

19 (Mon) August

09:00~10:30	Tutorial · <u>Debbie Leung</u> - <i>Embezzlement and Applications</i>
10:30~11:00	Coffee Break
11:00~12:30	Tutorial · <u>Nathan Wiebe</u> - <i>Introduction to Quantum Machine Learning</i>
12:30~14:00	Lunch
14:00~15:00	Invited Talk · <u>Giulio Chiribella</u> - <i>Testing quantum causal structures</i>
15:00~15:30	Coffee Break
15:30~17:00	Long Talks · <u>Xin Wang</u> , Mark Wilde and Yuan Su - <i>Efficiently computable bounds for magic state distillation</i> · Martin Hebenstreit, <u>Richard Jozsa</u> , Barbara Kraus, Sergii Strelchuk and Mithuna Yoganathan - <i>All fermionic non-Gaussian states are magic states for matchgate computations</i> · Baojie Liu, Xue-Ke Song, Zheng-Yuan Xue, Xin Wang and <u>Man-Hong Yung</u> - <i>Plug-and-Play Approach to Geometric Quantum Computation</i>
17:00~18:30	Poster I

20 (Tue) August

09:00~10:00	Invited Talk <ul style="list-style-type: none"> · Liang Jiang - <i>Achieving the Heisenberg limit in quantum metrology using quantum error correction</i>
10:00~10:30	Coffee Break
10:30~12:00	Long Talks <ul style="list-style-type: none"> · Hu Xiao-Min, Zhang Chao, Biheng Liu, Huang Yunfeng, Chuanfeng Li and Guangcan Guo - <i>Experimental multi-level quantum teleportation</i> · Zhibo Hou - <i>Zero-tradeoff multi-parameter estimation from multiple Heisenberg uncertainty relations</i> · Seung-Woo Lee, Timothy C. Ralph and Hyunseok Jeong - <i>Fundamental building block for scalable photonic quantum communication</i>
12:00~13:30	Lunch
13:30~14:30	Short Talks (Parallel Session A) <ul style="list-style-type: none"> · Zhihui Wang, Nicholas Rubin, Jason Dominy and Eleanor Rieffel - <i>XY-model: Analytical and Numerical Results for Quantum Algorithms</i> · Tyson Jones and Simon Benjamin - <i>Approximately recompiling NISQ circuits via energy dissipation</i> · Yuxuan Du, Min-Hsiu Hsieh and Dacheng Tao - <i>Efficient Online Quantum Generative Adversarial Learning Algorithms with Applications</i> Short Talks (Parallel Session B) <ul style="list-style-type: none"> · Parth Girdhar and Andrew Doherty - <i>Probing modified commutation relations via quantum noise</i> · Yoshifumi Nakata, Eyuri Wakakuwa and Masato Koashi - <i>Partial Decoupling Approach to Information Leakage Problem from Black Holes with Symmetry</i> · Xinyao Huang, Emil Zeuthen, Denis Vasilyev, Qiongyi He, Klemens Hammerer and Eugene Polzik - <i>Unconditional Steady-State Entanglement in Macroscopic Hybrid Systems by Coherent Noise Cancellation</i>
14:30~15:00	Coffee Break
15:00~16:00	Short Talks (Parallel Session A) <ul style="list-style-type: none"> · Sathyawageeswar Subramanian and Min-Hsiu Hsieh - <i>Quantum algorithm for estimating α-Renyi entropies of density matrices in an oracular setting</i> · Kosuke Mitarai and Keisuke Fujii - <i>Methodology for replacing indirect measurements with direct measurements</i> · Yertay Zhiyenbayev, Vladimir Akulin and Aikaterini Mandilara - <i>Quantum compiling with diffusive sets of gates</i> Short Talks (Parallel Session B) <ul style="list-style-type: none"> · Marc-Olivier Renou, Elisa Baumer, Sadra Boreiri, Nicolas Brunner, Nicolas Gisin and Salman Beigi - <i>Genuine quantum nonlocality in the triangle network</i> · Yu Xiang, Qiongyi He, Xiaolong Su, Yin Cai, Gerardo Adesso and Nicolas Treps - <i>Distribution of multipartite Einstein-Podolsky-Rosen steering in Gaussian systems</i> · Toshiki Kobayashi, Rikizo Ikuta, Tetsuo Kawakami, Shigehito Miki, Masahiro Yabuno, Taro Yamashita, Hirotaka Terai, Masato Koashi, Tetsuya Mukai, Takashi Yamamoto and Nobuyuki Imoto - <i>Polarization insensitive frequency conversion for a fiber-optic communication of an atom-photon entanglement</i>
16:00~17:30	Poster II
17:30~19:00	Banquet

