QCE24 Technical Paper Tracks

Best Paper Awards

Track	1st Place		2nd Place		3rd Place	
QSYS	154	SYS-ERRC	481	SYS-SIMU	481	SYS-CODL
QAPP	458	APP-QAOA	340	APP-PALG	340	APP-PSCI
QALG	435	ALG-EDMC	601	ALG-HSEC	601	ALG-SAMP
QTEM	203	TEM-CTRL	468	TEM-ROCT	468	TEM-HW1
QNET	136	NET-DQC	367	NET-PROT	367	NET-PROT
QPHO	690	PHO-IOPT	578	PHO-QSAS	578	PHO-APPS
QML	665	QML-GMOD	101	QML-KMOD	101	QML-RLG2

APP-ARCH-Quantum-System-and-Architecture

Sunday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

105 - A quantum vault scheme for digital currency
Anne Broadbent (University of Ottawa), Raza Ali Kazmi (Bank of Canada), Cyrus Minwalla (Bank of Canada)

341 - Scheduling quantum annealing for active user detect1ion in a NOMA network
Romain Piron (Université de Lyon, INSA Lyon, INRIA CITI EA 372), Claire Goursaud (Université de Lyon, INSA Lyon, INRIA CITI EA 372)

473 - Comparison of Superconducting NISQ Architectures
Benjamin Rempfer (Massachusetts Institute of Technology Lincoln Laboratory), Kevin Obenland (Massachusetts Institute of Technology Lincoln Laboratory)

SYS-CNAD-Hardware-Aware-Compilation-(Neutral-Atom-Devices)

Sunday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

160 - Circuit decompositions and scheduling for neutral atom devices with limited local addressability
Natalia Nottingham (University of Chicago), Michael A. Perlin (JPMorganChase), Dhirpal Shah (University of Chicago), Ryan White (University of Chicago), Hannes Bernien (University of Chicago), Frederic T. Chong (University of Chicago), Jonathan M. Baker (UT Austin)

402 - Comparison of Atom Detection Algorithms for Neutral Atom Quantum Computing
Jonas Winklmann (Technical University of Munich), Andrea Alberti (Max Planck Institute of Quantum Optics), Martin Schulz (Technical University of Munich)

100 - An Abstract Model and Efficient Routing for Logical Entangling Gates on Zoned Neutral Atom Architectures
Yannick Stade (TUM School of Computation, Information and Technology, Technical University of Munich), Ludwig Schmid (TUM School of Computation, Information and Technology, Technical University of Munich), Lukas Burgholzer (TUM School of Computation, Information and Technology, Technical University of Munich), Robert Wille (TUM School of Computation, Information and Technology, Technical University of Munich)

APP-ICLAS-Applications-for-Improving-Classical-Computing

Sunday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

128 - Towards Equivalence Checking of Classical Circuits Using Quantum Computing
Nils Quetschlich (Technical University of Munich, Germany), Tobias Forster (Technical University of Munich, Germany), Adrian Osterwind (German Aerospace Center (DLR), Institute of Systems Engineering for Future Mobility), Domenik Helms (German Aerospace Center (DLR), Institute of Systems Engineering for Future Mobility), Robert Wille (Technical University of Munich & SCCH GmbH)

146 - Workforce Task Execution Scheduling using Quantum Computers
Mitsuharu Takeori (IBM Quantum), Noriaki Shimada (IBM Quantum), Dimitris Alevras (IBM Quantum), Bob Parney (IBM Quantum), Deepak Sharma (IBM Quantum), Qi Chu (Woodside Energy), Bernard Cena (Woodside Energy)

588 - Quantum Optimization for FPGA-Placement
Thore Gerlach (Fraunhofer IAIS), Stefan Knipp (Thales Germany), David Biesner (Fraunhofer IAIS), Stelios Emmanouilidis (Fraunhofer IAIS), Klaus Hauber (Thales Germany), Nico Piatkowski (Fraunhofer IAIS)

SYS-CODL-Device-Level-Compilation

Sunday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

169 - Design and architecture of the IBM Quantum Engine Compiler
Michael Healy (IBM Quantum), Thomas Alexander (IBM Quantum), Reza Jokar (IBM Quantum), Soolu Thomas (IBM Quantum), Vincent R. Pascuzzi (IBM Quantum), Kit Barton (IBM Quantum), Roy Elkabetz (IBM Quantum), Brian Donovan (IBM Quantum), Hiroshi Horii (IBM Quantum), Marius Hillenbrand (IBM Quantum)

Quantum Systems Software (QSYS) Best Paper – 3rd Place – Awarded Monday AM Keynote
176 - One-Time Compilation of Device-Level Instructions for Quantum Subroutines
Aniket S. Dalvi (Duke University), Jacob Whitlow (Duke University), Marissa D'Onofrio (Duke University), Leon Riesebos (Duke University), Tianyi Chen (Duke University), Samuel Phiri (Duke University), Kenneth R. Brown (Duke University), Jonathan M. Baker (University of Texas at Austin)

238 - Graph-Based Pulse Representation for Diverse Quantum Control Hardware
Aniket S. Dalvi (Duke University), Leon Riesebos (Duke University), Jacob Whitlow (Duke University), Kenneth R. Brown (Duke University)

NET-PROT: Quantum Network Protocols

Sunday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

Quantum Networking and Communications Track (QNET) Best Paper – 2nd Place – Awarded Monday PM Keynote

367 - Architecture and Protocols for All-photonic Quantum Repeaters

Naphan Benchasattabuse (Keio University), Michal Hajdusek (Keio University), Rodney Van Meter (Keio University)

