



*Bogolyubov Institute for
Theoretical Physics*

**School on
Anomalous Transport, Superconductivity
and Magnetism in Nanosystems**

BITP, Kiev, 15 - 20 June 2015



PROGRAMME

MONDAY, 15 JUNE

- 9:00 - 10:00 Registration of all participants
- MORNING SESSION* *chairperson: Anatoly G. Zagorodny*
- 10:00 - 10:30 Opening ceremony
- 10:30 - 12:00 **Igor Lerner** One-dimensional flows of cold atoms
Birmingham University, UK
- 12:00 - 14:00 Lunch
- AFTERNOON SESSION* *chairperson: Andrey Varlamov*
- 14:00 - 15:30 **Leonid Glazman** Nonlinear quantum liquids in one dimension - part I
Yale University, USA
- 15:30 - 15:50 Coffee break
- 15:50 - 16:35 **Leonid Glazman** Nonlinear quantum liquids in one dimension - part II
Yale University, USA
- 17:00 - 18:30 Welcome party

TUESDAY, 16 JUNE

- MORNING SESSION* *chairperson: Yuri B. Gaididey*
- 9:00 - 10:30 **Sergei Flach** Nonlinear Lattice Waves:
Massey University at a journey from coherence to dephasing with
Auckland, New Zealand & encounters of FPU, KAM, Anderson and others
Inst. for Basic Science at
Daejeon, Korea
- 10:30 - 11:00 Coffee break

11:00 - 12:30	Rosario Fazio <i>Scuola Normale Superiore di Pisa, Italy</i>	Circuit-QED: from qubits to networks
12:30 - 14:00	Lunch	
	<i>AFTERNOON SESSION</i>	<i>chairperson: Valery Gusynin</i>
14:00 - 15:30	Leonid Falkovsky <i>ITP Landau, Russia</i>	2D conducting structures in magnetic fields
15:30 - 16:00	Coffee break	
16:00 - 17:30	Sasha Chudnovsky <i>Hamburg University, Germany</i>	One-dimensional system of interacting electrons: Luttinger liquid

WEDNESDAY, 17 JUNE

	<i>MORNING SESSION</i>	<i>chairperson: Vladimir E. Kravtsov</i>
9:00 - 10:30	Boris Altshuler <i>Columbia University, USA</i>	Anderson localization - part I
10:30 - 11:00	Coffee break	
11:00 - 11:45	Boris Altshuler <i>Columbia University, USA</i>	Anderson localization - part II
11:45 - 13:15	Mikhail Feigel'man <i>ITP Landau, Russia</i>	Strongly disordered superconductors and quantum transition to insulating state
13:15 - 15:00	Lunch	
15:00	Excursion: guided tour and visit of Kiev Pechersk Lavra	

THURSDAY, 18 JUNE

	<i>MORNING SESSION</i>	<i>chairperson: Vadim M. Loktev</i>
9:00 - 10:30	Vladimir Lebedev <i>ITP Landau, Russia</i>	Turbulence and elastic turbulence
10:30 - 11:00	Coffee break	
11:00 - 12:30	Leonid Ponomarenko <i>Lancaster University, UK</i>	Graphene heterostructures: electronic properties and potential applications
12:30 - 14:00	Lunch	

AFTERNOON SESSION

chairperson: Sergei G. Sharapov

- 14:00 - 15:30 **Mikhail Portnoi**
University of Exeter, UK Zero-energy states in two-dimensional Weyl semimetals
- 15:30 - 17:00 Coffee break
- 16:00 - 17:30 **Alexey Kavokin**
University of Southampton, UK Seebeck and Nernst-Ettingshausen effects in fluctuative superconductors

FRIDAY, 19 JUNE

MORNING SESSION

chairperson: Robert Shekhter

- 9:00 - 10:30 **Ilya Krive**
V.N. Karazin Kharkiv National University Nanoelectromechanics of superconducting systems
- 10:30 - 11:00 Coffee break
- 11:00 - 12:30 **Igor Luk'yanchuk**
J.V. University Amiens, France Critical superconductors with Ginzburg-Landau parameter κ close to $\kappa=1/\sqrt{2}$
- 12:30 - 14:00 Lunch

AFTERNOON SESSION

chairperson: Boris Altshuler

- 14:00 - 15:30 **Robert Shekhter**
University of Gothenburg, Sweden Nanoelectromechanics of magnetic shuttle systems
- 15:30 - 16:00 Coffee break
- 16:00 - 17:30 **Igor Zozoulenko**
Linköping University, Sweden Electronic and thermoelectric transport in organic polymeric films

SATURDAY, 20 JUNE

CLOSING SESSION

- 9:00 - 10:30 **Valery Gusynin**
BITP Kiev Graphene and quantum electrodynamics
- 10:30 - 12:00 **Vladimir E. Kravtsov**
ICTP, Italy Anderson localization and enhancement of superconductivity by disorder
- 12:00 - 12:45 **Boris Altshuler**
Columbia University, USA Anderson localization
- 12:45 - 13:00 Closing remarks