: 305, MLB**

**Chair:**

- 17:10 Dynamics of ultra cold atoms in optical lattices  
*Corinna Kollath (Univ of Geneva, Switzerland)*
- 17:40 Symmetry-protected topological phases of alkaline-earth ultra-cold fermionic atoms in one dimension  
*Keisuke Totsuka (Yukawa Inst for Theoretical Phys, Kyoto Univ, Japan)*
- 17:55 Large spin ultracold atomic fermions in one dimension  
*Xiwen Guan (Wuhan Inst of Phys and Math, Chinese Acad of Sci, China)*
- 18:10 Validity of Jarzynski equality for the rapidly expanding quantum piston  
*Haitao Quan (Peking Univ, China)*
- 18:25 Thermodynamics and point-to-set correlations in a supercooled liquid  
*Jacob Stevenson (Univ of Cambridge, United Kingdom)*





**17:10~18:40 B9-Topic4 Place: 404, MLB**

**Chair:**

- 17:10 Learning from conflicting theories: 2-d polymers and polymer stars  
*Albert Johner (ICS-CNRS Univ de Strasbourg, France)*
- 17:40 Constrained polymer statistics inside a spherical cavity  
*Wolfhard Janke (Leipzig Univ, Germany)*
- 17:55 Anomalous lateral diffusion in a viscous membrane surrounded by viscoelastic media  
*Shigeyuki Komura (Tokyo Metropolitan Univ, Japan)*
- 18:10 Nonequilibrium growth of functionalized colloids on substrates  
*Cristovao Sousa Dias (Univ de Lisboa, Portugal)*
- 18:25 Polymer-mediated entropic forces in confined spaces  
*Yacov Kantor (Tel Aviv Univ, Israel)*

**17:10~18:40 C9-Topic7 Place: 505, MLB**

**Chair:**

- 17:10 Dynamical theory of superfluidity in one dimension  
*Masaki Oshikawa (Univ of Tokyo, Japan)*
- 17:40 Recurrence time of a localized many-body state dynamics in the 1D Bose gas  
*Eriko Kaminishi (Univ of Tokyo, Japan)*
- 17:55 Density of states of quantum many-body systems  
*Alan Edelman (Massachusetts Inst of Technology, USA)*
- 18:10 Accurate simulation of long-time dynamics for quantum spin chains at infinite temperature  
*Yu-Kun Huang (Nan Jeon Inst of Technology, Chinese Taipei)*
- 18:25 Quantum phase transitions: a novel perspective from fidelity...  
*Huang-Qiang Zhou (Chongqing Univ)*

**17:10~18:40 D9-Topic2 Place: 506, MLB**

**Chair:**

- 17:10 Renormalization of tensor network states  
*Tao Xiang (CAS, Beijing, China)*
- 17:40 Large-n approach to thermodynamic Casimir effects in slabs with free surfaces  
*Felix Schmidt (Univ Duisburg-Essen, Germany)*
- 17:55 Novel phase transitions in XY antiferromagnets on plane triangulations  
*Timothy Garoni (Monash Univ, Australia)*
- 18:10 Finite size effects in a mean-field kinetically constrained model: dynamical glassiness and quantum criticality  
*Takahiro Nemoto (Kyoto Univ, Japan)*
- 18:25 Ising-like transitions in the  $O(n)$  loop model on the square lattice  
*Wenan Guo (Beijing Normal Univ, China)*



## July 26 (Friday), 2013

Time	Session	Room	Place
09:00~09:50	Plenary Talk 7	1F, Grand Conference Hall	Cultural Center (CC)
09:50~10:40	Plenary Talk 8	1F, Grand Conference Hall	
10:40~11:00	Break	1F&2F, Lobby	
11:00~12:30	Poster Session 4	2F, Lobby	
12:30~13:30	Lunch	Restaurant	Multimedia Lecture Building (MLB)
13:30~15:00	Parallel Session 10: A10, B10, C10, D10	305, 404, 505, 506	
15:00~15:20	Break		
15:20~16:50	Parallel Session 11: A11, B11, C11, D11	305, 404, 505, 506	
16:50~17:10	Break		
17:10~18:40	Parallel Session 12: A12, B12, C12, D12	305, 404, 505, 506	

### Plenary Talk 7

**09:00~09:50** **PT 7** **Place: 1F, Grand Conference Hall, CC**  
**Chair:**

09:00 Statistical physics of colloids: from passive to active particles  
*Hartmut Löwen (Univ of Düsseldorf, Germany)*

### Plenary Talk 8

**09:50~10:40** **PT 8** **Place: 1F, Grand Conference Hall, CC**  
**Chair:**

09:50 Criticality in the brain  
*Lucilla De Arcangelis (Second Univ of Naples, Italy)*