Quantum Networking and Communications Track (QNET) Best Paper – 3rd Place – Awarded Monday PM Keynote

413 - DeSQribe: Design and Synthesize Quantum Network Interoperable Protocols for Entanglement Distribution

Leonardo Bacciottini (University of Florence, University of Pisa), Luciano Lenzini (University of Pisa), Enzo Mingozzi (University of Pisa), Giuseppe Anastasi (University of Pisa)

293 - Cyber Layer Upgrade in Power Systems to Support Semi-Quantum Key Distribution

Mariam Gado (Tennessee Tech University), Muhammad Ismail (Tennessee Tech University)

APP-LIFE: Applications for Life Science

Sunday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

415 - mRNA secondary structure prediction using utility-scale quantum computers

Dimitris Alevras (IBM Quantum), Mihir Metkar (Moderna), Takahiro Yamamoto (IBM Quantum), Vaibhaw Kumar (IBM Quantum), Triet Friedhoff (IBM Quantum), Jae-Eun Park (IBM Quantum), Mitsuharu Takeori (IBM Quantum), Mariana LaDue (IBBM Quantum), Wade Davis (Moderna), Alexey Galda (Moderna)

466 - Expanding the Horizon: Enabling Hybrid Quantum Transfer Learning for Long-Tailed Chest X-Ray Classification

Skylar Chan (University of Maryland School of Medicine), Pranav Kulkarni (University of Maryland School of Medicine), Paul H. Yi (St. Jude Children's Research Hospital), Vishwa S. Parekh (University of Maryland School of Medicine)

554 - Quantum optimization CT algorithms with constraints

Hyunju Lee (Yonsei University), Kyungtaek Jun (QTomo)

TEM-ROCT: Hardware for Robust Controls

Sunday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

270 - Miniaturized Low-Pass Filter Using IPD Technology for Cryogenic Quantum Applications

Hung-Chun Lin (Institute of Electronics Engineering, National Tsing Hua University), Yin-Cheng Chang (Taiwan Semiconductor Research Institute, National Applied Research Laboratories), Ho-Chun Wu (Institute of Electronics Engineering, National Tsing Hua University), Chien-Yuan Chang (Institute of Electronics Engineering, National Tsing Hua University), Chih-Cheng Lin (Institute of Electronics Engineering, National Tsing Hua University), Yeke Liu (Institute of Electronics Engineering, National Tsing Hua University), Da-Chiang Chang (Taiwan Semiconductor Research Institute, National Applied

Research Laboratories), Shawn S. H. Hsu (Institute of Electronics Engineering, National Tsing Hua University)

416 - Demonstrating the Potential of Adaptive LMS Filtering on FPGA-Based Qubit Control Platforms for Improved Qubit Readout in 2D and 3D Quantum Processing Units
Hans Johnson (SQMS Fermilab, Illinois Institute of Technology), Silvia Zorzetti (SQMS Fermilab), Jafar Saniie (Illinois Institute of Technology), Nicholas Bornman (SQMS Fermilab), Taeyoon Kim (SQMS Fermilab, Northwestern University), David Van Zanten (SQMS Fermilab)

Quantum Technologies and Systems Engineering (QTEM) Best Paper – 2nd Place – Awarded Thursday AM Keynote
468 - Precision frequency tuning of tunable transmon qubits using alternating-bias assisted annealing
Xiqiao Wang (Rigetti Computing), Joel Howard (Rigetti Computing), Eyob Sete (Rigetti Computing), Greg Stiehl (Rigetti Computing), Cameron Kopas (Rigetti Computing), Stefano Poletto (Rigetti Computing), Xian Wu (Rigetti Computing), Mark Field (Rigetti Computing), Nicholas Sharac (Rigetti Computing), Christopher Eckberg (Rigetti Computing), Hilal Cansizoglu (Rigetti Computing), Raja Katta (Rigetti Computing), Josh Mutus (Rigetti Computing), Andrew Bestwick (Rigetti Computing), Kameshwar Yadavalli (Rigetti Computing), David Pappas (Rigetti Computing)

ALG-CRYT: Quantum Cryptography

Sunday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

142 - A Quantum Circuit to Execute a Key-Recovery Attack Against the DES and 3DES Block Ciphers
Simone Perriello (Politecnico di Milano), Alessandro Barenghi (Politecnico di Milano), Gerardo Pelosi (Politecnico di Milano)

162 - Bridging Quantum Computing and Differential Privacy: Insights into Quantum Computing Privacy
Yusheng Zhao (University of Science and Technology of China), Hui Zhong (University of Houston), Xinyue Zhang (Kennesaw State University), Yuqing Li (University of Science and Technology of China), Chi Zhang (University of Science and Technology of China), Miao Pan (University of Houston)

10 - Quantum Communication Complexity and Raz's Problem
Nipun Agarwal (Birla Institute of Technology and Science, Pilani)

NET-SATL: Satellite Networks

Sunday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

135 - Scalable Scheduling Policies for Quantum Satellite Networks
Albert Williams (University of Massachusetts Amherst), Nitish Kumar Panigrahy (University of Massachusetts Amherst), Andrew McGregor (University of Massachusetts Amherst), Don Towsley (University of Massachusetts Amherst)

