



National Academy of Sciences of Ukraine,
Institute of Mathematics (Kyiv),
Bogolyubov Institute for Theoretical Physics (Kyiv),
Wolfgang Pauli Institute (Vienna),
INTAS project : "Partial Differential Equations
Modeling Semiconductors"

INTERNATIONAL CONFERENCE

Recent Trends in Kinetic Theory and Its Applications

May 11-15, 2004
Kyiv, Ukraine

MAIN TOPICS:

1. Many-particle dynamics and derivation of kinetic equations.
2. Quantum evolution equations and Wigner transforms.
3. Nonlinear kinetic equations and asymptotic theory.
4. Applications: granular media, dusty plasmas, semiconductor devices, biologically motivated problems.
5. New mathematical ideas in kinetic theory.

SCIENTIFIC COMMITTEE:

P. Marcowich (*Austria*) - Chairman,

A. Samoilenko (*Ukraine*), A. Zagorodniy (*Ukraine*), D. Petrina (*Ukraine*) - Co-chairmen,
C. Cercignani (*Italy*), P. Degond (*France*), V. Gerasimenko (*Ukraine*),
M. Lachowicz (*Poland*), N. Mauser (*Austria*), N. Nurlybaev (*Kazakhstan*),
M. Rasulova (*Uzbekistan*), Ya. Sinai (*USA, Russia*),
A. Sinityn (*Russia*), G. Toscani (*Italy*).

LOCAL ORGANIZING COMMITTEE:

Zh. Artemichenko, R. Cherniha, V. Gerasimenko,
P. Malyshev, T. Ryabukha, W. Skrypnik, V. Zasenکو.

PLENARY LECTURES:

- P. Markowich.** MATHEMATICAL MODELS FOR CHEMOTAXIS.
- D. Petrina.** ANALOGUE OF LIOUVILLE EQUATION AND BBGKY HIERARCHY FOR A SYSTEM OF HARD SPHERES WITH INELASTIC COLLISIONS.
- A. Zagorodny.** BOGOLYUBOV HIERARCHY AND KINETIC EQUATIONS FOR DUSTY PLASMAS.
- R. Kapral.** QUANTUM-CLASSICAL REACTIVE DYNAMICS.
- I. Skripnik.** AVERAGING OF NONLINEAR DIFFUSION EQUATIONS.
- E. Belokolos.** KINETIC EQUATIONS FOR THE INTEGRABLE HAMILTONIAN SYSTEMS.
- M. Carvalho, E. Carle, E. Gabetta.** ON THE RELATION BETWEEN RATES OF RELAXATION AND CONVERGENCE OF WILD SUMS FOR SOLUTIONS OF THE KAC EQUATION
- P. Kotelenez.** CORRELATED BROWNIAN MOTIONS AND THE DEPLETION PHENOMENON.
- G. Toscani.** ASYMPTOTIC PROPERTIES OF THE INELASTIC BOLTZMANN EQUATION FOR MAXWELL MOLECULES.
- M. Lachowicz.** STOCHASTIC SEMIGROUPS AND THEIR MACROSCOPIC LIMIT.
- I. Goldhirsch, A. Peletminskii, S. Peletminskii, A. Sokolovsky.** KINETIC THEORY TAKING INTO ACCOUNT DISSIPATIVE INTERPARTICLE FORCES.
- W. Skrypnik.** GIBBS PATH SYSTEMS AND SOLUTIONS OF THE BBGKY-TYPE DIFFUSION HIERARCHIES.
- A. Sinitsyn.** MATHEMATICAL PROBLEMS OF MAGNETIC INSULATION. KINETIC APPROACH.
- A. Chechkin.** FRACTIONAL KINETIC EQUATIONS: THEORY AND APPLICATIONS.
- V. Gerasimenko.** ON THE ORIGIN OF KINETIC EVOLUTION OF MANY-PARTICLE SYSTEMS.

CONFERENCE LOCATION AND SCHEDULE:

The Conference opening ceremony will be held at 11:00 on Tuesday, May 11 in Great Conference Hall of Bogolyubov Institute for Theoretical Physics of NAS of Ukraine (14 Metrolohichna str.).

The Conference meetings will take place in the Conference Hall of the Institute of Mathematics of NAS of Ukraine (3 Tereshchenkivs'ka str.).

The registration of participants will take place in the Institute of Mathematics (room 206, 3 Tereshchenkivs'ka str.) during Monday, May 10.

Morning sessions will contain plenary lectures (45 minutes) while original communications (25 minutes) will be held during the afternoon sessions.

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