

Monday, July 11		
08:50 - 09:00	Welcome remarks	
09:00 - 10:35	Measurements & Sampling	
09:00 - 09:45	Robert Huang	Quantum advantage in learning from experiments
09:45 - 10:10	Daniel Grier, Hakop Pashayan and Luke Schaeffer	Sample-optimal classical shadows for pure states
10:10 - 10:35	Steven Flammia	Averaged Circuit Eigenvalue Sampling
10:35 - 11:00	Coffee break	
11:00 - 12:40	Quantum Error Correction	
11:00 - 11:25	Michael Beverland, Nicolas Delfosse and Maxime Tremblay	Two-dimensional implementations of quantum LDPC codes
11:25 - 11:50	Christopher Pattison, Michael Beverland, Marcus Silva and Nicolas Delfosse	Improved quantum error correction using soft information
11:50 - 12:15	Joschka Roffe, Lawrence Z. Cohen, Daryus Chandra, Armanda Quintavalle and Earl Campbell	Bias-tailored quantum LDPC codes
12:15 - 12:40	Michael Beverland, Vadym Kliuchnikov and Eddie Schoute	Surface code compilation via edge-disjoint paths
12:40 - 14:10	Lunch break	
14:10 - 15:50	Complexity Theory 1	
14:10 - 14:35	Chris Cade and P. Marcos Crichigno	Complexity of supersymmetric systems and the cohomology problem
14:35 - 15:00	Dorian Rudolph and Sevag Gharibian	On polynomially many queries to NP or QMA oracles
15:00 - 15:25	Arjan Cornelissen, Nikhil Mande and Subhasree Patro	Improved Quantum Query Upper Bounds Based on Classical Decision Trees
15:25 - 15:50	Francisco Escudero Gutiérrez and Jop Briët	On Converse to the Polynomial Method
15:50 - 16:00	Conference picture	

16:00 - 18:00	Poster session (at Siebel Center for Design)	
Tuesday, July 12		
09:00 - 10:35	Cryptography 1	
09:00 - 09:45	Prabhanjan Ananth	Cryptographic Explorations of Pseudorandom Quantum States
09:45 - 10:10	Andreas Bluhm, Matthias Christandl and Florian Speelman	Position-based cryptography: Single-qubit protocol secure against multi-qubit attacks
10:10 - 10:35	Alex May and Sam Cree	Code-routing: a new attack on position-verification
10:35 - 11:00	Coffee break	
11:00 - 12:40	Hamiltonians	
11:00 - 11:25	Harriet Apel, Tamara Kohler and Toby Cubitt	Holographic duality between local Hamiltonians from random tensor networks
11:25 - 11:50	Ivan Bardet, Ángela Capel, Li Gao, Angelo Lucia, David Perez-Garcia and Cambyse Rouzé	Rapid thermalization of 1D commuting Hamiltonians
11:50 - 12:15	Daniel Stilck França, Albert H. Werner, Johannes Borregaard, Liubov Markovich and Slava Dobrovitski	Efficient and robust estimation of many-qubit Hamiltonians
12:15 - 12:40	Anirban Chowdhury, Sergey Bravyi, David Gosset and Pawel Wocjan	On the complexity of quantum partition functions
12:40 - 14:10	Lunch break	
14:10 - 15:50	Algorithms 1	
14:10 - 14:35	William Huggins, Kianna Wan, Jarrod McClean, Thomas E. O'Brien, Nathan Wiebe and Ryan Babbush	Nearly Optimal Quantum Algorithms for Estimating Multiple Expectation Values
14:35 - 15:00	Enrique Cervero and Laura Mančinska	Weak Schur sampling with logarithmic quantum memory

