TQC 2021 schedule

UTC+3	Monday, July 5th	UTC+3	Tuesday, July 6th	UTC+3	Wednesday, July 7th	UTC+3	Thursday, July 8th
		9:30	**Poster session**				
10:00	**Invited talk: Cécilia Lancien** Typical correlations and entanglement in random MPS and PEPS			10:00	**Invited talk: Kai-Min Chung** Tight Quantum Time-Space Tradeoffs for Function Inversion	10:00	**Open problem session**
10:50	Break			10:50	Break	10:50	Break
11:15	**Even more efficient quantum computations of chemistry through tensor hypercontraction** Joonho Lee, Dominic Berry, Craig Gidney, William Huggins, Jarrod McClean, Nathan Wiebe and Ryan Babbush			11:15	**Lieb-Robinson bound and almost linear light cone in interacting boson systems** Tomotaka Kuwahara and Keiji Saito	11:15	**The XZZX Surface Code** Pablo Bonilla, David Tuckett, Stephen Bartlett, Steven Flammia and Benjamin Brown
11:25	**Quantum simulation with randomized product formulas: A concentration analysis** Chi-Fang Chen, Hsin-Yuan Huang, Richard Kueng and Joel Tropp			11:25	**StoqMA meets distribution testing** Yupan Liu	11:25	**Universal Fault-Tolerant Quantum Computing with Stabiliser Codes** Paul Webster, Michael Vasmer, Thomas R. Scruby and Stephen D. Bartlett
11:35	**A game of quantum advantage: linking verification and simulation** Daniel Stilck França and Raul Garcia-Patron Sanchez	11:30	**Faster Coherent Quantum Algorithms for Phase, Energy, and Amplitude Estimation** Patrick Rall	11:35	**Optimization at the boundary of the tensor network variety** Daniel Stilck França, Fulvio Gesmundo, Matthias Christandl and Albert H. Werner	11:35	*[Merged]* **Efficient estimation of Pauli observables by derandomization & Robust shadow estimation** Hsin-Yuan Huang, Richard Kueng and John Preskill & Senrui Chen, Wenjun Yu, Pei Zeng and Steven T. Flammia
11:45	**Fermion Sampling: a robust quantum computational advantage scheme using fermionic linear optics and magic input states** Michal Oszmaniec, Ninnat Dangniam, Mauro Morales and Zoltan Zimboras	11:40	**Quantum Algorithm for Finding the Optimal Variable Ordering for Binary Decision Diagrams** Seiichiro Tani	11:45	**General conditions for universality of quantum Hamiltonians** Tamara Kohler, Stephen Piddock, Johannes Bausch and Toby Cubitt	11:50	**Measurement Error Mitigation via Truncated Neumann Series** Kun Wang, Yu-Ao Chen and Xin Wang
11:55	**Efficient verification of Boson Sampling** Ulysse Chabaud, Frédéric Grosshans, Elham Kashefi and Damian Markham	11:50	**A note about claw function with a small range** Andris Ambainis, Kaspars Balodis and Jānis Iraids	11:55	**The Complexity of Translationally Invariant Problems beyond Ground State Energies** James Watson, Johannes Bausch and Sevag Gharibian		
12:05	Break	12:00	**Quantum Time-Space Tradeoff for Finding Multiple Collision** Pairs Yassine Hamoudi and Frederic Magniez	12:05	Break	12:00	Break
		12:10	**Quantum lower bounds based on hardness of the 3SUM problem** Subhasree Patro, Harry Buhrman, Florian Speelman and Bruno Loff				
		12:20	Break				
12:30	**Covariance Decomposition as a Universal Limit on Correlations in Networks** Salman Beigi and Marc-Olivier Renou			12:30	**A Direct Product Theorem for One-Way Quantum Communication** Rahul Jain and Srijita Kundu	12:30	**Explicit constructions of exact unitary t-designs and applications to higher-order randomized benchmarking** Yoshifumi Nakata, Da Zhao, Takayuki Okuda, Eiichi Bannai, Yasunari Suzuki, Shiro Tamiya, Kentaro Heya, Zhiguang Yan, Kun Zuo, Shuhei Tamate, Yutaka Tabuchi and Yasunobu Nakamura
12:40	**Genuine multipartite nonlocality is intrinsic to pure-state quantum networks** Patricia Contreras Tejada, Carlos Palazuelos and Julio de Vicente	12:40	**One-shot quantum state redistribution and quantum Markov chains** Anurag Anshu, Shima Bab Hadiashar, Rahul Jain, Ashwin Nayak and Dave Touchette	12:40	**One-shot manipulation of dynamical quantum resources** Bartosz Regula and Ryuji Takagi	12:40	**Fast and robust quantum state tomography from few basis measurements** Daniel Stilck França, Richard Kueng and Fernando Brandao