21 (Wed) August

09:00~10:00	Invited Talk · <u>Chaoyang Lu</u> - <i>Toward “quantum supremacy” with single photons</i>
10:00~10:30	Coffee Break
10:30~11:30	Invited Talk · <u>Joe Fitzsimmons</u> - <i>Verification of independent quantum devices</i>
11:00~19:00	Excursion

22 (Thu) August

09:00~10:00	Invited Talk <ul style="list-style-type: none"> · Xiaoliang Qi - <i>Quantum causal influence</i>
10:00~10:30	Coffee Break
10:30~12:00	Long Talks <ul style="list-style-type: none"> · Soeren Wengerowsky, Siddarth Koduru Joshi, Fabian Steinlechner, Hannes Hübel and Rupert Ursin - <i>Quantum Communications Network Based on Polarization Entanglement at Telecom Wavelength</i> · Yuval Sanders, Guang Hao Low, Artur Scherer and Dominic Berry - <i>Black-box quantum state preparation without arithmetic</i> · Aram Harrow, Linghang Kong, Zi-Wen Liu, Saeed Mehraban and Peter Shor - <i>A Separation of Out-of-time-ordered Correlator and Entanglement</i>
12:00~13:30	Lunch
13:30~14:50	Short Talks (Parallel Session A) <ul style="list-style-type: none"> · Kunkun Wang, Xingze Qiu, Lei Xiao, Xiang Zhan, Zhihao Bian, Wei Yi and Peng Xue - <i>Simulating dynamic quantum phase transitions in photonic quantum walks</i> · Eunou Lee and Sean Hallgren - <i>Approximation of MAX-2-local Hamiltonians</i> · Daniel Brod and Michał Oszmaniec - <i>Nonuniform photonic losses and classical simulation of linear optics</i> · Vojtech Havlicek, Sergii Strelchuk and Kristan Temme - <i>A Classical Algorithm for Quantum $SU(2)$ Schur Sampling</i> Short Talks (Parallel Session B) <ul style="list-style-type: none"> · Areeya Chantasri, Ivonne Guevara, Kiarn Laverick and Howard Wiseman - <i>Unifying theory of quantum state estimation using past and future information</i> · Ben Dive, David Trillo and Miguel Navascués - <i>Remote Time Manipulation</i> · Jessica Bavaresco, Mateus Araújo, Časlav Brukner and Marco Tulio Quintino - <i>Semi-device-independent certification of indefinite causal order</i> · Alastair Abbott, Julian Wechs, Dominic Horsman, Mehdi Mhalla and Cyril Branciard - <i>Communication through coherent control of quantum channels</i>
14:50~15:20	Coffee Break
15:20~16:40	Short Talks (Parallel Session A) <ul style="list-style-type: none"> · Eyuri Wakakuwa and Yoshifumi Nakata - <i>Randomized Partial Decoupling Unifies One-Shot Quantum Channel Capacities</i> · Seunghoan Song and Masahito Hayashi - <i>Capacity of Quantum Private Information Retrieval with Multiple Servers</i> · Zi-Wen Liu and Andreas Winter - <i>Resource theories of quantum channels and the universal role of resource erasure</i> · Yadong Wu and Barry Sanders - <i>Efficient verification of bosonic quantum channels via benchmarking</i> Short Talks (Parallel Session B) <ul style="list-style-type: none"> · Xin Wang and Mark Wilde - <i>Resource theory of asymmetric distinguishability</i> · Yuanlong Wang, Shota Yokoyama, Daoyi Dong, Ian Petersen, Elanor Huntington and Hidehiro Yonezawa - <i>Two-stage Estimation for Quantum Detector Tomography</i> · Kok Chuan Bobby Tan, Hyukjoon Kwon, Tyler Volkoff and Hyunseok Jeong - <i>From quantum coherence to nonclassicality and metrological power</i> · Man-Hong Yung, Fei Meng, Xiao-Ming Zhang and Ming-Jing Zhao - <i>One-Shot Detection Limits of Quantum Illumination with Discrete Signals</i>
16:40~17:10	Coffee Break
17:10~18:10	Invited Talk <ul style="list-style-type: none"> · Peng Xue - <i>Parity-time-symmetric quantum walks</i>

