

PROGRAMME
INTERNATIONAL BOGOLYUBOV CONFERENCE
**PROBLEMS OF THEORETICAL AND
MATHEMATICAL PHYSICS**
Moscow – Dubna, August 21 – 27, 2009

August 21, Friday Moscow

- 08:00 - 10:00 **Registration** Moscow, RAS bldg.
- 10:00 - 10:30 Yu.S. Osipov (Moscow)
Opening. Welcome
- 10:30 - 11:10 V.V. Kozlov (Moscow) Chair: A.N. Sissakian
*Nonequilibrium statistical mechanics from the point of view
of weak convergence of solutions of the Liouville equation*
- 11:10 - 11:50 S.P. Novikov (Moscow)
New Discretization of Complex Analysis
- 11:50 - 12:30 V.A. Matveev (Moscow)
Search on New Physics at LHC
- 12:30 - 12:50 COFFEE BREAK** Chair: V.A. Matveev
- 12:50 - 13:30 M. Shaposhnikov (Lausanne)
Cosmology versus Standard Model
- 13:30 - 14:10 A.V. Radyushkin (Newport News & Dubna)
Pion distribution amplitude and form factors
- 14:10 - 15:50 LUNCH BREAK**
- 16:00 **Visit to Novodevichy Monastyr**
- 18:00 Film about N.N.Bogolyubov
- 19:00 WELCOME PARTY**

August 22, Saturday Moscow

Chair: V.V. Kozlov

- 09:30 - 10:10 V.S. Vladimirov (Moscow)
*Adelic formulas for string and superstring amplitudes
in one-class quadratic fields*
- 10:10 - 10:50 V.I. Arnold (Moscow)
Weak asymptotics in the averaging theory
- 10:50 - 11:30 I.A. Molotkov (Moscow)
Mathematical modeling of processes in an emergency reactor
- 11:30 - 12:10 A.I. Neishtadt (Moscow)
*Averaging, passages through resonances, and captures into
resonance in dynamics of charged particles*
- 12.10 - 12.30 **COFFEE BREAK**
- Chair: A.A. Slavnov
- 12:30 - 13:10 I.V. Volovich (Moscow)
Time Irreversibility Problem and the Bogolyubov Hierarchy
- 13:10 - 13:50 Ya.G. Sinai (Moscow & Princeton)
*The decay of Fourier modes in solutions of
Navier-Stokes system*
- 13:50 - 14:30 L.N. Lipatov (St. Petersburg)
Scattering amplitudes in $N=4$ SUSY and Steinmann relations
- 14.30 - 15.50 LUNCH BREAK**
- 16.00 **Departure to Dubna**

August 23, Sunday Dubna

- 16:00 - 18:00 **Boat Trip**

August 24, Monday Dubna

- 08:00 - 09:00 **Registration** Dubna, BLTP JINR
- 09:00 - 09:20 A.N. Sissakian (Dubna)
Opening. Welcome
- 09:20 - 09:50 A.N. Sissakian (Dubna)
N.N.Bogolyubov – the teacher and master
- 09:50 - 10:00 M.N. Bogolyubov (St.Petersburg)
- 10:00 - 10:15 **Opening memorial plaque**
- 10:15 - 10:35 **COFFEE BREAK**
- Chair: D.V. Shirkov
- 10:35 - 11:15 H. Araki (Kyoto)
Dynamics and potentials
- 11:20 - 12:00 E.E. Boos (Moscow)
Physics at the LHC
- 12:05 - 12:45 D.I. Kazakov (Dubna)
New developments in QFT: $D=4$ conformal field theories and AdS/CFT correspondence
- 12:50 - 13:30 N.A. Slavnov (Moscow)
Asymptotic behavior of correlation functions of massless quantum integrable models
- 13:35 - 15:00 **LUNCH BREAK**
- 15:00 - 17:00 **Parallel sessions**
- 17:00 - 17:20 Coffee break
- 17:20 - 19:20 **Parallel sessions**
- 20:00 **WELCOME PARTY**

August 25, Tuesday Dubna

Chair: A.G. Zagorodny

- 09:00 - 09:45 K. Jansen (Zeuthen)
The quest for solving QCD: simulations with light quarks
- 09:45 - 10:30 L.D. Faddeev (St.Petersburg)
New variables for the Einstein Theory of Gravity
- 10:30 - 11:15 L.P. Pitaevsky (Moscow & Trieste)
Direct experimental verification of the Bogolyubov theory of a dilute Bose-gas

11:15 - 11:35 **COFFEE BREAK**

Chair: H. Araki

- 11:35 - 12:20 K. Chetyrkin (Karlsruhe)
Multiloop renormalization group: past, present and future
- 12:20 - 13:05 S. Frolov (Dublin)
Gauge theory from quantum strings
- 13:10 - 15:00 **LUNCH BREAK**
- 15:00 - 17:00 **Parallel sessions**
- 17:00 - 17:20 **COFFEE BREAK**
- 17:20 - 19:20 **Parallel sessions**
- 20:00 **CONCERT**

August 26, Wednesday **Dubna**

Chair: L.P. Pitaevsky

- 09:00 - 09:45 W. Götze (München)
*The mode-coupling theory of Glassy relaxation –
What is non-trivial?*
- 09:45 - 10:30 V.G. Bar'yakhtar (Kiev)
N.N. Bogoliubov and Development of Physical Kinetics
- 14.30 - 15.50 **LUNCH BREAK**
- 10:30 - 11:15 P.-G. Reinhard (Erlangen)
*Self-consistent mean-field description of nuclear structure and
dynamics – a status report*
- 11.15 - 11.35 **COFFEE BREAK**
- Chair: V.V. Voronov
- 11.35 - 12.20 Yu. Oganessian (Dubna)
The limits of existence of atomic nuclei
- 12.20 - 13.05 M. Stoitsov (Knoxville & Oak Ridge & Sofia)
Nuclear density functional theory
- 13.05 - 15.00 **LUNCH**
- 15.00 - 17.00 **Parallel sessions**
- 17.00 - 17.20 **COFFEE BREAK**
- 17.20 - 19:00 **Parallel sessions**
- 19.30 **BANQUET**

August 27, Thursday Dubna

Chair: L.D. Faddeev

09:00 - 09:45 I.Ya. Arefeva (Moscow)
Catalysis of Black Holes Production at the LHC

09:45 - 10:30 A. Smirnov (Trieste)
Neutrino physics and astrophysics

10:30 - 11:15 V.I. Zakharov (Moscow)
Duality and Non-perturbative Physics in QCD

11:15 - 11:35 **COFFEE BREAK**

Chair: P.N. Bogolyubov

11:35 - 12:20 R.N. Faustov (Moscow)
Low-energy properties of hadrons in the relativistic quark model

12:20 - 13:05 V.A. Zagrebnov (Marseille)
Bogoliubov theory of boson systems in the presence of external potentials

13:05 - 15:00 **LUNCH**

Chair: P.-G. Reinhard

15:00 - 15:45 V.V. Voronov (Dubna)
Pair correlations and the time-dependent Hartree-Fock-Bogoliubov method in the theory of nuclear structure

15:45 - 17:00 A.S. Sorin (Dubna)
The nuclotron-based ion collider facility at the Joint Institute for Nuclear Research: new prospects for heavy ion collisions and spin Physics

16:30 A.N. Sissakian (Dubna)
CLOSING