15:00 - 15:25	András Gilyén and Alexander Poremba	Improved Approximation Algorithms for Fidelity Estimation
15:25 - 15:50	João F. Doriguello, Alessandro Luongo, Jinge Bao, Patrick Reberstrost and Miklos Santha	Quantum algorithm for stochastic optimal stopping problems with applications in finance
15:50 - 16:15	Coffee break	
16:15 - 17:55	Quantum Machine Learning	
16:15 - 16:40	Alicia Magann, Kenneth Rudinger, Matthew Grace and Mohan Sarovar	Feedback-based quantum optimization
16:40 - 17:05	Carlos Ortiz Marrero, Maria Kieferova and Nathan Wiebe	Training quantum neural networks with an unbounded loss function
17:05 - 17:30	Han Zheng, Zimu Li, Junyu Liu, Sergii Strelchuk and Risi Kondor	Speeding up Learning Quantum States through Group Equivariant Convolutional Quantum Ansätze
17:30 - 18:00	Joao Basso, Edward Farhi, Kunal Marwaha, Benjamin Villalonga and Leo Zhou	The Quantum Approximate Optimization Algorithm at High Depth for MaxCut on Large-Girth Regular Graphs and the Sherrington-Kirkpatrick Model
Wednesday, July 13		
09:00 - 10:35	Entanglement	
09:00 - 09:45	Ludovico Lami	Irreversibility of quantum resources, from entanglement to magic
09:45 - 10:10	Sumeet Khatri	Policies for elementary links in a quantum network
10:10 - 10:35	Ludovico Lami and Maksim Shirokov	Attainability and lower semi-continuity of the relative entropy of entanglement, and variations on the theme
10:35 - 11:00	Coffee break	
11:00 - 12:40	Complexity Theory 2	
11:00 - 11:25	Gregory Rosenthal	Query and Depth Upper Bounds for Quantum Unitaries via Grover Search

11:25 - 11:50	Suchetan Dontha, Shi Jie Samuel Tan, Matthew Coudron, Stephen Smith and Sangheon Choi	Approximating Output Probabilities of Shallow Quantum Circuits which are Geometrically-local in any Fixed Dimension
11:50 - 12:15	Dong An, Di Fang and Lin Lin	Time-dependent Hamiltonian Simulation of Highly Oscillatory Dynamics and superconvergence for the Schrödinger equation
12:15 - 12:40	Srinivasan Arunachalam, Sergey Bravyi, Chinmay Nirkhe and Bryan O'Gorman	The Parameterized Complexity of Quantum Verification
12:40 - 14:10	Lunch break	
14:10 - 16:15	Quantum Computation & Shannon Theory 1	
14:10 - 14:35	Hammam Qassim, Hakop Pashayan and David Gosset	Improved upper bounds on the stabilizer rank of magic states
14:35 - 15:00	Aleks Kissinger, John van de Wetering and Renaud Vilmart	Classical simulation of quantum circuits with partial and graphical stabiliser decompositions
15:00 - 15:25	Andrew Glaudell, Neil J. Ross, John van de Wetering and Lia Yeh	Qutrit metaplectic gates are a subset of Clifford+T
15:25 - 15:50	Christoph Hirche and Felix Leditzky	Bounding quantum capacities via partial orders and complementarity
15:50 - 16:15	Christoph Hirche, Cambyse Rouze and Daniel Stilck França	Quantum Differential Privacy: An Information Theory Perspective
16:15 - 18:30	Free time (organized tours)	
18:30 - 21:30	Conference dinner	
Thursday, July 14		
09:00 - 10:40	Shannon Theory 2 (remote)	
09:00 - 09:25	Xuanqiang Zhao, Benchi Zhao, Zihan Xia and Xin Wang	Information recoverability of noisy quantum states
09:25 - 09:50	Zahra Baghali Khanian, Kohdai Kuroiwa and Debbie Leung	Quantum Rate Distortion Theory for Mixed States

