Quantum Africa Conference, Sixth Edition (QA6)

12th to 16th of September, 2022

SCHEDULE: MONDAY/12/SEPTEMBER

Time in Kigali	Time in Beijing	Time in California	Time in New York	Time in Tokyo	Speaker	Title
08:15 – 09:00	14:15 – 15:00	23:15 – 00:00	02:15 – 03:00	15:15 – 16:00	Welcome and Introduction	
9:00 – 9:40	15:00 – 15:40	00:00 – 00:40	03:00 – 03:40	16:00 – 16:40	Tommaso Calarco, Julich, Germany	The European Quantum Initiative – from a Flagship to a Fleet –
9:40 – 10:20	15:40 – 16:20	00:40 – 01:20	03:40 – 04:20	16:40 – 17:20	J. S. Tsai RIKEN and TUS, Tokyo	Superconducting Quantum Circuit
10:20 – 11:00	16:20 – 17:00	01:20 – 02:00	04:20 – 05:00	17:20 – 18:00	Daniel Loss RIKEN and Univ. Basel, Switzerland	Spin qubits in hole quantum dots
11:00 – 11:30	17:00 – 17:30	02:00 – 02:30	05:00 – 05:30	18:00 – 18:30	Coffee Break	
11:30 – 12:10	17:30 – 18:10	02:30 – 03:10	05:30 – 06:10	18:30 – 19:10	Mark Tame Stellenbosch, S. Africa	Quantum Plasmonics
12:10 – 12:50	18:10 – 18:50	03:10 – 03:50	06:10 – 06:50	19:10 – 19:50	Frank Wilhelm-Mauch Julich, Germany	Convergence properties of the Quantum Approximate Optimization Algorithm for the number partitioning problem
12:50 – 15:00	18:50 – 21:00	03:50 – 06:00	06:50 – 09:00	19:50 – 22:00	LUNCH IN KIGALI	
15:00 – 15:40	21:00 – 21:40	06:00 – 06:40	09:00 – 09:40	22:00 – 22:40	Steve Girvin Yale	Introduction to Quantum Error Correction with Superconducting Qubits and Microwave Photons
15:40 – 16:20	21:40 – 22:20	06:40 – 07:20	09:40 – 10:20	22:40 – 23:20	Will Oliver MIT	Giant Artificial Atoms and Waveguide QED
16:20 – 16:50	22:20 – 22:50	07:20 – 07:50	10:20 – 10:50	23:20 – 23:50	Coffee Break	
16:50 – 17:30	22:50 – 23:30	07:50 – 08:30	10:50 – 11:30	23:50 – 00:30	Helmut G. Katzgraber AWS	Moving Quantum from POC towards Production Readiness
17:30 – 18:10	23:30 – 00:10	08:30 – 09:10	11:30 – 12:10	00:30 – 01:10	Fernando Brandao AWS	Fault tolerant Quantum computing with bosonic systems
18:10 – 18:50	00:10 – 00:50	09:10 – 09:50	12:10 – 12:50	01:10 – 01:50	Pedram Roushan Google Quantum	Time-Crystalline Eigenstate Order on a Quantum Processor

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SCHEDULE: TUESDAY/13/SEPTEMBER

