BIRS Workshop - Quantum Technology: Computational Models for Quantum Device Design (12w5061) - Timetable 1.6

Time	Su, 8/1/2012	Mo, 9/1/2012 — Device Modelling	Tu, 10/1/2012 — Bio and Spin Systems	We, 11/1/2012 — System Identification	Th, 12/1/2012 — Control	Fr, 13/1/2012 — Control
7:00		Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
8:45		BIRS — Introduction by Station Manager		Survey, 8am	Frank Langbein, Jonathan Quinn	
9:00		Introduction — Schirmer, Langbein, Hollenberg	Survey — Martin Plenio	Survey — Steffen Glaser	Survey — Sophie Schirmer	Survey — Thomas Schulte-Herbruggen — Symmetry Principles in Quantum Systems Theory (chair: Lloyd Hollenberg)
9:15		chair: Sophie Schirmer — Plenio, Bandrauk, Glaser, Sanders, Schulte-Herbruggen	chair: Thomas Schulte-Herbruggen — Quantum Coherence and Biological Systems	chair: Mark Balas — Spectroscopy, Tomography & Beyond / Optimal Control of Uncoupled and Coupled Spins	chair: Frank Langbein — Coherent Control and Closing the Modelling-Simulation-Control-Identification Loop	
9:30		Survey				
9:45		chair: Sophie Schirmer — Richard Muller — Development of Few-Electron Si Quantum Dots for Use as Qubits				
10:00		Coffee	Coffee — Stephan Hoyer — Bio and Spin Systems	Coffee	Coffee — Matthew James — Control	Coffee
10:15		Bio and Spin Systems	chair: Barry Sanders — Quantum Control of Light-Harvesting Systems	System Identification — Daniel Oi	chair: Tomasso Calarco — Quantum Feedback Networks	Group 1 - Steffen Glaser — Group discussion
10:30		Coffee		chair: T Schulte-Herbruggen — Maximum Likelihood Hamiltonian and Decoherence Estimation	Coffee	Group 2 - Andre Bandrauk — Conclusions and Next Steps
11:00		Device Modelling — Jim Fonseca	Paul Rees — Mathematical Techniques for Cell Cycle Analysis		Ian Peterson	Group 3 - Tomasso Calarco — coordinator: Lloyd Hollenberg
11:15		chair: Lloyd Hollenberg — Erik Nielsen — NanoHUB and NEMO5	Jianming Cai		Daniel Burgarth — Robust Stability of Uncertain Quantum Systems	Sophie Schirmer, Frank Langbein, Lloyd Hollenberg — Feedback
11:30		Lunch	Diamond Based Single Molecule Magnetic Resonance Spectroscopy	Clemens Muller — Characterizing Defects in Superconducting Phase Qubits	Giulia Gualdi — Quantum System Identification with Limited Resources	Conclusions and Next Steps
11:45			Lunch	Lunch	Approx.Open Quantum Sys.Dyn.in a Controlled and Efficient Way	Check-out by 12:00
12:00		Informal meeting possible — contact: Frank Langbein			Lunch	Lunch
13:00		BIRS — Guided tour of Banff Centre — Meet at BIRS 2nd floor lounge of Corbett Hall				Tea and cofee items available in tea lounge — Informal meetings possible — contact: Frank Langbein
13:30			Ilya Kuprov — Alg.and Software for Large-Scale Quantum Spin Dyn.Simulations	Edmond Jonckheere — Differential Topology of Adiabatic Gap	Tomasso Calarco — Quantum Technology Taken to its (Speed) Limit	Open session — Emerging topics, opportunities, collaborations, grants, etc
13:45		Group Photo: meet at front steps of Corbett Hall	chair: Sophie Schirmer	chair: Edmond Jonckheere		
14:00		Erik Nielsen — The QCAD Framework for Quantum Device Simulation	Survey — Andre Bandrauk — Modelling Molecules in Intense Laser Pulses and Attosecond Simulations	Group discussion — Topics on System Identification	Survey — Barry Sanders — Efficient Quantum Algorithms for Simulating Hamiltonian Evolution on a Quantum Computer / Optimal Phase Estimation Using Particle Swarm Optimisation	coordinator: Frank Langbein
14:15		Suzey Gao		Group 1 - Mark Balas	chair: Edmond Jonckheere — Group 2 - Daniel Burgarth	
14:30				Group 3 - Celmens Muller	Group 3 - Celmens Muller	
14:45		Semiclassical Poisson and Poisson-Schrodinger Solvers in QCAD		coordinator: Sophie Schirmer — Group 4 - Daniel Oi	coordinator: Frank Langbein	
15:00		Coffee	Coffee	Coffee	Coffee	
15:30		Rajib Rahman — High Prec. Quantum Dev. Simulations with Atomistic TB	Lloyd Hollenberg — Quantum Sensing Technology and Modelling	Excursion to upper hot springs (open 10:00 - 22:00, bus: http://www.banff.ca/locals-residents/public-transit-buses.htm, taxi: tel. 403 762 4444, 403 762 0000)	Group discussion — Group 1 - Ian Peterson	
15:45			chair: Sophie Schirmer		Topics on Control — Group 2 - Matthew James	
16:00	BIRS	Group discussion — Group 1 - Suzey Gao, Erik Nielsen	Group discussion — Group 1 - Stephan Hoyer		Group 3 - Barry Sanders	
16:15	Check-in	Topics on Device Modelling, Simulation, Control — Group 2 - Rajib Rahman	Topics on Modelling, Simulation, Control of Bio and Spin Systems — Group 2 - Paul Rees		coordinator: Jon Quinn — Group 4 - Edmond Jonckheere	
16:30		Group 3 - Jim Fonseca	Group 3 - Ilya Kuprov		Feedback	
16:45		coordinator: Lloyd Hollenberg — Group 4 - Thomas Schulte-Herbruggen	coordinator: Frank Langbein — Group 4 - Tomasso Calarco		Andre Bandrauk — Control	
17:00		Feedback — Richard Muller	Feedback — Martin Plenio			
17:15		Device Modelling, Simulation, Control	Modelling, Simulation, Control of Bio and Spin Systems			
17:30	Buffet Dinner	Dinner	Dinner	Dinner	Dinner	
18:00						
19:30					Dala at The Club, Theatre Complex ($22, Doors 19:30)	
20:00	Informal gathering at TCPL Pavilion — coordinator: Frank Langbein	Discussions — coordinator: Sophie Schirmer	Discussions — Meet at Corbett Hall Lounge on second floor — coordinator: Lloyd Hollenberg	Feedback — System Identification — Steffen Glaser — in TCPL 201 — coordinator: Sophie Schirmer	Discussions — coordinator: Sophie Schirmer — contact: Frank Langbein — Meet at Corbet Hall Lounge on second floor	