09:50 - 10:15	Felix Huber, Igor Klep, Victor Magron and Jurij Volčič	Dimension-free entanglement detection in multipartite Werner states
10:15 - 10:40	Dmitry Grinko and Maris Ozols	Linear programming with unitary-equivariant constraints
10:35 - 11:00	Coffee break	
11:00 - 12:40	Algorithms 2 & Estimation	
11:00 - 11:25	Simon Apers, Shantanav Chakraborty, Leonardo Novo and Jérémie Roland	Quadratic speedup for spatial search by continuous-time quantum walk
11:25 - 11:50	Vladislavs Kļevickis, Krišjānis Prūsis and Jevgēnijs Vihrovs	Quantum speedups for treewidth
11:50 - 12:15	Anthony Polloreno, Jacob Beckey, Joshua Levin, Ariel Shlosberg, James Thompson, Michael Foss-Feig, David Hayes and Graeme Smith	Opportunities and Limitations in Broadband Sensing
12:15 - 12:40	Nai-Hui Chia and Shih-Han Hung	Certifying quantum depth
12:40 - 14:10	Lunch break	
14:10 - 15:50	Cryptography 2	
14:10 - 14:35	Jamie Sikora and Sarah Osborn	A constant lower bound for any quantum protocol for secure function evaluation
14:35 - 15:00	Uriel Shinar, Amit Behera and Or Sattath	Noise-Tolerant Quantum Tokens for MAC
15:00 - 15:25	Alexandru Gheorghiu, Tony Metger and Alexander Poremba	Quantum cryptography with classical communication: parallel remote state preparation for copy-protection, verification, and more
15:25 - 15:50	Naresh Goud Boddu, Upendra Kapshikar and Rahul Jain	Quantum secure non-malleable-extractors
15:50 - 16:15	Coffee break	
16:15 - 17:55	Foundations	
16:15 - 16:40	Martti Karvonen	Neither Contextuality nor Nonlocality Admits Catalysts

16:40 - 17:05	Michael Zurel, Cihan Okay, Robert Raussendorf and Arne Heimendahl	Hidden Variable Model for Quantum Computation with Magic States on Any Number of Qudits of Any Dimension
17:05 - 17:30	Xingjian Zhang, Pei Zeng, Tian Ye, Hoi-Kwong Lo and Xiongfeng Ma	Quantum Complementarity Approach to Device-Independent Security
17:30 - 17:55	Xinan Chen, Yujie Zhang, Eric Chitambar, Virginia Lorenz and Andreas Winter	Information Carried by a Single Particle in Multiple-Access Channels
Friday, July 15		
09:00 - 10:35 Complexity Theory 3 (remote)		
09:00 - 09:45	Adam Bouland	TBA
09:45 - 10:10	Michał Oszmaniec, Michał Horodecki and Nicholas Hunter-Jones	Saturation and recurrence of quantum complexity for random quantum circuits
10:10 - 10:35	Harry Buhrman, Bruno Loff, Subhasree Patro and Florian Speelman	Memory Compression with Quantum Random-Access Gates
10:35 - 11:00 Coffee break		
11:00 - 12:40 Quantum Machine Learning, Algorithms, Computation (remote)		
11:00 - 11:25	Matthias C. Caro, Elies Gil-Fuster, Johannes Jakob Meyer, Jens Eisert, Ryan Sweke, Hsin-Yuan Huang, Marco Cerezo, Kunal Sharma, Andrew Sornborger, Lukasz Cincio and Patrick J. Coles	Generalization guarantees for variational quantum machine learning
11:25 - 11:50	Ashley Montanaro and Changpeng Shao	Quantum algorithms for learning a hidden graph
11:50 - 12:15	Omar Fawzi, Alexander Müller-Hermes and Ala Shayeghi	A lower bound on the space overhead of fault-tolerant quantum computation
12:15 - 12:40	Martin Johannes Renner and Caslav Brukner	Reassessing the computational advantage of quantum-controlled ordering of gates
12:40 - 16:00 Free afternoon, Lab tours		