23 (Fri) August

09:00~10:00	Invited Talk <ul style="list-style-type: none"> · Michelle Simmons - <i>The Future of Computing in Silicon</i>
10:00~10:30	Coffee Break
10:30~12:00	Long Talks <ul style="list-style-type: none"> · Paul Skrzypczyk, Ivan Supic and Daniel Cavalcanti - <i>All sets of incompatible measurements give an advantage in quantum state discrimination</i> · Stefan Baeuml, Andreas Winter and Dong Yang - <i>Every entangled state provides an advantage in classical communication</i> · Nariman Saadatmand, Travis Baker, Dominic Berry and Howard Wiseman - <i>The Heisenberg limit for laser coherence</i>
12:00~13:30	Lunch
13:30~14:30	Short Talks (Parallel Session A) <ul style="list-style-type: none"> · Rikizo Ikuta, Yasushi Hasegawa, Nobuyuki Matsuda, Kiyoshi Tamaki, Hoi-Kwong Lo, Takashi Yamamoto, Koji Azuma and Nobuyuki Imoto - <i>Experimental time-reversed adaptive Bell measurement towards all-photon quantum repeaters</i> · Kunkun Wang, Xingze Qiu, Lei Xiao, Xiang Zhan, Zhihao Bian, Barry Sanders, Wei Yi and Peng Xue - <i>Observation of emergent momentum-time skyrmions in parity-time-symmetric non-unitary quench dynamics</i> · Pablo Arrighi, Cedric Beny and Terry Farrelly - <i>A quantum cellular automaton for one-dimensional QED</i> Short Talks (Parallel Session B) <ul style="list-style-type: none"> · Ge Bai, Yuxiang Yang and Giulio Chiribella - <i>Compression Protocols for Tensor Network States</i> · Farzard Ghafari, Nora Tischler, Carlo Di Franco, Jayne Thompson, Mile Gu and Geoff Pryde - <i>Interfering future trajectories in experimental quantum-enhanced stochastic simulation</i> · Prahlad Warszawski and Howard Wiseman - <i>Open quantum systems are harder to track than open classical systems</i>
14:30~15:00	Coffee Break
15:00~16:00	Short Talks (Parallel Session A) <ul style="list-style-type: none"> · Mark Um, Qi Zhao, Xiongfeng Ma and Kihwan Kim - <i>Randomness expansion certified by quantum contextuality in a trapped ion system</i> · Kishor Bharti, Maharshi Ray, Antonios Varvitsiotis, Naqeeb Ahmad Warsi, Adan Cabello and Leong Chuan Kwek - <i>Robust self-testing of quantum systems via non-contextuality inequalities</i> · Yunlong Xiao, Kun Fang and Gilad Gour - <i>Complementary Information Principle and Universal Uncertainty Regions</i> Short Talks (Parallel Session B) <ul style="list-style-type: none"> · Bartosz Regula, Varun Narasimhachar, Francesco Buscemi and Mile Gu - <i>The power of dephasing-covariant operations in the manipulation of quantum coherence</i> · Yuxiang Yang, Lennart Baumgärtner, Ralph Silva and Renato Renner - <i>Accuracy enhancing protocols for quantum clocks</i> · Andy Chia, Michal Hadjusek, Ranjith Nair, Rosario Fazio, Leong Chuan Kwek and Vlatko Vedral - <i>Noise-induced amplification: Parametric amplifiers cannot simulate all phase-preserving linear amplifiers</i>
16:00~16:30	Coffee Break
16:30~17:30	Invited Talk <ul style="list-style-type: none"> · Kihwan Kim - <i>Coherence time of single qubit, scalable global gate and quantum error mitigation with trapped ions</i>
17:30~18:00	Closing