187 - Fair and Efficient Scheduling Strategies for Satellite Assisted QKD Systems
Ronald Maule (University of Connecticut), Nitish K. Panigrahy (University of Massachusetts), Naga Lakshmi Anipeddi (South East Technological University), Prajit Dhara (University of Arizona), Deirdre Kilbane (South East Technological University), Zakir Hossain (University of Connecticut), Walter O. Krawec (University of Connecticut), Don Towsley (University of Massachusetts), Bing Wang (University of Connecticut)

388 - Entanglement Swapping in Orbit: a Satellite Quantum Link Case Study
Paolo Fittipaldi (Sorbonne Université, CNRS, LIP6, F-75005 Paris, France), Kentaro Teramoto (Mercari R4D, Mercari, Inc., Japan), Naphan Benchasattabuse (Graduate School of Media and Governance, Keio University Shonan Fujisawa Campus, Kanagawa, Japan), Michal Hajdušek (Graduate School of Media and Governance, Keio University Shonan Fujisawa Campus, Kanagawa, Japan), Rodney Van Meter (Faculty of Environment and Information Studies, Keio University Shonan Fujisawa Campus, Kanagawa, Japan), Frédéric Grosshans (Sorbonne Université, CNRS, LIP6, F-75005 Paris, France)

SYS-COLL: Low-level Components

Sunday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

116 - Quantum Hardware Roofline: Evaluating the Impact of Gate Expressivity on Quantum Processor Design
Justin Kalloor (UC Berkeley), Mathias Weiden (UC Berkeley), Costin Iancu (LBNL), John Kubiatowicz (UC Berkeley), Ed Younis (LBNL), Bert De Jong (LBNL)

368 - Low-Power Half-Flux-Quantum based Counter Circuits for Cryogenic Quantum Computers
Yuki Matsumoto (Kyushu University), Teruo Tanimoto (Kyushu University), Masamitsu Tanaka (Nagoya University), Takatsugu Ono (Kyushu University)

617 - Understanding Side-Channel Vulnerabilities in Superconducting Qubit Readout Architectures
Satvik Maurya (University of Wisconsin-Madison), Chaithanya Naik Mude (University of Wisconsin-Madison), Benjamin Lienhard (Princeton University), Swamit Tannu (University of Wisconsin-Madison)

ALG-SAMP: Quantum Learning and Sampling

Monday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

Quantum Algorithms Track (QALG) Best Paper – 3rd Place – Awarded Wednesday AM Keynote
540 - Learning Gaussian Operations and the Matchgate Hierarchy
Joshua Cudby (University of Cambridge), Sergii Strelchuk (University of Cambridge)

591 - On the Robustness of Variational Quantum Classifier against "Label Flipping Attacks" in Federated Learning for Semiconductor Manufacturing
Amandeep Bhatia (Purdue University), Sabre Kais (Purdue University), Muhammad Alam (Purdue University)

208 - Consistent Sampling with Smoothed Quantum Walk
Tianyi Zhang (The University of Georgia), Yuan Ke (The University of Georgia)

TEM-ECCY: Hardware for Error Correction and Cryptography

Monday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

296 - Towards a Cryogenic CMOS-Memristor Neural Decoder for Quantum Error Correction
Pierre-Antoine Mouny (Irréversible Inc.), Maher Benhouria (Irréversible Inc.), Victor Yon (Irréversible Inc.), Linxiang Huang (Université de Sherbrooke), Patrick Dufour (Université de Sherbrooke), Sophie Rochette (Irréversible Inc.), Yann Beilliard (Université de Sherbrooke), Dominique Drouin (Université de Sherbrooke), Pooya Ronagh (Irréversible Inc.)

495 - Privacy-Preserving Quantum Annealing for Quadratic Unconstrained Binary Optimization (QUBO) Problems
Moyang Xie (Nanjing University), Yuan Zhang (Nanjing University), Sheng Zhong (Nanjing University), Qun Li (William & Mary)

414 - Foldable, Recursive Proofs of Isogeny Computation with Reduced Time Complexity
Krystal Maughan (University of Vermont), Christelle Vincent (University of Vermont), Joseph Near (University of Vermont)

APP-REST: Quantum Resource Estimation and Calibration

Monday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

96 - Utilizing Resource Estimation for the Development of Quantum Computing Applications
Nils Quetschlich (Technical University of Munich), Mathias Soeken (Microsoft Quantum, Switzerland), Prakash Murali (University of Cambridge, United Kingdom), Robert Wille (Technical University of Munich & SCCH GmbH)

139 - Q-SCALE: Quantum Sensor Calibration for Advanced Learning and Efficiency
Lorenzo Bergadano (Politecnico di Torino), Andrea Ceschini (Sapienza University of Rome), Pietro Chiavassa (Politecnico di Torino), Edoardo Giusto (University of Naples, Federico II), Bartolomeo Montrucchio (Politecnico di Torino), Massimo Panella (Sapienza University of Rome), Antonello Rosato (Sapienza University of Rome)

163 - On the use of calibration data in error-aware compilation techniques for NISQ devices
Handy Kurniawan (Universidad Complutense de Madrid), Laura Rodríguez-Soriano (Universitat Politècnica de València), Daniele Cuomo (Universitat Politècnica de València), Carmen G. Almudever (Universitat Politècnica de València), Francisco Garcia-Herrero (Universidad Complutense de Madrid)

