

The 4th Conference

“Statistical Physics: Modern Trends and Applications”

Programme

3–6 July 2012, Lviv, Ukraine

Tuesday, 3 July, 2012

9.00 – 13.00

- Registration of the “StatPhys-2012” participants
- Satellite meeting of young participants
- Satellite Workshop “Polymers in porous environments and on disordered substrates”

14.00 – 14.20 OPENING CEREMONY

Chaired by I. YUKHNOVSKII (*Lviv, Ukraine*)

14.20 – 15.00 G. SZAMEL (*Fort Collins, USA*)
Dynamics of interacting Brownian particles

15.00 – 15.20 A. SCALA (*Rome, Italy*)
Full Brownian Dynamics simulation techniques for Hard Spheres

15.20 – 15.40 A.V. CHECHKIN (*Kharkiv, Ukraine*)
First passage processes for the two paradigmatic models of anomalous diffusion

15.40 – 16.00 O. GOMONAY (*Kyiv, Ukraine*)
Spin torque antiferromagnetic nanooscillator in the presence of noise

16.00 – 16.30 Coffee Break

Chaired by B. BERCHE (*Nancy, France*)

16.30 – 17.10 A. ZAGORODNY (*Kyiv, Ukraine*)
Fokker-Planck equation with memory: the cross over from ballistic to diffusive processes in many particle systems and incompressible media

17.10 – 17.50 I. ELIAZAR (*Holon, Israel*)
Anomalous is ubiquitous

17.50 – 18.10 L. CONTI (*Padova, Italy*)
Experimental study of thermal noise of oscillators in non-equilibrium steady-states

18.10 – 18.40 P. HÄNGGI (*Augsburg, Germany*)
Smoluchowski’s oeuvre: Its impact for physics and chemistry

18.40 – 19.00 A. ROVENCHAK (*Lviv, Ukraine*)
Lviv period for Smoluchowski: Science, teaching, and beyond

19.15 – 22.00 GET-TOGETHER PARTY

Wednesday, 4 July, 2012

Chaired by J. STREČKA (*Košice, Slovakia*)

- 9.00 – 9.40 I. PROCACCIA (*Rehovot, Israel*)
Universal plasticity in amorphous solids with implications to the glass transition
- 9.40 – 10.00 O.S. BAKAI (*Kharkiv, Ukraine*)
Short-range order effects in the critical and overcritical states of fluid
- 10.00 – 10.20 A. HUERTA (*Xalapa, México*)
Freezing of a two-dimensional matter
- 10.20 – 10.40 YU.D. FOMIN (*Troitsk, Russia*)
Inversion of sequence of diffusion and density anomalies in core-softened systems
- 10.40 – 11.00 T. BRYK (*Lviv, Ukraine*)
Features of collective dynamics in supercritical fluids
- 11.00 – 11.30 Coffee Break

Chaired by R. FOLK (*Linz, Austria*)

- 11.30 – 12.10 M. SCHMIDT (*Bayreuth, Germany*)
The internal-energy functional for classical liquids
- 12.10 – 12.30 A. MACIOŁEK (*Stuttgart, Germany*)
Phase behaviour, structure and aggregation of colloids immersed in near-critical solvents
- 12.30 – 12.50 O.D. LAVRETOVICH (*Kent, USA*)
Lytropic chromonic liquid crystals: structure, viscoelasticity, and defects

- 12.50 – 13.10 V.M. PERGAMENSHCHIK (*Kyiv, Ukraine*)
Kinetic energy of aggregates and universal power-law behavior of self-assembling in a thermal bath

13.15 – 13.30 CONFERENCE PHOTO

13.30 – 15.00 Lunch

Chaired by E. SCHÖLL-PASCHINGER (*Vienna, Austria*)

- 15.00 – 15.40 C. MEJÍA-MONASTERIO (*Madrid, Spain*)
Single particle trajectories – making the most out of bad statistics

- 15.40 – 16.00 B. HRIBAR-LEE (*Ljubljana, Slovenia*)
The influence of the charged obstacles on thermodynamics and dynamics in electrolyte solutions

- 16.00 – 16.20 A.E. KOBRYN (*Edmonton, Canada*)
Multiscale modeling of structure and dynamical processes of oligomeric polyelectrolyte gelators

- 16.20 – 16.40 S. SOKOŁOWSKI (*Lublin, Poland*)
Phase behavior of simple fluids and binary symmetric mixtures in pillared slit-like pores: A density functional approach

16.40 – 17.10 Coffee Break

17.10 – 18.40 POSTER SESSION
 (odd numbers of the list on pp. 17–27)