12:50	**A family of additive multipartite entanglement measures** Péter Vrana	12:50	**Quantum state redistribution for ensemble sources** Zahra Baghali Khanian and Andreas Winter	12:50	**Geometric Renyi Divergence and its Applications in Quantum Channel Capacities** Kun Fang and Hamza Fawzi	12:50	**Sample Efficient Algorithms for Learning Quantum Channels in PAC Model and the Approximate State Discrimination Problem** Kai-Min Chung and Han-Hsuan Lin
13:00	**Enumerating all bilocal Clifford distillation protocols through symmetry reduction** Sarah Jansen, Kenneth Goodenough, Sebastian de Bone, Dion Gijswijt and David Elkouss	13:00	**Entanglement consumption in attacks to Position Based Cryptography from geometry of Banach spaces** Aleksander Marcin Kubicki, Marius Junge, Carlos Palazuelos and David Pérez-García	13:00	**No-go theorems for quantum resource purification: universal theories and practical applications** Kun Fang and Zi-Wen Liu	13:00	**A general framework for randomized benchmarking** Jonas Helsen, Ingo Roth, Emilio Onorati, Albert Werner and Jens Eisert
13:10	**Quasi-polynomial time algorithms for quantum games in bounded dimension** Hyejung Hailey Jee, Carlo Sparaciari, Omar Fawzi and Mario Berta	13:10	**Upper bounds on device-independent quantum key distribution rates** Rotem Arnon-Friedman, Matthias Christandl, Roberto Ferrara, Karol Horodecki and Felix Leditzky	13:10	**Stabilizer extent is not multiplicative** Arne Heimendahl, Felipe Montealegre-Mora, Frank Vallentin and David Gross	13:10	**Matchgate benchmarking: Scalable benchmarking of a continuous family of many-qubit gates** Jonas Helsen, Sepehr Nezami, Matthew Reagor and Michael Walter
13:20	Break	13:20	**New Approaches for Quantum Copy-Protection** Scott Aaronson, Jiahui Liu, Qipeng Liu, Mark Zhandry and Ruizhe Zhang	13:20	Break	13:20	Break
		13:30	Break				
		16:00	**Generalization in Quantum Machine Learning: a Quantum Information Perspective** Leonardo Banchi, Jason Pereira and Stefano Pirandola				
		16:10	**Tensor network decoding of arbitrary 2D Pauli codes** Christopher Chubb				
		16:20	**Thermalization in Kitaev's quantum double models via Tensor Network techniques** Angelo Lucia, David Pérez-García and Antonio Pérez-Hernández				
		16:30	**Covariant Quantum Error Correcting Codes via Reference Frames** Yuxiang Yang, Mo Yin, Joseph Renes, Giulio Chiribella and Mischa Woods	16:30	**Hybrid quantum-classical algorithms for approximate graph coloring** Sergey Bravyi, Alexander Kliesch, Robert Koenig and Eugene Tang		
		16:40	**Oscillator-to-oscillator codes do not have a threshold** Lisa Hänggli and Robert König	16:40	**Quantum algorithms for matrix scaling and matrix balancing** Joran van Apeldoorn, Sander Gribling, Yinan Li, Harold Nieuwboer, Michael Walter and Ronald de Wolf		
		16:50	Break	16:50	**Faster quantum-inspired algorithms for solving linear systems** Changpeng Shao and Ashley Montanaro		
17:00	**Open problem session**	17:00	**Business meeting**	17:00	**Quantum Probability Oracles & Multidimensional Amplitude Estimation** Joran van Apeldoorn	17:00	**Invited talk: Scott Aaronson** *[tentative]*
				17:10	**Quantum-accelerated multilevel Monte Carlo methods for stochastic differential equations in mathematical finance** Dong An, Noah Linden, Jin-Peng Liu, Ashley Montanaro, Changpeng Shao and Jiasu Wang		
				17:20	Break		
17:50	Break	18:00	Break	17:30	**Poster session**	17:50	Break