SYS-AIML: AI/ML-Enhanced Toolchain

Monday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

120 - Qiskit-Torch-Module: Fast Prototyping of Quantum Neural Networks
Nico Meyer (Fraunhofer Institute for Integrated Circuits IIS), Christian Ufrecht (Fraunhofer Institute for Integrated Circuits IIS), Maniraman Periyasamy (Fraunhofer Institute for Integrated Circuits IIS), Axel Plinge (Fraunhofer Institute for Integrated Circuits IIS), Christopher Mutschler (Fraunhofer Institute for Integrated Circuits IIS), Daniel D. Scherer (Fraunhofer Institute for Integrated Circuits IIS), Andreas Maier (Pattern Recognition Lab, FAU Erlangen-Nuremberg)

604 - AI methods for approximate compiling of unitarizes
David Kremer (IBM Quantum), Victor Villar (IBM Quantum), Sanjay Vishwakarma (IBM Quantum), Ismael Faro (IBM Quantum), Juan Cruz-Benito (IBM Quantum, IBM Research)

263 - AlphaRouter: Quantum Circuit Routing with Reinforcement Learning and Tree Search
Wei Tang (AWS Quantum Technologies, co-first-author), Yiheng Duan (AWS Quantum Technologies, co-first-author), Yaroslav Kharkov (AWS Quantum Technologies), Rasool Fakoor (Amazon Web Services), Eric Kessler (AWS Quantum Technologies), Yunong Shi (AWS Quantum Technologies)

APP-VARI: Variational Quantum Computing

Monday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

73 - Effective Embedding of Integer Linear Inequalities for Variational Quantum Algorithms
Maximilian Hess (Infineon Technologies AG), Lilly Palackal (Infineon Technologies AG), Abhishek Awasthi (BASF Digital Solutions GmbH), Karen Wintersperger (Siemens AG)

351 - Qubit-efficient Variational Quantum Algorithms for Image Segmentation
Supreeth Mysore Venkatesh (University of Kaiserslautern (RPTU), German Research Center for Artificial Intelligence (DFKI)), Antonio Macaluso (German Research Center for Artificial Intelligence (DFKI)), Marlon Nuske (German Research Center for Artificial Intelligence (DFKI)), Matthias Klusch (German Research Center for Artificial Intelligence (DFKI)), Andreas Dengel (University of Kaiserslautern (RPTU), German Research Center for Artificial Intelligence (DFKI))

406 - Variational Quantum Algorithms via Measurement-Induced Passive Steering
Sahan Sanjaya (University of Florida), Daniel Volya (University of Florida), Prabhat Mishra (University of Florida)

QML-CDA1: Quantum Circuit Design and Analysis I

Monday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

93 - PQML: Enabling the Predictive Reproducibility on NISQ Machines for Quantum ML Applications
Priyabrata Senapati (Kent State University), Samuel Yen-Chi Chen (Wells Fargo), Bo Fang (Pacific Northwest National Laboratory (PNNL)), Tushar Athawale (Oak Ridge National Lab(ORNL)), Ang Li (Pacific Northwest National Laboratory (PNNL)), Weiwen Jiang (George Mason University), Cheng Chang Lu (Kent State University), Qiang Guan (Kent State University)

579 - The Impact of Feature Embedding Placement in the Ansatz of a Quantum Kernel in QSVMs
Ilmo Salmenperä (University of Helsinki), Ilmars Kuhtarskis (University of Helsinki), Jukka K. Nurminen (University of Helsinki), Arianne Meijer-van de Griend (University of Helsinki)

573 - Exploring the State Vector Classification Algorithm and Its Quantum Equivalent
Ethan Hunt (Kennesaw State University), Hieu Nguyen (University of Science, VNU-HCM), Tu Nguyen (Kennesaw State University)

QML-CDA2: Quantum Circuit Design and Analysis II

Monday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

131 - Predominant Aspects on Security for Quantum Machine Learning: Literature Review
Nicola Franco (Fraunhofer IKS), Alona Sakhnenko (Fraunhofer IKS), Leon Stolpmann (adesso Switzerland—Presenter), Daniel Thuerck (Quantagonia GmbH), Fabian Petsch (Federal Office for Information Security (BSI)), Annika Rüll (Federal Office for Information Security (BSI)), Jeanette Lorenz (Fraunhofer-Institute for Cognitive Systems IKS)

585 - Structural Modifications in Quantum-Assisted Training for General Boltzmann Machines
Jose Pablo Pinilla (The University of British Columbia), Steve Wilton (The University of British Columbia)

326 - Certifiably Robust Encoding Schemes
Aman Saxena (Technical University of Munich), Tom Wollschläger (Technical University of Munich), Nicola Franco (Fraunhofer Institute for Cognitive Systems IKS), Jeanette Miriam Lorenz (Fraunhofer Institute for Cognitive Systems IKS), Stephan Günnemann (Technical University of Munich)

QML-GMOD: Quantum Generative Models

Monday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

324 - Efficient and Optimized Small Organic Molecular Graph Generation Pathway Using a Quantum Generative Adversarial Network with Graph Convolution
Max Cui (University of Toronto), Linda Chang (Aspiring Scholars Directed Research Program), Adelina Chau (University of California, Berkeley), Hasset Mekuria (University of California, Berkeley), Leena Adwankar (Aspiring Scholars Directed Research Program), Sriaditya Pendyala (Aspiring Scholars Directed Research Program)

Quantum Machine Learning Track (QML) Best Paper – 1st Place – Awarded Wednesday PM Keynote
665 - Adaptive Quantum Generative Training using an Unbounded Loss Function
Kyle Sherbert (Virginia Tech), Jim Furches (Virginia Tech), Karunya Shirali (Virginia Tech), Carlos Ortiz Marrero (Pacific Northwest National Laboratory), Sophia Economou (Virginia Tech)