### Parallel Session 10

**13:30~15:00** **A10-Topic10** **Place: 305, MLB**  
**Chair:**

13:30 From daily motifs of human travel to road usage patterns  
*Marta Gonzáles (MIT, USA)*

14:00 Limited urban growth: the historical trajectory of London's street networks  
*A. Paolo Masucci (Univ Coll of London, United Kingdom)*

14:15 The hidden structure in urban economic diversity  
*Hyejin Youn (Santa Fe Inst, USA)*

14:30 Community structure and spreading of social contagions  
*Yong-Yeol Ahn (Indiana Univ, USA)*

14:45 Epidemic spreading on multi-relation networks  
*Rui-Qi Li (Beijing Normal Univ & Univ of Electronic Sci and Technology of China, China)*

**13:30~15:00** **B10-Topic6** **Place: 404, MLB**  
**Chair:**

13:30 Universality class and critical exponents for the transition to turbulence  
*Björn Hof (IST Austria, Germany)*



- 14:00 Covariant Lyapunov vectors for smooth and rough hard disk fluids  
*Harald Posch (Univ of Vienna, Austria)*
- 14:15 Multi-level dynamical systems: connecting the Ruelle response theory and the Mori-Zwanzig approach  
*Valerio Lucarini (Univ of Hamburg, Germany)*
- 14:30 A gravity wave bifurcation in a Taylor-Couette system with free surface  
*Julian Martinez Mercado (Departamento de Fisica, FCFM, Univ de Chile, Chile)*
- 14:45 Burgers turbulence in random matrix models  
*Maciej Nowak (Jagiellonian Univ, Poland)*

**13:30~15:00 C10-Topic1 Place: 505, MLB**

**Chair:**

- 13:30 Aspects of T-system and Y-system  
*Atsuo Kuniba (Univ of Tokyo, Japan)*
- 14:00 Critical manifolds, graph polynomials, and exact solvability  
*Jesper Jacobsen (Ecole Normale Supérieure, France)*
- 14:15 Local deformed semicircle law for Wigner matrices with random potential  
*Ji Oon Lee (KAIST, Republic of Korea)*
- 14:30 Hamilton-Jacobi analysis of molecular distribution function in a chemical oscillator  
*Hiizu Nakanishi (Kyushu Univ, Japan)*
- 14:45 Markov chain monte carlo sampling with irreversible kernel  
*Synge Todo (Univ of Tokyo, Japan)*

**13:30~15:00 D10-Topic8 Place: 506, MLB**

**Chair:**

- 13:30 Jamming as a paradigm of disorder  
*Sidney Nagel (Univ of Chicago, USA)*
- 14:00 Jamming of finite-width tunnels in the Kob-Andersen kinetically-constrained model  
*Eial Teomy (Tel Aviv Univ, Israel)*
- 14:15 Devising a statistical ensemble approach to jammed packings generated by successive taps  
*Fabien Paillusson (Univ of Cambridge, United Kingdom)*
- 14:30 Jamming percolation in an unoriented kinetically constrained model  
*Hiroki Ohta (LPTMS, France)*
- 14:45 Direct computation of the packing entropy of granular materials  
*Daniel Asenjo-Andrews (Univ of Cambridge, United Kingdom)*

**Parallel Session 11**

**15:20~16:50 A11-Topic10 Place: 305, MLB**

**Chair:**

- 15:20 Geographic information and physics of society  
*Beom Jun Kim (Sungkyunkwan Univ, Korea)*
- 15:50 Geographical network model for the urban scaling  
*Kousuke Yakubo (Hokkaido Univ, Japan)*
- 16:05 Defining cities through percolation and density cutoffs  
*Elsa Arcaute (Univ Coll London, United Kingdom)*
- 16:20 Network distance: a concept helping identifying communities in phylogenetic analysis  
*Roberto Andrade (Univ Fed da Bahia, Brazil)*
- 16:35 How to share underground reservoirs  
*Ken Schrenk (ETH Zurich, Switzerland)*

**15:20~16:50 B11-Topic4 Place: 404, MLB**

**Chair:**

- 15:20 TBA  
*Dov Levine (IIT Technion, Israel)*
- 15:50 Attractive interaction tuning in bio-colloidal membranes  
*Mathieu Nespoulous (ENS Lyon, France)*
- 16:05 Ion at Interfaces  
*Yan Levin (UFRGS, Brazil)*



- 16:20 Centrosomes are autocatalytic droplets of pericentriolar material organized by centrioles  
*David Zwicker (Max Planck Inst for the Phys of Complex Systems, Germany)*
- 16:35 Torsion and curvature of FtsZ filaments  
*Pablo Gonzalez de Prado Salas (Univ Autonoma de Madrid, Spain)*