18:15	**Quantum Logarithmic Space and Post-Selection** Francois Le Gall, Harumichi Nishimura and Abuzer Yakaryilmaz	18:15	**Invited talk: Srinivasan Arunachalam** Recent advances in learning quantum states			18:15	**Efficient learning of quantum extensive observables** Daniel Stilck França and Cambyse Rouze
18:25	**Quantum Proofs of Proximity** Marcel Dall'Agnol, Tom Gur, Subhayan Roy Moulik and Justin Thaler					18:25	**Single-shot error correction of three-dimensional homological product codes** Armanda O. Quintavalle, Michael Vasmer, Joschka Roffe and Earl Campbell
18:35	**Leveraging Unknown Structure in Quantum Query Algorithms** Noel Anderson, Jay-U Chung and Shelby Kimmel					18:35	**Limitations on transversal gates for hypergraph product codes** Simon Burton and Dan Browne
18:45	**Quantum Pseudorandomness and Classical Complexity** William Kretschmer					18:45	**Balanced Product Quantum Codes** Nikolas Breuckmann and Jens Eberhardt
18:55	**Bounds on the QAC^0 Complexity of Approximating Parity** Gregory Rosenthal					18:55	**Subsystem codes with high thresholds by gauge fixing and reduced qubit overhead** Oscar Higgott and Nikolas Breuckmann
19:05	Break	19:05	Break			19:05	Break
19:30	**Reducing the CNOT count for Clifford+T circuits on NISQ architectures** Vlad Gheorghiu, Sarah Meng Li, Michele Mosca and Priyanka Mukhopadhyay	19:30	**Entanglement Induced Barren Plateaus** Carlos Ortiz Marrero, Maria Kieferova and Nathan Wiebe	19:30	**Cost of universality: A comparative study of the overhead of state distillation and code switching with color codes** Michael Beverland, Aleksander Kubica and Krysta Svore	19:30	**RLD Fisher Information Bound for Multiparameter Estimation of Quantum Channels** Vishal Katariya and Mark Wilde
19:40	**Implementing a fast unbounded quantum fanout gate using power-law interactions** Andrew Guo, Abhinav Deshpande, Su-Kuan Chu, Zachary Eldredge, Przemyslaw Bienias, Dhruv Devulapalli, Yuan Su, Andrew Childs and Alexey Gorshkov	19:40	**Dynamical entanglement** Gilad Gour and Carlo Maria Scandolo	19:40	*[Merged]* **Four-dimensional toric code with non-Clifford transversal gates & Locally unencoding the color code** Tomas Jochym-O'Connor and Theodore Yoder & Michael Vasmer and Aleksander Kubica	19:40	**The quantum Wasserstein distance of order 1** Giacomo De Palma, Milad Marvian, Dario Trevisan and Seth Lloyd
19:50	*[Talk rescheduled]*	19:50	**Bounding the classical capacity of a quantum channel assisted by classical feedback** Dawei Ding, Sumeet Khatri, Yihui Quek, Peter Shor, Xin Wang and Mark Wilde	19:55	**Single-shot error correction and universal fault-tolerant computation with the three-dimensional subsystem toric code** Aleksander Kubica, Michael Vasmer and Joseph Iverson	19:50	**'Interaction-Free' Channel Discrimination** Markus Hasenöhrl and Michael M. Wolf
20:00	**Charge-conserving unitaries typically generate optimal covariant quantum error-correcting codes** Linghang Kong and Zi-Wen Liu	20:00	**Hidden Variable Model for Universal Quantum Computation with Magic States on Qubits** Michael Zurel, Cihan Okay and Robert Raussendorf	20:05	**Fault-tolerant syndrome extraction and cat state preparation with fewer qubits** Prithviraj Prabhu and Ben Reichardt	20:00	**Faster Digital Quantum Simulation by Symmetry Protection** Minh Tran, Yuan Su, Daniel Carney and Jake Taylor
20:10	**Private learning implies quantum stability** Srinivasan Arunachalam, Yihui Quek and John Smolin	20:10	**Quantum algorithm for Petz recovery channels and pretty good measurements** András Gilyén, Seth Lloyd, Iman Marvian, Yihui Quek and Mark Wilde	20:15	**Pauli error estimation via Population Recovery** Steven Flammia and Ryan O'Donnell	20:10	**Quantum Gravity in the Lab: Teleportation by Size and Traversable Wormholes** Adam Brown, Hrant Gharibyan, Stefan Leichenauer, Henry Lin, Sepehr Nezami, Grant Salton, Leonard Susskind, Brian Swingle and Michael Walter
20:20	END	20:20	END	20:25	END	20:20	END