Time in Kigali	Time in Beijing	Time in California	Time in New York	Time in Tokyo	Speaker	Title
08:15 – 09:00	14:15 – 15:00	23:15 – 00:00	02:15 – 03:00	15:15 – 16:00		
9:00 – 9:40	15:00 – 15:40	00:00 – 00:40	03:00 – 03:40	16:00 – 16:40		
9:40 – 10:20	15:40 – 16:20	00:40 – 01:20	03:40 – 04:20	16:40 – 17:20	Erika Kawakami RIKEN, Japan	Floating electrons as qubits
10:20 – 11:00	16:20 – 17:00	01:20 – 02:00	04:20 – 05:00	17:20 – 18:00	Nathan Shammah Unitary Fund	Quantum Error Mitigation: An open-source software approach
11:00 – 11:30	17:00 – 17:30	02:00 – 02:30	05:00 – 05:30	18:00 – 18:30	Coffee Break	
11:30 – 12:10	17:30 – 18:10	02:30 – 03:10	05:30 – 06:10	18:30 – 19:10	Trond Andersen Google Quantum	Formation of robust bound states of interacting photons
12:10 – 12:50	18:10 – 18:50	03:10 – 03:50	06:10 – 06:50	19:10 – 19:50		
12:50 – 15:00	18:50 – 21:00	03:50 – 06:00	06:50 – 09:00	19:50 – 22:00	LUNCH IN KIGALI	
15:00 – 15:40	21:00 – 21:40	06:00 – 06:40	09:00 – 09:40	22:00 – 22:40	Contributed Talks	
15:40 – 16:20	21:40 – 22:20	06:40 – 07:20	09:40 – 10:20	22:40 – 23:20	Marco Pistoia JPMorgan Chase & Co	
16:20 – 16:50	22:20 – 22:50	07:20 – 07:50	10:20 – 10:50	23:20 – 23:50	Coffee Break	
16:50 – 17:30	22:50 – 23:30	07:50 – 08:30	10:50 – 11:30	23:50 – 00:30	Giulia Galli Univ. Chicago	Embedding theories for quantum simulations on hybrid classical-quantum architectures
17:30 – 18:10	23:30 – 00:10	08:30 – 09:10	11:30 – 12:10	00:30 – 01:10	Steve Flammia AWS	Averaged Circuit Eigenvalue Sampling
18:10 – 18:50	00:10 – 00:50	09:10 – 09:50	12:10 – 12:50	01:10 – 01:50	Mercedes Gimeno-Segovia, PsiQuantum	Fault-Tolerant Quantum Computing with photons

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SCHEDULE: WEDNESDAY/14/SEPTEMBER

Time in Kigali	Time in Beijing	Time in California	Time in New York	Time in Tokyo	Speaker	Title
08:15 – 09:00	14:15 – 15:00	23:15 – 00:00	02:15 – 03:00	15:15 – 16:00	Terry Rudolph PsiQuantum	Quantum Computing at the speed of light
9:00 – 9:40	15:00 – 15:40	00:00 – 00:40	03:00 – 03:40	16:00 – 16:40	Susan Coppersmith UNSW, Sidney	Quantum stochastic resonance of individual Fe atoms
9:40 – 10:20	15:40 – 16:20	00:40 – 01:20	03:40 – 04:20	16:40 – 17:20	Marcello Dalmonte ICTP	Rydberg topological quantum memories and toric code dynamics
10:20 – 11:00	16:20 – 17:00	01:20 – 02:00	04:20 – 05:00	17:20 – 18:00	Francesco Petruccione Stellenbosch, S. Africa	Bad vibrations: Quantum Tunnelling and SARS-CoV-2 infections
11:00 – 11:30	17:00 – 17:30	02:00 – 02:30	05:00 – 05:30	18:00 – 18:30	Coffee Break	
11:30 – 12:10	17:30 – 18:10	02:30 – 03:10	05:30 – 06:10	18:30 – 19:10	Christine Silberhorn Paderborn Univ. Germany	Quantum photonics using non-linear integrated optics and pulsed light
12:10 – 12:50	18:10 – 18:50	03:10 – 03:50	06:10 – 06:50	19:10 – 19:50	Oliver Dial IBM Yorktown Heights	A Mitigated Path to Quantum Advantage
12:50 – 15:00	18:50 – 21:00	03:50 – 06:00	06:50 – 09:00	19:50 – 22:00	LUNCH IN KIGALI	
15:00 – 19:00	21:00 – 21:40	06:00 – 06:40	09:00 – 09:40	22:00 – 22:40	Sight Seeing	
19:00 – 21:00	21:40 – 22:20	06:40 – 07:20	09:40 – 10:20	22:40 – 23:20	Conference Banquet	

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SCHEDULE: THURSDAY/15/SEPTEMBER

