School on Counting Statistics, 7 & 8 January 2006
Lancaster University, UK

Saturday 7th January

8:00-8:45 **Breakfast *(Langdales Restaurant)***

Conference Centre

MR1 Morning Session

9:00-10:00	Tobias Brandes *Quantum optics and photon counting I*
10:00-10:30	Coffee
10:30-11:30	Yaroslav Blanter *Noise in electronic systems I*
11:30-12:00	Break
12:00-13:00	Wolfgang Belzig *Mesoscopic counting statistics I*
13:00-14:30	**Lunch (Foyer)**

MR1 Afternoon Session

14:30-15:30	Tobias Brandes *Quantum optics and photon counting II*
15:30-16:00	Coffee
16:00-17:00	Eugene Sukhorukov *Stochastic Path Integral formulation I*
17:30-19:00	Discussion
19:30-21:00	**Dinner (*Langdales Restaurant)***

Sunday 8th January

8:00-8:45 **Breakfast (*Langdales Restaurant*)**

Conference Centre

MR1 Morning Session

9:00-10:00	Yaroslav Blanter *Noise in electronic systems II*
10:00-10:30	Coffee
10:30-11:30	Wolfgang Belzig *Mesoscopic counting statistics II*
11:30-11:45	Break
11:45-12:45	Eugene Sukhorukov *Stochastic Path Integral formulation II*
12:45-14:00	**Lunch (Foyer)**

International Conference Nanoelectronics 2006
Lancaster University, UK

Sunday 8th January

Conference Centre

MR1 Noise and Counting Statistics I (Chair: Wolfgang Belzig)

14:00-14:30 Renaud Leturcq
Counting statistics of single electron transport in a quantum dot

14:30-15:00 Frank Hekking
Finite frequency quantum noise in an interacting mesoscopic conductor

15:00-15:20 Leonardo DiCarlo
Shot Noise of a Quantum Point Contact in a Magnetic Field

15:20-15:40 Alessandro Braggio
Full Counting Statistics & Non-Markovian Effect in Strongly Interacting Systems

15:40-16:00 Tomas Novotny
Charge transport statistics of quantum shuttles

16:00-16:30 **Coffee (Foyer)**

MR1 Noise and Counting Statistics II (Chair: Elisabetta Paladino)

16:30-17:00 Tobias Brandes
Coherence and noise in transport through coupled quantum dots

17:00-17:30 Guiseppe Falci
Coherent population transfer in superconducting nanodevices

17:30-18:00 Christoph Bruder
Current cross-correlations in mesoscopic devices

18:00-18:20 Alberto Morpurgo
Non-local Andreev reflection: experimental observation and relevance for entangler devices

18:30-19:30 **Posters up (MR1)**

Barker House Farm

19:30-21:30 **Dinner/Welcome party with barrels of local beer**

International Conference Nanoelectronics 2006
Lancaster University, UK

Monday 9th January

8:00-8:45 **Breakfast (*Langdales Restaurant)***

Conference Centre

MR2 Quantum Transport I (Chair: John Chalker)

9:00-9:30 Yaroslav Tserkovnyak
Momentum-resolved tunneling into a short cleaved-edge wire

9:30-10:00 Konstantin Arutyunov
Quantum size phenomena in ultra-narrow 1D nanowires

10:00-10:30 Jurgen Smet
Polarization dependence and local probe studies of the microwave induced zero resistance in the two dimensional electron system

10:30-11:00 **Coffee (Foyer)**

MR2 Hybrid Structures I (Chair: Gerrit Bauer)

11:00-11:30 Arne Brataas
Magnetoelectronic Circuits: Torque, Pumping, and Noise

11:30-12:00 Chris Marrows
Spin polarisation at finite temperature

12:00-12:30 Veronique Dupuis
Single magnetic clusters embedded in matrix

12:30-12:50 Malek Zareyan
Shot noise in magnetoelectronic structures

13:00-14:30 **Lunch (Foyer)**

MR2 Quantum Dynamics (Chair: Christoph Bruder)

14:30-15:00 Miles Blencowe
Cooper-Pair Molasses: Cooling a Nanomechanical Resonator with Quantum Back-Action

