Recent Advances in Quantum Computing and Technology (ReAQCT)

Wednesday, 19 June 2024

June 19th: Registration (08:00 - 08:45)

June 19th: Plenary session 1 - Auditorium (09:00 - 10:30)

time	[id] title	presenter
09:00	[64] ReAQCT Opening	Dr CSILLING, Ákos
09:20	[2] Shortcuts to quantum advantage and their relationship to the superconducting platform	WILHELM-MAUCH, Frank
10:00	[3] Materials challenges in quantum sensing with diamond nitrogen-vacancy center	GALI, Ádám

June 19th: Plenary session 2 - Auditorium (11:00 - 12:30)

time	[id] title	presenter
11:00	[9] Munich Quantum Software Stack: Seamlessly Integrating Quantum Computing into HPC	ECHEVARRIA, Jorge
11:20	[10] Recent developments in open-source design tools and QPUs	TAKALA, Eelis
11:40	[11] Hybrid Tree Tensor Networks for Quantum Simulation	SCHUHMACHER, Julian
12:00	[12] Statistical phase estimation and error mitigation on a superconducting quantum processor	BLUNT, Nick

June 19th: Poster Session - 1st floor Aula (13:30 - 14:20)

June 19th: Plenary session 3 - Auditorium (14:20 - 15:30)

time	[id] title	presenter
14:20	[14] Architecture considerations for superconducting quantum processors	FRISK KOCKUM, Anton
14:50	[13] Materials science with quantum computers: use cases and technical work	STROHM, Thomas

June 19th: Parallel 2A: Quantum sensing - Cello (16:00 - 17:20)

time	[id] title	presenter
16:00	[27] Ab-initio theory of nuclear spin flip processes within NV center of diamondvia orbital degrees of freedom	THIERING, Gergo THIERING, Gergő
16:20	[39] Activation of metrologically useful genuine multipartite entanglement	TRENYI, Robert

16:40	[24] Theory of charge-sensing-based noisy qubit readout of semiconductor qubits	SVASTITS, Domonkos
17:00	[47] Simphony: a python package to simulate point-defect spin dynamics	BOROSS, Péter

June 19th: Parallel 2B:Quantum HW: Semiconductors a - Operetta (16:00 - 17:20)

time	[id] title	presenter
16:00	[29] Exchange-driven two-hole spin qubit in Germanium	SAEZ-MOLLEJO, Jaime
16:20	[45] Bichromatic Rabi control of semiconductor qubits	GYÖRGY, Zoltán
16:40	[33] In situ Resistance Control of Granular Aluminium Superinductors for Hybrid Circuit Quantum Electrodynamics	JANÍK, Marián
17:00	[48] Real-time two-axis control of spin qubits	BERRITTA, Fabrizio

June 19th: Parallel 2C: Quantum HW: superconductors - Auditorium (16:00 - 17:20)

time	[id] title	presenter
16:00	[15] Superconducting flux qubits with stacked Josephson junctions	KREUZER, Alex
16:20	[37] Resilient multi-mode superconducting qubit designed with evolutionary algorithms	GARCIA AZORIN, Pablo
16:40	[18] Readout error mitigation on a superconducting qubit	DI GIOVANNI, Andras
17:00	[38] Measuring the current-phase relation in Josephson junction using superconducting resonators	MAKK, Peter

June 19th: Parallel 2D: Q algorithms & informatics 1 - Trumpet (16:00 - 17:20)

time	[id] title	presenter
16:00	[16] Bayesian amplitude estimation	RAMOA, Alexandra
16:20	[49] Quantum approximated cloning-assisted density matrix exponentiation	RODRÍGUEZ, Pablo
16:40	[50] Optimizing T and CNOT Gates in Quantum Ripple-Carry Adders and Comparators	REMAUD, Maxime
17:00	[34] Extensions of Digital-Analog Quantum Computation	GARCIA DE ANDOIN, Mikel

June 19th: Parallel 2E: Quantum SW engineering 1 - Cornets (16:00 - 17:20)

time	[id] title	presenter
16:00	[51] Patterns for Quantum Software Engineering	BĄCZYK, Michael
16:20	[42] QDsim: A user-friendly toolbox for simulating large-scale quantum dot devices	GUALTIERI, Valentina
16:40	[46] Piquasso: A Photonic Quantum Computer Simulation Software Platform	KOLAROVSZKI, Zoltán
17:00	[40] Benchmarking Quantum Computers: Towards a Standard Performance Evaluation Approach	PEÑA GUZMÁN, Rubén

June 19th: Social programme (19:00 - 21:00)

time	[id] title	presenter
19:00	[4] Conference dinner	