The Abdus Salam International Centre for Theoretical Physics

Tenth Hopping and Related Phenomena Conference (HRP 10)

Director(s):
Organizer(s): H. Böttger
Trieste - Italy, 01 - 04 September 2003

Venue: Adriatico Guest House (Terrace)

Final programme

Welcome and Reception Party - Sunday, 31 August 2003 @ 19:00 (Room:Adriatico Guest House (Terrace)) (**Sunday**)

Glass Transition/2D Systems (Room:Adriatico Guest House Kastler Lecture Hall)
Chairperson: A. Aldea (Bucharest, Romania)

1 September 2003

08:30 - 09:40 (Room: Adriatico Guest House (Lower Level 1))
--- REGISTRATION ---

09:40 - 10:00 **H. Boettger** / *Otto-von-Guericke Universität, Magdeburg, Germany*
OPENING - WELCOME ADDRESS

10:00 - 10:40 **V. Dobrosavljevic** / *Florida State University, Tallahassee, U.S.A.*
2D-MIT as a Transition to a Mott-Anderson Glass

10:40 - 11:00 **C.C. Yu** / *University of California, Irvine, U.S.A.*
Why Study 1/f Noise in Coulomb Glasses: A Suggestion for Experimentalists

11:00 - 11:30 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

11:30 - 12:10 **D. Popovic** / *Florida State University, Tallahassee, U.S.A.*
Metal-Insulator Transition and Glassy Behaviour in a Two-Dimensional Electron System in Silicon

12:10 - 12:30 **G. Minkov** / *Ural State University, Ekaterinburg, Russian Federation*
Is the Conductivity of 2D Systems Hopping at Sigma < e^2/h?

12:30 - 14:00 (Room: Adriatico Guest House Cafeteria)
--- Lunch Break ---

Glassy Behaviour (Room:Adriatico Guest House Kastler Lecture Hall)
Chairperson: A. Frydman (Ramat Gan, Israel)

1 September 2003

14:00 - 14:40 **Z. Ovadyahu** / *The Hebrew University of Jerusalem, Israel*
Memory Effects in the Electron Glass

14:40 - 15:20 **A.L. Efros** / *University of Utah, Salt Lake City, U.S.A.*
Long Time Relaxation of Interacting Electrons in Regime of Hopping Conduction

15:20 - 16:00 **O. Bleibaum** / *Otto-von-Guericke Universität, Magdeburg, Germany*
Relaxation of Non-Equilibrium Charge Carriers at Low Temperatures

16:00 - 16:30 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

16:30 - 17:10 **Wenhao Wu** / *University of Rochester, U.S.A.*
Relaxations, Nonlinearity, and Fluctuations in an Electron Glass

17:10 - 17:30 **T. Grenet** / *LEPES/CNRS, Grenoble, France*
Anomalous Field Effect and Slow Relaxation in the Conductivity of Granular Aluminium

17:30 - 17:50 **A. Goldman** / *University of Minnesota, Minneapolis, U.S.A.*
Electrical Transport of Spin Polarized Carriers in Disordered Ultrathin Films

18:00 - 19:00 (Room: Adriatico Guest House (Lower Level 1))
--- Poster Session ---

19:00 - 20:00 (Room: Adriatico Guest House Cafeteria)
--- Dinner ---

20:00 - 22:00 (Room: Adriatico Guest House (Lower Level 1))
--- Poster Session ---

Hopping (Room:Adriatico Guest House Kastler Lecture Hall)
Chairperson: I. Shlimak (Ramat-Gan, Israel)

2 September 2003

09:00 - 09:40 **P. Kleinert** / *Paul-Drude-Institut für Festkörperelektronik, Berlin, Germany*
Electric-Field-Induced Hopping Transport in Superlattices

09:40 - 10:20 **A.K. Savchenko** / *University of Exeter, U.K.*
Shot Noise in Mesoscopic Transport through Localised States

10:20 - 10:40 **B. Shklovskii** / *University of Minnesota, Minneapolis, U.S.A.*
1/f Noise in Variable Range Hopping Conduction

10:40 - 11:00 **T. Damker** / *Otto-von-Guericke Universität, Magdeburg, Germany*
Spin Transport in Two Dimensional Hopping Systems

11:00 - 11:30 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

11:30 - 11:50 **A. Frydman** / *Bar-Ilan University, Ramat Gan, Israel*
Transport Properties of Dilute Granular Hopping Systems

11:50 - 12:10 **K.K. Bardhan** / *Saha Institute of Nuclear Physics, Kolkata, India*
Scaling in Hopping Systems under Finite Electric Field

12:10 - 12:30 **H.B. Brom** / *University of Leiden, The Netherlands*
Charge Carrier Properties below and above the Metal-Insulator Transition in Conjugated Polymers - Recent Results

12:30 - 14:00 (Room: Adriatico Guest House Cafeteria)
--- Lunch Break ---

MIT in 2D (Room:Adriatico Guest House Kastler Lecture Hall)
Chairperson: A. Goldman (Minneapolis, U.S.A.)