15:00-15:20 Andrea Donarini
Electromechanical properties of a biphenyl transistor

15:20-15:40 Denzil Rodrigues
The SET Resonator: Quantum Master Equations

15:40-16:00 Alexey Bykov
Effect of DC and AC excitations on the magnetoresistance in high-density high-mobility GaAs quantum well systems

16:00-16:30 **Coffee (Foyer)**

MR2 Graphene and Graphite I (Chair: Pablo Esquinazi)

16:30-17:00 Tsuneya Ando
Exotic transport properties of two-dimensional graphite

17:00-17:30 Francisco Guinea
Interaction effects, disorder, and transport in graphene layers

17:30-18:00 Andre Geim
QED in a Pencil Trace

18:00-18:30 Ben Simons
Electronic Structure of the Superconducting Graphite Intercalates

18:30-20:00 **Poster session I (MR1)**

20:00-21:30 **Dinner (*Langdales Restaurant)***

International Conference Nanoelectronics 2006
Lancaster University, UK

Tuesday 10th January

8:00-8:45 **Breakfast (*Langdales Restaurant)***

Conference Centre

MR2 Hybrid Structures II (Chair: Alberto Morpurgo)

9:00-9:30 Hervé Courtois
Local spectroscopy of superconducting hybrid nanostructures

9:30-9:50 Regis Melin
Non local transport at FS and NS double interfaces

9:50-10:10 Igor Sosnin
Superconducting proximity effect in conical ferromagnets

10:10-10:30 David Sanchez
Magnetic-field asymmetry in nonlinear mesoscopic transport

10:30-11:00 **Coffee (Foyer)**

MR2 Quantum Transport II (Chair: Jurgen Smet)

11:00-11:30 Ramon Aguado
SU(4) Kondo effect in Carbon Nanotubes

11:30-12:00 Yuli Nazarov
G_q corrections in circuit theory of Quantum Transport

12:00-12:30 Per Delsing
Current measurement by counting of single electrons

12:30-12:50 Jozsef Cserti
Rashba Billiards

13:00-14:30 **Lunch (Foyer)**

MR2 Mesoscopic Quantum Optics (Chair: Tobias Brandes)

14:30-15:00 Peter Michler
Photon correlation measurements on semiconductor nanostructures

15:00-15:30 Carlos Tejedor
Quantum optics with quantum dots in microcavities: photon pairs emission

15:30-16:00 Alexei Vagov
Ultra-fast dynamics of optically excited quantum dots

16:00-16:30 **Coffee (Foyer)**

MR2 Graphite and Graphene II (Chair: Tsuneya Ando)

16:30-17:00 Philip Kim
Unusual Transport Properties in Carbon Based Low Dimensional Materials: Nanotubes and Graphene

17:00-17:30 Edward McCann
Landau level degeneracy and quantum Hall effect in a graphite bilayer

17:30-18:00 Pablo Esquinazi
Magnetic order in carbon structures

18:00-18:20 Luis Brey
Edge States and Quantum Hall Effect in Graphene

18:30-20:00 **Poster session II (MR1)**

20:00-21:30 **Dinner *(INFOLAB café)***

International Conference Nanoelectronics 2006
Lancaster University, UK

Wednesday 11th January

8:00-8:45 **Breakfast (*Langdales Restaurant)***

Conference Centre

MR2 Quantum Hall Effect and Transport I (Chair: Vadim Cheianov)

9:00-9:30 John Chalker
Electron Interactions and Transport Between Coupled Quantum Hall Edges

9.30-9:50 Stefano Roddaro
Non-linear transport and particle-hole symmetry in a quantum Hall device

9:50-10:10 Inanc Adagideli
Intrinsic Spin Hall Edges

10:10-10:30 Branislav Nikolic
Mesoscopic spin Hall effect in multiterminal spin-orbit coupled nanostructures: Local spin densities, total pure spin currents, and their shot noise

10:30-11:00 **Coffee (Foyer)**

MR2 Quantum Hall Effect and Transport II (Chair: Henning Schomerus)

