

NCCR SPIN Annual Meeting 2022

Monday, June 13, 2022

Time	Event
10:30	Scientific Advisory Board Meeting (Rondo, Sela Muragl-Laret, 1st floor)
	Individual Travel Arrangements
12:57	Arrival Train at Pontresina Station
13:30	Buffet Lunch (open until ca. 14:30)
13:57	Arrival Train at Pontresina Station
14:00	Opening (Rondo, Sela Arabella, 1st floor) Hole Spins (finFET) Chair: Bence Hetényi
14:10	Matthias Mergenthaler (IBM) Fabrication and Characterization of FinFET Spin Qubit Devices
14:25	Petar Tomić (ETHZ) (& Felix Schupp (IBM)) Silicon MOS Gate Stack Optimization for Fin-FET Quantum Dots
14:40	Kostas Tsoukalas (IBM) Understanding Schottky Contacts for Silicon Spin Qubits
14:55	Simon Geyer (Basel) Fast two-qubit Logic with Holes in Silicon FinFETs
15:10	Qian Ding (ETHZ) TCAD AC Simulation Framework for Silicon FinFET Spin Qubit Devices
15:25	Rafael Eggli (Basel) Dispersive Readout in a finFET
15:40	Break (30 min)
	Hole Spins (Ge/Si hole spins) Chair: Felix Schupp
16:10	Stefano Bosco (Basel) Photon-spin Coupling
16:25	Fabian Oppliger (EPFL), Eric Jutzli and Arianna Nigro (Basel) Planar Ge-SiGe Heterostructures for Spin Qubits
16:40	Santhanu Ramanandanan (EPFL) Engineering Shape and Crystal Quality in p-Type Ge Nanowires
16:55	Simon Svab (Basel) Hot Ge/Si Nanowire Hole Spin Qubits
17:10	Philipp Mutter (Konstanz) Theory of Germanium Hole-Spin Qubit Control
17:25	Poster Flash-Intro
17:50	Poster Session (Rondo, Sela Arabella, Foyer 1st & 2nd floor)
18:30	Dinner (Hotel Saratz, Jugendstilsaal) Innovation Session Chair: Heike Riel
20:30	Quantum Motion, John Morton (Rondo, Sela Arabella)
21:15	Fireside Chat Young Researchers (Rondo, Sela Arabella) Moderators: Ekaterina al-Tavil & Rafael Eggli
	General Assembly (Rondo, Sela Muragl-Laret, 1st floor)
22:00	Evening Reception (Rondo, Foyer)

Tuesday, June 14, 2022

Time	Event
07:30	Breakfast (Hotel Saratz, Jugendstilsaal) Architecture (Error Correction and Algorithms) Chair: Dominik Zumbühl
09:00	Daniel Miller (IBM) Hardware-tailored Diagonalization Circuits
09:15	James Wootton (IBM) Benchmarking 6-qubit Stabilizers with 2-qubit Measurements
09:30	Mariëlle van der Pol (Roche) The Potential of QC for Pharma
10:00	Innovation Office: Leonie Kellner (Basel)
10:30	Break (30 min)
	Breakouts (4 parallel sessions)
11:00	Part 1: Qubit Platforms finFETs (Muragl, 1st floor) Ge/Si wires (San Spiert, 2nd floor) FD-SOI (Sela Laret, 1st floor) planar Ge (Giarsun, 2nd floor)
11:45	Part 2: Architectures Theory and Simulation (Muragl) Coupling and Resonators (S. Spiert) Error corr. and Algorithms (Laret) Q-control, Scaling and 3D Integration (Giarsun)
12:30	Group Photo
12:45	Lunch Bags & Hikes
17:00	Poster Session (Rondo, Sela Arabella, Foyer 1st & 2nd floor)
18:30	Conference Dinner (Hotel Saratz, Jugendstilsaal)
20:30	Poster Session (Rondo, Sela Arabella, Foyer 1st & 2nd floor)
21:15	Young Researchers Forum (Rondo, Sela Arabella)
22:00	Evening Reception (Rondo, Foyer)

Wednesday, June 15, 2022

Time	Event
07:30	Breakfast (Hotel Saratz, Jugendstilsaal) Architecture (CryoMOS and QI) Chair: Maria Spethmann
09:00	Cezar Zota (IBM) Cryogenic Electronics For Scalable Quantum Computers
09:30	Eugene Demler (ETHZ) Quantum Simulators
10:00	Vincenzo Savona (EPFL) Bosonic Encoding of a Qubit: Novel Approaches to hardware-efficient Error Correction
10:30	Break (30 min)
	Electrons Chair: Mark Hogg
11:00	Lisa Zaper (Basel) Cobalt Nanomagnets for Spin Qubit Control
11:15	Artem Kononov (Basel) Spin-Photon Interface with high Impedance Resonators
11:30	Aurele Kamber (Basel) A Nanowire Quantum Dot Scanning Probe
11:45	Marcin Kisiel (Basel) Towards Scanning Probe Measurements of Qubit Devices
12:00	Awards & Conclusions
13:00	Lunch Bags & Departure
13:02	Departure Train from Pontresina Station
14:02	Departure Train from Pontresina Station
	Individual Travel Arrangements