586 - Quantum-Assisted Machine Learning Framework: Training and Evaluation of Boltzmann Machines using Quantum Annealers
Jose Pablo Pinilla (The University of British Columbia), Steve Wilton (The University of British Columbia)

NET-TSTB: Hardware and Testbed

Tuesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

192 - The QUANT-NET Testbed Development and Preliminary Results
Damian Schon (University of Hamburg), Prathwiraj Umesh (Caltech), You-Wei Cheah (Lawrence Berkeley National Laboratory), Se-Young Yu (Lawrence Berkeley National Laboratory), Ezra Kissel (Lawrence Berkeley National Laboratory), Venkata Ramana Raju Valivarthi (Caltech), Erhan Saglamyurek (Lawrence Berkeley National Laboratory), Lavanya Ramakrishnan (Lawrence Berkeley National Laboratory), Wenji Wu (Lawrence Berkeley National Laboratory), Alp Sipahigil (University of

California, Berkeley), Maria Spiropulu (Caltech), Hartmut Haffner (University of California, Berkeley), Inder Monga (Lawrence Berkeley National Laboratory)

378 - Scalable Timing Coordination of Bell State Analyzers in Quantum Networks
Yoshihiro Mori (Emerging Media Initiative, Kanazawa University), Toshihiko Sasaki (The University of Tokyo), Rikizo Ikuta (Osaka University), Kentaro Teramoto (Mercari, Inc.), Hiroyuki Ohno (Emerging Media Initiative, Kanazawa University), Michal Hajdusek (Keio University), Rodney Van Meter (Keio University), Shota Nagayama (Mercari, Inc. and Keio University)

449 - Performance of a hot Rb vapour based portable Quantum Memory
Kenneth Gregory (Carleton University), Konrad Socha (Carleton University), Khaled Mnaymned (National Research Council Canada), Connor Kupchak (Carleton University)

ALG-HSEC: Hamiltonian Simulation and Error Mitigation

Tuesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

Quantum Algorithms Track (QALG) Best Paper – 2nd Place – Awarded Wednesday AM Keynote
601 - Weighted Feedback-Based Quantum Algorithm for Excited States Calculation
Salahuddin Abdul Rahman (Aalborg University), Özkan Karabacak (Kadir Has University), Rafal Wisniewski (Aalborg University)

483 - Tailoring Fault-Tolerance to Trotter Circuits
Zhuangzhuang Chen (University of Arizona), Narayanan Rengaswamy (University of Arizona)

615 - Error Mitigation of Hamiltonian Simulations from an Analog-based Compiler (SimuQ)
Amey Meher (North Carolina State University), Yuan Liu (North Carolina State University), Huiyang Zhou (North Carolina State University)

SYS-SIMU: Simulation

Tuesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

16 - Decision Diagram vs. State Vector: A Comparative Study on Quantum Computing Simulation Efficiency
Yusuke Kimura (Fujitsu Ltd.), Shaowen Li (The University of Tokyo), Hiroyuki Sato (The University of Tokyo), Masahiro Fujita (The University of Tokyo)

Quantum Systems Software (QSYS) Best Paper – 2nd Place – Awarded Monday AM Keynote
481 - GraFeyn: Efficient Parallel Sparse Simulation of Quantum Circuits
Sam Westrick (Carnegie Mellon University), Pengyu Liu (Carnegie Mellon University), Byeongjee Kang (Carnegie Mellon University), Colin McDonald (Carnegie Mellon University), Mike Rainey (Carnegie Mellon University), Mingkuan Xu (Carnegie Mellon University), Jatin Arora (Carnegie Mellon University), Yongshan Ding (Yale University), Umut Acar (Carnegie Mellon University)

400 - QuaSi: A Scalable and Reliable Quantum Simulation-based Equivalence Checking Framework
Chao Lu (University of Texas at Dallas), Navnil Choudhury (University of Texas at Dallas), Kanad Basu (University of Texas at Dallas)

NET-SEC1: Quantum Secure Networks I

Tuesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

89 - Secret Addressing Scheme using Distributed Quantum Computing
Jyoti Faujdar (University of Ottawa, Ontario, Canada and Ericsson Research, Montreal, Quebec, Canada), Muhammad Asad Ullah (Ericsson Research, Stockholm, Sweden), Mbarka Soualhia (Ericsson Research, Montreal, Quebec, Canada), Anne Broadbent (Department of Mathematics and Statistics, University of Ottawa, Ontario, Canada)

172 - Finite Key Security of Simplified Trusted Node Networks
Walter Krawec (University of Connecticut), Bing Wang (University of Connecticut), Ryan Brown (University of Connecticut)

213 - Masking Countermeasures Against Side-Channel Attacks on Quantum Computers
Jason T. LeGrow (Virginia Tech), Travis Morrison (Virginia Tech), Jamie Sikora (Virginia Tech), Nicolas Swanson (Virginia Tech)

SYS-COFT: Fault-tolerant Compilation

Tuesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

138 - Unitary Synthesis of Clifford+T Circuits with Reinforcement Learning
Sebastian Rietsch (Fraunhofer Institute for Integrated Circuits (IIS), Karlsruhe Institute of Technology), Abhishek Y. Dubey (Fraunhofer Institute for Integrated Circuits (IIS)), Christian Ufrecht (Fraunhofer Institute for Integrated Circuits (IIS))

392 - A Holistic Approach to Rotation Synthesis for Fault-Tolerant Quantum Computation
Tian-Fu Chen (National Taiwan University), Cheng-Han Liu (National Taiwan University), Jie-Hong Roland Jiang (National Taiwan University)