11:00-11:30 Sergey Dorozhkin
Interplay of inter and intra-Landau-level transitions in microwave photoresponse of two-dimensional electron systems

11:30-12:00 Marek Potemski
Quasi-excitons and fractionally charged excitons in the vicinity of the ν =1/3 fractional quantum Hall state

12:00-12:30 Matthew Grayson
Bending the quantum Hall effect: Novel metallic and insulating states in one dimension

12:30-13:00 Boris Altshuler
Dephasing without Heating: New Experiments and Old Theory

13:00-13:45 **Lunch (Foyer)**

International Conference Nanoelectronics 2006
Lancaster University, UK

Posters

- Babak Abdollahipour
  Spin-polarized shot noise in diffusive spin-valve systems with non-collinear magnetizations
- Ilias Amanatidis and Steven Bailey
  Carbon nanotube electron turbines: a novel design for man-made nano-motors
- Alistair Armstrong-Brown
  Observation of multiple soliton-like modes in the quantum Hall edge dynamics
- Sophie Avesque
  Correlations vs impurities: or how to go from fractions to integers in the quantum Hall effect
- Christian Flindt
  FCS of NEMS
- Heidi Förster
  Full counting statistics for voltage and dephasing probes in a Mach-Zehnder interferometer
- Mihai Gabureac
  Spin-polarized transport in atomic-size ferromagnetic constrictions
- Iain Grace
  Electron Transport in Molecular Wires
- Alexander Grishin
  Low Temperature Decoherence in Josephson Junction Qubits
- Fabian Hassler
  Using Qubits for Measuring Fidelity in Mesoscopic Systems
- Christopher Hooley
  To Be Announced
- Babak Hosseinkhani
  Magnetization Dynamics and Spin Pumping in Ferromagnetic Nanoclusters
- Daniel Huertas-Hernando
  Spin and interactions in chaotic quantum dots
- Anna Kauch
  Local momentum approach to multiorbital single impurity Anderson model with applications to transport in quantum dots
- Pengshun Luo
  Transport properties of Superconductor/Ferromagnet hybrid structures
- Mohammad Ali Maleki
  Superconducting proximity effect in the clean ferromagnetic domain structures
- Ghadir Mohammadkhani
  Non-sinusoidal current-phase relations in diffusive ferromagnetic Josephson junctions
- Jan Petter Morten
  Spin transport in superconductors
- Marcin Mucha-Kruczynski
  Electronic bands of a graphite bilayer – comparison of AB and AA stacking
- Kostya Novoselov
  Electric Field Effect in Thin Graphitic Films

International Conference Nanoelectronics 2006
Lancaster University, UK

- Elisabetta Paladino
  Decoherence and decoupling in superconducting nanocircuits
- Theodoros Papadopoulos
  Symmetry Breaking in Molecular Wires
- Cyril Petitjean
  Dynamically induced entanglement and decoherence. (The quantum to classical crossover)
- Peter Polinak
  Andreev Drag Effect via Magnetic Quasiparticle Focusing in SN Hybrid Waveguides
- Alessandro Potenza
  Superconducting critical temperature dependence on the layer sequence in Nb/Pd bilayers
- John P. Robinson
  Geometrical oscillations in the SAW induced acousto-electric effect
- Stanislas Rohart
  Magnetic anisotropy of mixed Co based clusters
- Adam Rycerz
  Entanglement and transport through correlated quantum dot
- Valentin Rytchkov
  Quantum versus classical division of current fluctuations
- Ken-ichi Sasaki
  Stabilization mechanism of edge states in graphene
- Skon Sirichantaropass
  Even-Odd Effects in Monovalent Atomic Chains
- Janine Splettstößer
  A diagrammatic approach to adiabatic pumping
- Tihomir Tenev
  Modeling spin-resolved transport through InSb quantum well
- Oleksandr Tsyplyatyev
  Spin current generated by a thermal flow, magnetothermopower and magnetoresistance in metals embedded with magnetic nanosclusters
- Daniel Urban
  Spin-dependent transport through quantum dots connected to three ferromagnetic leads
- Jing Zou
  Variable-polarization source of spin-polarized current