

Program IW2 2017

June 5, 2017 – Low Wood Bay Hotel, Windermere, UK

8:25-8:30	Opening (Room: <i>Lake Suite</i> ; for all oral presentations)
	Session I: Chair Josef Weinbub
8:30-9:00	Wigner Function Representation in Electron Quantum Optics Dario Ferraro (invited)
9:00-9:20	Squeezing of Optical Phonons Generated by Different Optical Excitations of a Quantum Dot: A Wigner Function Analysis Daniel Wigger
9:20-9:50	Full Reconstruction of Symmetric Two-Mode Optical Quantum States with Gaussian Wigner Function via Spectral Homodyne Detection Stefano Olivares (invited)
9:50-10:10	On Wigner Functions in Dirac-Like Bands: The Transition Metal Di-Chalcogenides David K. Ferry
10:10-10:25	Coffee & Tea Break (Room: <i>Gallery Lounge</i>)
	Session II: Chair David K. Ferry
10:25-10:55	Generalized Phase Space Distributions of Observables in Quantum Transport Wolfgang Belzig (invited)
10:55-11:15	Challenges in Simulating Dissipative Transport in Nanostructures Using the Wigner Transport Formalism Irena Knezevic
11:15-11:45	Wigner-Boltzmann Monte Carlo Simulation: From Ballistic to Diffusive Quantum Transport in Semiconductor Devices Philippe Dollfus (invited)
11:45-12:05	Potential Problems in the Application of Wigner-Boltzmann Equation in the Time-Dependent Modelling of Dissipative Quantum Transport Zhen Zhan
12:05-13:00	Lunch (Room: <i>Windermere Restaurant</i>)
	Session III: Chair Irena Knezevic
13:00-13:30	Wigner Function and Decoherence Carlo Jacoboni (invited)
13:30-13:50	Application of the Discrete Wigner Transport Equation to Simulation of Gate-All-Around Silicon Nanowire Transistors: Preliminary Results and Numerical Issues Kyoung-Youm Kim
13:50-14:20	Cavity QED of Atoms: Cooling, Trapping and Many-Body Physics Peter Domokos (invited)
14:20-14:40	Transport Properties of Quasiperiodic Systems Maciej Wołoszyn

14:40-14:55	Coffee & Tea Break (Room: <i>Gallery Lounge</i>)
	Session IV: Chair Mihail Nedjalkov
14:55-15:25	The Role of Wigner and Cross-Wigner Functions in a Non-Commutative Phase Space Basil J. Hiley (invited)
15:25-15:45	On the Characteristic Neumann Equation and the Wigner Equation Hans Kosina
15:45-16:15	Wigner Functions for the Canonical Pair Angle and Orbital Angular Momentum Hans A. Kastrup (invited)
16:15-16:35	Wigner Functions as a Route to Correlation Fluctuations in Problems of Electromagnetic Interference and Noise and Vibration Stephen C. Creagh
16:35-16:50	Coffee & Tea Break (Room: <i>Gallery Lounge</i>)
	Session V: Chair Josef Weinbub
16:50-17:20	To Know, or Not to Know the Quantum State of an Open System, that is the Question in the Realistic Modelling of Quantum Dissipation Xavier Oriols (invited)
17:20-17:40	Non-Classical Properties of Electronics States. Influence of the Scattering Mechanisms Bartłomiej J. Spisak
17:40-18:10	A Probabilistic Model for the Wigner Transport Equation Orazio Muscato (invited)
18:10-18:30	Self-Energy Approach for Solving the Wigner-Transport Equation Dirk Schulz
18:30-18:50	Wigner Analysis of Surface Roughness in Quantum Wires Mihail Nedjalkov
	Poster Session & Dinner Reception (Room: <i>Gallery Lounge</i>)
19:00-21:30	Numerical Aspects of the Deterministic Solution of the Wigner Equation Johann Cervenka Accurate Deterministic Wigner Functions for Typical Quantum Systems Zhenzhu Chen Efficient Resampling Techniques in Stochastic Wigner Simulations Yunfeng Xiong A Wigner Equation with Decoherence Luigi Barletti Wigner-Signed Particles Study of Double Dopant Quantum Effects Josef Weinbub