409 - Cyclic Qubit Mappings
Maxwell Poster (The University of Texas at Austin), Sayam Sethi (The University of Texas at Austin), Jonathan Baker (The University of Texas at Austin)

ALG-EDMC: Quantum Error Detection, Mitigation, and Correction

Tuesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

Quantum Algorithms Track (QALG) Best Paper – 1st Place – Awarded Wednesday AM Keynote
435 - Non-Binary Hypergraph Product Codes for Qudit Error Correction
Shantom K. Borah (University of Arizona), Asit K. Pradhan (University of Arizona), Nithin Raveendran (University of Arizona), Narayanan Rengaswamy (University of Arizona), Bane Vasić (University of Arizona)

457 - GNarsil: Splitting Stabilizers into Gauges
Oskar Novak (University of Arizona), Narayanan Rengaswamy (University of Arizona)

475 - Qubit-Wise Majority Vote: Maximum Likelihood Quantum Error Mitigation for Algorithms with a Single Correct Output
Dror Baron (North Carolina State University), Hrushikesh Pramod Patil (North Carolina State University), Huiyang Zhou (NC State Univ)

NET-PFA1: Performance Analysis I

Tuesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

329 - Quantum Circuit Switching with One-Way Repeaters in Star Networks
Álvaro G. Iñesta (TU Delft), Hyeongrak Choi (Massachusetts Institute of Technology), Dirk Englund (Massachusetts Institute of Technology), Stephanie Wehner (TU Delft)

355 - Calculating the Capacity Region of a Quantum Switch
Ian Tillman (University of Arizona), Thirupathaiah Vasantam (Durham University), Don Towsley (University of Massachusetts Amherst), Kaushik Seshadreesan (University of Pittsburgh)

557 - Scaling Quantum Networks: Inter-QLANs Artificial Connectivity
Siyi Chen (University of Naples Federico II), Jessica Illiano (University of Naples Federico II), Angela Sara Cacciapuoti (University of Naples Federico II), Marcello Caleffi (University of Naples Federico II)

ALG-LALG: Quantum Linear Algebra

Tuesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

390 - Quantum Algorithms for tensor-SVD
Jezer Jojo (Indian Institute of Science Education and Research, Pune), Ankit Khandelwal (Tata Consultancy Services), M. Girish Chandra (Tata Consultancy Services)

610 - Variational Quantum Algorithm as an Efficient Tool for Data Fitting
Mohammadreza Saghafi (Virginia Tech), Lamine Mili (Virginia Tech), Ravi Raghunathan (Virginia Tech)

632 - Efficient Variational Quantum Linear Solver for Structured Sparse Matrices
Abeynaya Gnanasekaran (RTX Technology Research Center), Amit Surana (RTX Technology Research Center)

APP-PALG: Practical Quantum Algorithms

Tuesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

360 - Quantum Enhanced Simulation-Based Optimization for Newsvendor Problems
Monit Sharma (Singapore Management University), Hoong Chuin Lau (Singapore Management University), Rudy Raymond (IBM Quantum, IBM Research -- Tokyo)

Quantum Applications Track (QAPP) Best Paper – 2nd Place – Awarded Tuesday AM Keynote
340 - Hybrid Meta-Solving for Practical Quantum Computing
Domenik Eichhorn (Karlsruhe Institute of Technology (KIT)), Maximilian Schweikart (Karlsruhe Institute of Technology (KIT)), Nick Poser (Karlsruhe Institute of Technology (KIT)), Frederik Fiand (GAMS Software GmbH), Benedikt Poggel (Fraunhofer Institute for Cognitive Systems IKS), Jeanette Miriam Lorenz (Fraunhofer Institute for Cognitive Systems IKS)

157 - Quantum algorithm for copula-based risk aggregation using orthogonal series density estimation
Hitomi Mori (Osaka University), Koichi Miyamoto (Osaka University)

NET-PFA2: Performance Analysis II

Tuesday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

394 - Role of Error Correction in Teleportation Scheduling
Aparimit Chandra (University of Massachusetts Amherst), Filip Rozpedek (University of Massachusetts Amherst), Don Towsley (University of Massachusetts Amherst)

430 - Analytical Performance Estimations for Quantum Repeater Network Scenarios
Allen Zang (University of Chicago), Joaquin Chung (Argonne National Laboratory), Rajkumar Kettimuthu (Argonne National Laboratory), Martin Suchara (Microsoft Corporation), Tian Zhong (University of Chicago)

460 - Optimized Generation of Entanglement by Real-Time Ordering of Swapping Operations
Ranjani G Sundaram (Stony Brook University), Himanshu Gupta (Stony Brook University)

QML-KMOD: Quantum Kernel Models

Tuesday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

71 - Parametrized Energy-Efficient Quantum Kernels for Network Service Fault Diagnosis
Hiroshi Yamauchi (SoftBank Corp.), Tomah Sogabe (The University of Electro-Communications), Rodney Van Meter (Keio University)

Quantum Machine Learning Track (QML) Best Paper – 2nd Place – Awarded Wednesday PM Keynote
101 - QUACK: Quantum Aligned Centroid Kernel
Kilian Tscharke (Fraunhofer AISEC), Sebastian Issel (Fraunhofer AISEC), Pascal Debus (Fraunhofer AISEC)