2 September 2003

14:00 - 14:40 **B. Narozhny** / *Abdus Salam I.C.T.P., Trieste, Italy*
Metallic Conductivity in 2D Electron Systems

14:40 - 15:20 **S. Kravchenko** / *Northeastern University, Boston, U.S.A.*
Metal-Insulator Transition and Possible Ferromagnetic Instability in Two dimensions

15:20 - 16:00 **M. Reznikov** / *Solid State Institute, Haifa, Israel*
The Thermodynamic Spin Magnetization of Strongly Correlated 2D Electrons in a Silicon Inversion Layer

16:00 - 16:30 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

16:30 - 17:10 **V. Pudalov** / *Rutgers, The State University of New Jersey, Piscataway, U.S.A.*
Are Interaction Effects Responsible for Temperature and Magnetic Field Dependant Conductivity in Si-MOSFETs?

17:10 - 17:30 **F.X. Bronold** / *EMAU Greifswald, Germany*
Localization and Delocalization of Polaron States

17:30 - 17:50 **S. Ishida** / *Tokyo University of Science, Yamaguchi, Japan*
Crossover from Weak Localization to Weak Anti-Localization with Decreasing Thickness of Sn Doped InSb Films on GaAs (100) Substrates

17:50 - 18:10 **G. Sambandamurthy** / *The Weizmann Institute of Science, Rehovot, Israel*
Re-Entrant Insulating Phase at High Magnetic Fields in Disordered 2D Superconductors

18:10 - 20:00 (Room: Adriatico Guest House Cafeteria)
--- Dinner ---

20:00 - 21:00 **Panelists: S. Kravchenko, B. Narozhny, M. Pollak (Moderator), D. Popovic, V. Pudalov**
Panel Discussion I: MIT and Glassy State in 2D

21:00 - 22:00 (Room: Adriatico Guest House (Lower Level 1))
--- Poster Session ---

Hopping/Biological Systems (Room:Adriatico Guest House Kastler Lecture Hall)
Chairperson: B. Shklovskii (Minnesota, U.S.A.)

3 September 2003

09:00 - 09:20 **I.L. Drichko** / *A.F. Ioffe Physical-Technical Institute, St. Petersburg, Russian Federation*
AC Hopping Conductance of Self-Organized Ge/Si Quantum Dot Arrays

09:20 - 09:40 **N. Stepina** / *Institute of Semiconductors Physics, Novosibirsk, Russian Federation*
Non-Equilibrium Transport in Arrays of Type-II Ge/Si Quantum Dots

09:40 - 10:20 **P. Armitage** / *University of California, Los Angeles, U.S.A.*
Electrons on the Double Helix

10:20 - 11:00 **K. Kohary** / *University of Oxford, U.K.*
Hopping Transport in 1D Chains (DNA vs. DLC)

11:00 - 11:30 (Room: Adriatico Guest House (Terrace))
--- Coffee Break ---

11:30 - 12:10 **H. Kamimura** / *Tokyo University of Science, Japan*
Study on the Mechanism of Proton Conductivity in Zero-Dimensional Hydrogen-Bonded Crystals M3H(XO4)2 with M=K, Rb, Cs and X=S, Se

12:10 - 12:50 **E. Frey** / *Hahn-Meitner-Institut, Berlin, Germany*
Collective Phenomena in Intracellular Transport

12:50 - 14:00 (Room: Adriatico Guest House Cafeteria)
--- Lunch Break ---

14:30 - 18:30 --- Excursion ---

19:30 - 20:00 **Counsel of Programme Committee**

20:00 - 22:00 (Room: Adriatico Guest House (Terrace))
--- Conference Dinner ---

Coulomb Glass/Localisation (Room:Adriatico Guest House Kastler Lecture Hall)
Chairperson: P. Zvyagin (Moscow, Russian Federation)

4 September 2003

09:00 - 09:40 **R. Haug** / *Universität Hannover, Germany*
Hopping Conductivity in the Quantum Hall Effect

09:40 - 10:00 **I. Shlimak** / *Bar-Ilan University, Ramat Gan, Israel*
Longitudinal Conductivity in Si/SiGe Heterostructure at Integer Filling Factors

10:00 - 10:40	**D. Kumar** / *Jawaharlal Nehru University, New Delhi, India* **Role of Coulomb Interactions in Hopping Conduction**
10:40 - 11:00	**M. Pollak** / *University of California, Riverside, U.S.A.* **Variable-Range Hopping in the Two-Dimensional Coulomb Gap**
11:00 - 11:30	(Room: Adriatico Guest House (Terrace)) --- Coffee Break ---
11:30 - 12:10	**V. Filinov** / *High Energy Density Research Center, Moscow, Russian Federation* **Wigner Approach to Quantum Dynamics Simulations of the Interacting Carriers in Disordered Systems**
12:10 - 12:50	**A.G. Zabrodski** / *A.F. Ioffe Physical-Technical Institute, St. Petersburg, Russian Federation* **Metal-Insulator Transition in Doped Semiconductors: Disorder, Charge and Spin Correlations**
12:50 - 14:00	(Room: Adriatico Guest House Cafeteria) --- Lunch Break ---
14:15 - 15:15	**Panelists: P. Armitage, S. Baranovski, H. Boettger (Moderator), H. Brom, Z. Ovadyahu, C. Yu** **Panel Discussion II: ("Quo Vadis, Hopping?")**
15:15 - 15:20	**H. Boettger** / *Otto-von-Guericke Universität, Magdeburg, Germany* **Closing Remarks**