Chaired by: C. VON FERBER (*Coventry, United Kingdom*)
 A. SCALA (*Rome, Italy*)
 YU. KALYUZHNYI (*Lviv, Ukraine*)
 O. LAVRETOVICH (*Kent, USA*)
 W. JANKE (*Leipzig, Germany*)

Thursday, 5 July, 2012

Chaired by G. OSHANIN (*Paris, France*)

- 9.00 – 9.40 P. HÄNGGI (*Augsburg, Germany*)
Doing small systems: Concepts, role of ensembles, thermalization and fluctuation theorems
- 9.40 – 10.00 J. TALBOT (*Paris, France*)
Fluctuation theorems for an ideal and frictional granular motor
- 10.00 – 10.20 M.V TAMM (*Moscow, Russia*)
New alphabet-dependent morphological transition in a random RNA alignment
- 10.20 – 10.40 M.YA. SUSHKO (*Odesa, Ukraine*)
Experimental observation of triple correlations in fluids
- 10.40 – 11.00 A.B. BELONOSHO (Stockholm, Sweden)
Melting of ideal and real materials
- 11.00 – 11.30 Coffee Break

Chaired by O. PIZIO (*Coyoacan, Mexico*)

- 11.30 – 12.10 J. KERTESZ (*Budapest, Hungary*)
Egocentric social networks from communication data
- 12.10 – 12.50 R. KENNA (*Coventry, United Kingdom*)
Critical masses for academic research groups
- 12.50 – 13.10 C. VON FERBER (*Coventry, United Kingdom*)
Public transport networks: Fractal properties

- 13.10 – 13.30 YU. KOZITSKY (*Lublin, Poland*)
Markov evolution of continuum particle systems with dispersion and competition

- 13.30 – 15.00 Lunch

- 15.00 – 16.30 POSTER SESSION
(even numbers of the list on pp. 17–27)

Chaired by: C. VON FERBER (*Coventry, United Kingdom*)
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W. JANKE (*Leipzig, Germany*)

- 16.30 – 19.30 Excursion

- 19.30 – 22.30 CONFERENCE DINNER

Friday, 6 July, 2012

Chaired by I. STASYUK (*Lviv, Ukraine*)

- 9.00 – 9.40 J.K. FREERICKS (*Washington, USA*)
Recent progress in solving the nonequilibrium many-body problem
- 9.40 – 10.00 J. RICHTER (*Magdeburg, Germany*)
Strongly correlated systems on highly frustrated lattices: From magnons to electrons
- 10.00 – 10.20 O. DERZHKO (*Lviv, Ukraine*)
How does spin chain's quantum critical point manifest itself in elastic properties?
- 10.20 – 10.40 E.G. PETROV (*Kyiv, Ukraine*)
Coarse-grained kinetic equations for quantum systems
- 10.40 – 11.00 M.YU. RASULOVA (*Kuala-Lumpur, Malaysia*)
Soliton solution of generalized kinetic equation for many particle Jaynes-Cummings model
- 11.00 – 11.30 Coffee Break
- Chaired by H.Ş. MERT (*Konya, Turkey*)
- 11.30 – 12.10 C. VEGA (*Madrid, Spain*)
Modelling water with computer simulations
- 12.10 – 12.50 T. RENGER (*Linz, Austria*)
Theory of light-harvesting in photosynthesis
- 12.50 – 13.10 W. JANKE (*Leipzig, Germany*)
Polymer statistics in an attractive sphere

- 13.10 – 13.30 J. SZNAJD (*Wroclaw, Poland*)
Linear Perturbation Renormalization Group method for Ising-like spin systems
- 13.30 – 15.00 Lunch
- Chaired by A. SOKOLOVSKY (*Dnipropetrovs'k, Ukraine*)
- 15.00 – 15.40 W. SCHIRMACHER (*Mainz, Germany*)
Theory of vibrational anomalies in glasses
- 15.40 – 16.00 V.G. MOROZOV (*Moscow, Russia*)
Entropy production in decoherence: exactly solvable qubit models
- 16.00 – 16.20 V.V. IGNATYUK (*Lviv, Ukraine*)
On a relation between the temperature dependence of the T-mode of adsorbate and the nature of the “adsorbate-substrate” interaction
- 16.20 – 16.50 Coffee Break
- Chaired by I. MRYGLOD (*Lviv, Ukraine*)
- 16.50 – 17.30 Z. BURDA (*Krakow, Poland*)
Maximal entropy random walk
- 17.30 – 17.50 V.V. PLYULIN (*Potsdam-Golm, Germany*)
How a finite potential barrier decreases the mean first-passage time
- 17.50 – 18.10 Poster sessions summary
CONFERENCE CLOSING