Time in Kigali	Time in Beijing	Time in California	Time in New York	Time in Tokyo	Speaker	Title
08:15 – 09:00	14:15 – 15:00	23:15 – 00:00	02:15 – 03:00	15:15 – 16:00		
9:00 – 9:40	15:00 – 15:40	00:00 – 00:40	03:00 – 03:40	16:00 – 16:40	Contributed Talks	
9:40 – 10:20	15:40 – 16:20	00:40 – 01:20	03:40 – 04:20	16:40 – 17:20	Contributed Talks	
10:20 – 11:00	16:20 – 17:00	01:20 – 02:00	04:20 – 05:00	17:20 – 18:00	Bennoit Vermersch CNRS, Grenoble	Entanglement versus quantum computers
11:00 – 11:30	17:00 – 17:30	02:00 – 02:30	05:00 – 05:30	18:00 – 18:30	Coffee Break	
11:30 – 12:10	17:30 – 18:10	02:30 – 03:10	05:30 – 06:10	18:30 – 19:10	Peng Xue CSRC, China	Non-Bloch parity-time symmetry and exceptional points
12:10 – 12:50	18:10 – 18:50	03:10 – 03:50	06:10 – 06:50	19:10 – 19:50	Rosario Fazio ICTP	Exotic states in quantum many-body open systems
12:50 – 15:00	18:50 – 21:00	03:50 – 06:00	06:50 – 09:00	19:50 – 22:00	LUNCH IN KIGALI	
15:00 – 15:40	21:00 – 21:40	06:00 – 06:40	09:00 – 09:40	22:00 – 22:40	Charles Tahan White House Office for Quantum, USA	The US National Quantum Initiative
15:40 – 16:20	21:40 – 22:20	06:40 – 07:20	09:40 – 10:20	22:40 – 23:20	Jens Koch Northwestern Univ.	Computer-aided quantization and numerical modeling of superconducting circuits with "scqubits"
16:20 – 16:50	22:20 – 22:50	07:20 – 07:50	10:20 – 10:50	23:20 – 23:50	Coffee Break	
16:50 – 17:30	22:50 – 23:30	07:50 – 08:30	10:50 – 11:30	23:50 – 00:30	Meigan Aronson UBC, Vancouver	
17:30 – 18:10	23:30 – 00:10	08:30 – 09:10	11:30 – 12:10	00:30 – 01:10	Jarred McClean Google Quantum	What quantum computer science teaches us about chemistry and quantum advantage in learning from experiments
18:10 – 18:50	00:10 – 00:50	09:10 – 09:50	12:10 – 12:50	01:10 – 01:50		

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SCHEDULE: FRIDAY/16/SEPTEMBER

Time in Kigali	Time in Beijing	Time in California	Time in New York	Time in Tokyo	Speaker	Title
08:15 – 09:00	14:15 – 15:00	23:15 – 00:00	02:15 – 03:00	15:15 – 16:00		
9:00 – 9:40	15:00 – 15:40	00:00 – 00:40	03:00 – 03:40	16:00 – 16:40	Contributed Talks	
9:40 – 10:20	15:40 – 16:20	00:40 – 01:20	03:40 – 04:20	16:40 – 17:20	Contributed Talks	
10:20 – 11:00	16:20 – 17:00	01:20 – 02:00	04:20 – 05:00	17:20 – 18:00	Contributed Talks	
11:00 – 11:30	17:00 – 17:30	02:00 – 02:30	05:00 – 05:30	18:00 – 18:30	Coffee Break	
11:30 – 12:10	17:30 – 18:10	02:30 – 03:10	05:30 – 06:10	18:30 – 19:10	Tiago Mendes Univ. Ausburg, Germany	Unsupervised learning universal critical behavior via the intrinsic dimension
12:10 – 12:50	18:10 – 18:50	03:10 – 03:50	06:10 – 06:50	19:10 – 19:50	Anna Sanpera UAB, Barcelona	Attractor Neural Networks: storage capacity and learning
12:50 – 15:00	18:50 – 21:00	03:50 – 06:00	06:50 – 09:00	19:50 – 22:00	LUNCH IN KIGALI	