**15:20~16:50 C11-Topic2 Place: 505, MLB**

**Chair:**

- 15:20 Solving the critical 3D Ising model with the conformal bootstrap  
*Slava Rychkov (CERN, France)*
- 15:50 Multiple Schramm-Loewner evolutions for conformal field theories with Lie algebra symmetries  
*Kazumitsu Sakai (Univ of Tokyo, Japan)*
- 16:05 Fractal geometry and stochastic Loewner evolution in disordered systems  
*Martin Weigel (Coventry Univ, United Kingdom)*
- 16:20 Discrete holomorphicity in integrable lattice models  
*Imam Alam (Australian Natl Univ, Australia)*
- 16:35 Proximity effects in layered Ising models  
*Helen Au-Yang (Oklahoma State Univ, USA)*

**15:20~16:50 D11-Topic7 Place: 506, MLB**

**Chair:**

- 15:20 Transport with and without integrability in one-dimensional quantum systems  
*Joel Moore (UC Berkeley/LBNL, USA)*
- 15:50 Exact results for transport properties of one-dimensional Hamiltonian systems  
*Henk van Beijeren (Utrecht Univ, Netherlands)*
- 16:05 Entropy production in transport phenomena: variational principles and path-integral quantization of irreversible dynamics  
*Masuo Suzuki (RIKEN, Japan)*
- 16:20 Scale-dependent competing interactions: sign reversal of the average persistent current in nanoscale superconducting rings  
*Ora Entin-Wohlman (Ben Gurion and Tel Aviv Univ, Israel)*
- 16:35 Bound state influence on long-time non-exponential decay in open quantum systems  
*Savannah Garmon (Univ of Tokyo, Japan)*

**Parallel Session 12**

**17:10~18:40 A12-Topic9 Place: 305, MLB**

**Chair:**

- 17:10 Quantifying the diversity of antibody receptors  
*Aleksandra Walczak (ENS Paris, France)*
- 17:40 Double, double, ... bubble: the physics of DNA melting  
*Michel PEYRARD (Ecole Normale Supérieure de Lyon, France)*
- 17:55 Statistical physics of driven DNA: scaling and phase diagram  
*Sanjay Kumar (Banaras Hindu Univ, India)*
- 18:10 Rupturing of Hoogsteen base pairs in triplex DNA  
*Seok-Cheol Hong (Korea Univ, Republic of Korea)*
- 18:25 Hidden complexity in the isomerization dynamics of Holliday junctions  
*Changbong Hyeon (KIAS, Republic of Korea)*

**17:10~18:40 B12-Topic5 Place: 404, MLB**

**Chair:**

- 17:10 A fluid dynamics wave-particle duality: how quantum-like properties emerge from path-memory  
*Yves Couder (Univ Paris Diderot, France)*
- 17:40 Simple views on the dynamics of fluids in confined space  
*Ko Okumura (Ochanomizu Univ, Japan)*
- 17:55 Power law behavior in quantum crystallization of 4He in aerogel  
*Ryuji Nomura (Tokyo Inst of Technology, Japan)*
- 18:10 Re-entrant wetting of network fluids  
*Nelson Bernardino (Univ of Lisbon, Portugal)*



18:25 Ultrafast X-ray imaging of bubble entrapment during drop impact  
*Ji San Lee (Pohang Univ of Sci and Technology, Republic of Korea)*

**17:10~18:40 C12-Topic3 Place: 505, MLB**

**Chair:**

17:10 Fluctuations of heat in nonequilibrium systems  
*Jae Dong Noh (Univ of Seoul, Korea)*

17:40 Work distribution and fluctuation-dissipation relations for systems driven by external Levy random forces.  
*Ewa Gudowska-Nowak (M. Smoluchowski Inst of Phys, Jagiellonian Univ in Krakow, Poland)*

17:55 Density large deviations of driven systems with slow nonconserving dynamics  
*Or Cohen (Weizmann Inst of Sci, Israel)*

18:10 Information thermodynamics on causal networks  
*Sosuke Ito (Univ of Tokyo, Japan)*

18:25 Asymmetric inter-particle interactions can break the long time power-law decay of current correlation functions in low dimensional lattices  
*Hong Zhao (Xiamen Univ, China)*

**17:10~18:40 D12- Topics Place: 506, MLB**

**Chair:**

17:10 Exploring universal out-of-equilibrium scaling laws with turbulent liquid crystal  
*Kazumasa Takeuchi (Univ of Tokyo, Japan)*

17:40 Towards a dynamical picture of local equilibrium  
*Bernhard Altaner (Max Planck Inst for Dynamics and Self-Organization, Germany)*

17:55 Freezing of vesicles and stressed bilayers  
*Antti Lamberg (Kyoto Univ, Japan)*

18:10 Sheared Ising models in two and three dimensions  
*Antti Lamberg (Kyoto Univ, Japan)*

18:25 X-ray imaging of wetting ridge on a soft solid  
*Su Ji Park (Pohang Univ of Sci and Technology, Republic of Korea)*