524 - QuaCK-TSF: Quantum-Classical Kernelized Time Series Forecasting
Abdallah Aaraba (Université de Sherbrooke), Soumaya Cherkaoui (Polytechnique Montréal), Ola Ahmad (Thales Digital Solutions), Jean-Frédéric Laprade (Institut Quantique, Université de Sherbrooke), Olivier Nahman-Lévesque (Institut Quantique, Université de Sherbrooke), Alexis Vieloszynski (Université de Sherbrooke), Shengrui Wang (Université de Sherbrooke)

APP-DANA: Application for Data Analysis

Tuesday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

166 - Discrete Quantum Random Walks for Semantic Text Similarity (NIER)
Jacob Doody (The Johns Hopkins University Applied Physics Laboratory), Roxanne Holden (The Johns Hopkins University Applied Physics Laboratory), David Zaret (The Johns Hopkins University Applied Physics Laboratory), Nathaniel Kavaler (The Johns Hopkins University Applied Physics Laboratory)

133 - Quadratic Advantage with Quantum Randomized Smoothing Applied to Time-Series Analysis
Nicola Franco (Fraunhofer IKS), Marie Kempkes (Volkswagen Group Innovation, Volkswagen AG), Jakob Spiegelberg (Volkswagen Group Innovation, Volkswagen AG), Jeanette Lorenz (Fraunhofer-Institute for Cognitive Systems IKS)

137 - Harnessing a 256-qubit Neutral Atom Simulator for Graph Classification
Edoardo Giusto (University of Naples, Federico II), Gabriele Iurlaro (Politecnico di Torino), Bartolomeo Montrucchio (Politecnico di Torino), Alberto Scionti (Fondazione LINKS), Olivier Terzo (Fondazione LINKS), Chiara Vercellino (Fondazione LINKS, Politecnico di Torino), Giacomo Vitali (Fondazione LINKS, Politecnico di Torino), Paolo Viviani (Fondazione LINKS)

NET-SEC2: Quantum Secure Networks II

Tuesday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

248 - Square Root Law for Covert Quantum Communication over Optical Channels
Evan Anderson (Wyant College of Optical Sciences, University of Arizona), Christopher Eyre (Department of Mathematics, Brigham Young University), Isabel Dailey (Department of Electrical and Computer Engineering, University of Arizona), Filip Rozpędek (University of Massachusetts Amherst), Boulat Bash (Department of Electrical and Computer Engineering and Wyant College of Optical Sciences, University of Arizona)

259 - Leveraging Quantum Circuit Cutting for Obfuscation and Intellectual Property Protection
George Typaldos (Yale University), Wei Tang (Princeton University), Jakub Szefer (Yale University)

260 - Post-Quantum Cryptography (PQC) Network Instrument: Measuring PQC Adoption Rates and Identifying Migration Pathways
Jakub Sowa (UIUC), Bach Hoang (UIUC), Steven Qie (UIUC), Advaith Yeluru (UIUC), Anita Nikolich (UIUC), Ravishankar Iyer (UIUC), Phuong Cao (UIUC)

QML-LMOD: Quantum Machine Learning Models

Tuesday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

111 - A Comparative Analysis of Adversarial Robustness for Quantum and Classical Machine Learning Models
Maximilian Wendlinger (Fraunhofer AISEC, Technical University of Munich), Kilian Tscharke (Fraunhofer AISEC), Pascal Debus (Fraunhofer AISEC)

581 - Fermionic Machine Learning
Jérémie Gince (Université de Sherbrooke), Jean-Michel Pagé (Université de Sherbrooke), Marco Armenta (Université de Sherbrooke), Ayana Sarkar (Université de Sherbrooke), Stefanos Kourtis (Université de Sherbrooke)

638 - MQML: Multi-omic Quantum Machine Learning based Cancer Classification, Biomarker Identification in Human Lung Adenocarcinoma
Mandeep Saggi (Purdue University), Sabre Kais (Purdue University)

APP-QEDC: Quantum Error Detection and Correction

Tuesday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

158 - Quantum Computer Fault Injection Attacks
Chuanqi Xu (Yale University), Ferhat Erata (Yale University), Jakub Szefer (Yale University)

599 - Understanding Error Sensitivity of Quantum Circuits
Shubdeep Mohapatra (North Carolina State University), Huiyang Zhou (North Carolina State University)

185 - Magic Mirror on the Wall, How to Benchmark Quantum Error Correction Codes, Overall?
Avimita Chatterjee (The Pennsylvania State University), Swaroop Ghosh (The Pennsylvania State University)

NET-PFA3: Performance Analysis III

Wednesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

118 - An on-demand resource allocation algorithm for a quantum network hub and its performance analysis
Gayane Vardoyan (TU Delft, UMass Amherst), Scarlett Gauthier (TU Delft), Thirupathaiah Vasantam (Durham University)

379 - Optimal Switching Networks for Paired-Egress Bell State Analyzer Pools
Marii Koyama (Faculty of Environment and Information Studies, Keio University), Claire Yun (Department of Information Science, College of Agriculture and Life Science, Cornell University), Amin Taherkhani (Graduate School of Media and Governance, Keio University), Naphan Benchasattabuse (Graduate School of Media and Governance, Keio University), Bernard Ousmane Sane (Graduate School of Media and Governance, Keio University), Michal Hajdusek (Graduate School of Media and Governance, Keio University), Shota Nagayama (Mercari inc. and Graduate School of Media and Governance, Keio University), Rodney Van Meter (Faculty of Environment and Information Studies, Keio University)

