

Schedule

Friday, July 3d

8:30 – 9:20 Registration

9:30 Openning, chairman: Dmitri Diakonov

Grigory Volovik (Helsinki & Landau). Dynamics of the self-sustained vacuum and cosmological constant

10:20

Martin Zirnbauer (Cologne). Superbosonization meets free probability

11:10 Coffee break

11:40

Pierre van Baal (Leiden). Calorons with non-trivial holonomy - an overview

12:30

Alexei Yung (PNPI, SPb). Crossover between Abelian and non-Abelian confinement in $N=2$ supersymmetric QCD

13:20 Lunch

15:00

Chairman: Alexander Mirlin

Mikhail Dyakonov (Montpellier). One-dimensional model for the Fractional Quantum Hall Effect

15:30

Igor Burmistrov (Landau). Interplay of spin and charge channels in the tunneling density of states of zero-dimensional systems

16:00 Coffee break

16:30

Thomas Quella (Amsterdam). World-sheet duality for supersphere sigma-models

17:00

Vitaly Tarasov (Indianapolis & Steklov, SPb). Bethe Ansatz and Schubert calculus

18:00 Welcome party

Saturday, July 4th

Chairman: Andreas Ludwig

9:30

Falk Bruckmann (Regensburg & Erlangen). Instanton constituents in sigma models

10:20

Konstantin Efetov (Bochum). Exact collective modes description of interacting Fermi gas in any dimension

11:10 Coffee break

11:40

Alexander Mirlin (Karlsruhe & PNPI, SPb). Non-equilibrium Luttinger liquids: bosonization and tunneling spectroscopy

12:30

Vladimir Kravtsov (ICTP, Trieste & Landau, Moscow). Horizon in Hawking radiation, random matrix theory and flow of cold atoms.

13:20 Lunch

Chairman: Alexei Yung

15:00

Dmitry Levkov (INR, Moscow). Kink-antikink production in collisions of high energy particles

15:30

Pavel Bolokhov (Pittsburgh). Heterotic vortex strings in N=1 Super QCD

16:00 Coffee break

16:30

Mikhail Zvonarev (Geneva). Mott-insulator to ferromagnetic liquid transition in the one-dimensional spin 1/2 Bose-Hubbard model

17:00

Dmitry Bagrets (FZ Karlsruhe). Non-equilibrium kinetics of a disordered Luttinger liquid

Sunday, July 5th

Chairman: Alexei Morozov

9:30

Ilya Gruzberg (U. of Chicago). Wave functions and conductances at the integer quantum Hall transition: conformal invariance and possible theories.

10:20

Alexander Altland (Cologne). Quantum generalization of the Eilenberger equation

11:10 Coffee break

11:40

Samson Shatashvili (Trinity College, Dublin & IHES, Bures-Sur-Yvette). Quantum integrability and supersymmetric vacua

12:30

Nikita Nekrasov (IHES, Bures-sur-Yvette)

Supersymmetric gauge theories and quantization of integrable systems

13:20 Lunch

Free time, group meetings

20:00 Boat trip and conference dinner on board.

Monday, July 6th

Chairman: Grigory Volovik

9:30

Andrei Barvinsky (Lebedev, Moscow). CFT driven cosmology and brane induced gravity correspondence

10:20

Emil Akhmedov (ITEP, Moscow). On instability of the de Sitter space

11:10 Coffee break

11:40

Yuri Makhlin (Landau). Quantum measurement and superconducting qubits

12:30

Paul Fendley (U. of Virginia). Topological order from quantum loops and nets

13:20 Lunch

Chairman:

15:00

Ludwig Faddeev (Steklov, SPb). New action for the Hilbert–Einstein equation

15:40

Peter Woit (Columbia U.). BRST and Dirac Cohomology

16:10 Coffee break

16:40

Sergei Alexandrov (Montpellier). D-instantons and twistors

17:10

Dmitri Diakonov (PNPI, SPb). Statistical physics of dyons and quark confinement

Tuesday, July 7th

Chairman:

9:30

Vladimir Kazakov (Ecole Normale). Integrability of the full exact spectrum of planar AdS / CFT

10:20

Nikolay Gromov (DESY, Hamburg & PNPI, SPb). Full spectrum of planar AdS / CFT

11:10 Coffee break

11:40

Andreas Ludwig (Santa Barbara). Classification of topological insulators and superconductors

12:30

Mikhail Feigelman (Landau, Moscow). Pseudogap superconductivity and quantum transition to insulator

13:20 Lunch

Chairman:

15:00

Alexander Dmitriev and **Valentin Kachorovskii** (Ioffe, SPb). Aharonov-Bohm conductance through a Luttinger-liquid ring

15:30

Andrey Yashenkin (PNPI, SPb). Weak localization and magnetoresistivity of a disordered Luttinger liquid

16:00 Coffee break

16:30

Dmitri Ivanov (EPFL, Switzerland). Correlations of the local density of states in quasi-one-dimensional wires

17:00

Dmitry Aristov (Karlsruhe & PNPI, SPb). Strong impurity in a quantum wire

Wednesday, July 8th

Chairman:

9:30

Arkady Tseytlin (Imperial College). TBA

10:20

Konstantin Zarembo (Ecole Normale & Uppsala & ITEP). Integrability in superconformal Chern-Simons theories

11:10 Coffee break

11:40

Lev Lipatov (PNPI, SPb). Integrability of high energy scattering amplitudes in N=4 supersymmetric theory

12:30

Yan Fyodorov (Nottingham). Random potentials with logarithmic correlations: multifractality of Boltzmann-Gibbs weights and extreme value statistics

13:20 Lunch

Chairman:

15:00

Gernot Akemann (Brunel U., London). Effective Random Matrix Theory of Finite Density QCD

15:30

Andrei Mikhailov (CalTech). Notes on pure spinor string in anti-de Sitter space

16:00 Coffee break

16:30

Alexander Panin (INR, Moscow). Long quantum transitions due to unstable semiclassical dynamics

17:00

Pavel Ostrovsky (FZ Karlsruhe). Transport of disordered Dirac fermions

18:00 Closing and farewell party