384 - Performance of Quantum Networks Using Heterogeneous Link Architectures
Kento Samuel Soon (Keio University), Naphan Benchasattabuse (Keio University), Michal Hajdusek (Keio University), Kentaro Teramoto (R4D, Mercari, Inc.), Shota Nagayama (R4D, Mercari, Inc., Keio University), Rodney Van Meter (Keio University)

QML-ARCS: Quantum Architecture Search

Wednesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

218 - Differentiable Quantum Architecture Search in Asynchronous Quantum Reinforcement Learning
Samuel Yen-Chi Chen (Wells Fargo)

219 - Quantum Machine Learning Architecture Search via Deep Reinforcement Learning
Xin Dai (Brookhaven National Laboratory), Tzu-Chieh Wei (Stony Brook University), Shinjae Yoo (Brookhaven National Laboratory), Samuel Yen-Chi Chen (Brookhaven National Laboratory)

618 - Quantum Architecture Search: A Survey
Darya Martyniuk (Fraunhofer FOKUS), Johannes Jung (Freie Universität Berlin, Fraunhofer FOKUS), Adrian Paschke (Freie Universität Berlin, Fraunhofer FOKUS)

SYS-PABS: Program Abstraction and Analysis

Wednesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

144 - Supporting Static Program Analysis and Transformation of Quantum-Based Languages
Joshua Behler (Kent State University), Ali Al-Ramadan (Kent State University), Betis Baheri (Kent State University), Qiang Guan (Kent State University), Jonathan Maletic (Kent State University)

365 - CircInspect: Integrating Visual Circuit Analysis, Abstraction, and Real-Time Development in Quantum Debugging
Mushahid Khan (University of British Columbia), Prashant Nair (University of British Columbia), Olivia Di Matteo (University of British Columbia)

333 - An Abstraction Hierarchy Toward Productive Quantum Programming
Olivia Di Matteo (The University of British Columbia), Santiago Núñez-Corrales (University of Illinois Urbana-Champaign), Michał Stęchły (PsiQuantum), Steven Reinhardt (Transform Computing, Inc.), Tim Mattson (Human Learning Group)

TEM-TOMO: Gates and Tomography

Wednesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

251 - Few-Shot, Robust Calibation of Single Qubit Gates Using Bayesian Robust Phase Estimation
Travis Hurant (Duke University), Ke Sun (Duke University), Zhubing Jia (Duke University), Kenneth Brown (Duke University)

336 - Fast Quantum Process Tomography via Riemannian Gradient Descent
Daniel Volya (University of Florida), Andrey Nikitin (University of Florida), Prabhat Mishra (University of Florida)

620 - Constructing Noise-Robust Quantum Gates via Pontryagin's Maximum Principle
Joshua Hanson (Error Corp), Dennis Lucarelli (Error Corp)

TEM-BNCH: Benchmarking

Wednesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

337 - Quantum Benchmarking via Random Dynamical Quantum Maps
Daniel Volya (University of Florida), Prabhat Mishra (University of Florida)

525 - Practical Evaluation of a Quantum Physical Unclonable Function and Design of an Authentication Scheme
Franco Cirillo (University of Salerno), Christian Esposito (University of Salerno)

377 - Reduction of Resources for a Fault-tolerant qRAM using Pieceable Bucket-Brigade Schemes
Bernard Ousmane Sane (Keio University), Praveen Balaji (University of Illinois Urbana-Champaign), Michal Hajdušek (Keio University), Liang Jiang (The University of Chicago, USA), Rodney Van Meter (Keio University)

SYS-BNCH: Benchmarking

Wednesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

240 - QuAS: Quantum Application Score for benchmarking the utility of quantum computers
Koen Mesman (Delft University of Technology), Ward van der Schoot (TNO), Matthias Moller (Delft University of Technology), Niels Neumann (TNO)

315 - Extending the Q-score to an Application-level Quantum Metric Framework
Ward van der Schoot (TNO), Robert Wezeman (TNO), Niels Neumann (TNO), Frank Phillipson (TNO), Rob Kooij (TNO)

606 - Qiskit HumanEval: An evaluation benchmark for Quantum Code Generative Models
Sanjay Vishwakarma (IBM Quantum), Francis Harkins (IBM Quantum), Siddharth Golecha (IBM Quantum), Vishal Sharathchandra Bajpe (IBM Quantum), Nicolas Dupuis (IBM Research), Luca Buratti (IBM Research), David Kremer (IBM Quantum), Ismael Faro (IBM Quantum), Ruchir Puri (IBM Research), Juan Cruz-Benito (IBM Quantum)

SYS-QMAR: Qubit Mapping and Routing

Wednesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

239 - Route-Forcing: Scalable Quantum Circuit Mapping for Scalable Quantum Computing Architectures
Pau Escofet (Universitat Politècnica de Catalunya), Alejandro Gonzalvo (Universitat Politècnica de València), Eduard Alarcón (Universitat Politècnica de Catalunya), Carmen G. Almudéver (Universitat Politècnica de València), Sergi Abadal (Universitat Politècnica de Catalunya)

331 - Optimization for Gaussian Elimination-based NNA-compliant Circuit Synthesis method by Inserting CNOT Gates
Zanhe Qi (Graduate School of Science and Engineering, Ritsumeikan University), Atsushi Matsuo (IBM Quantum, IBM Research - Tokyo), Shigeru Yamashita (Graduate School of Science and Engineering, Ritsumeikan University)

465 - Graph-based Identification of qubit NETwork (GidNET) for Qubit Reuse Algorithm
Gideon Uchehara (University of British Columbia), Tor Aamodt (University of British Columbia), Olivia Di Matteo (University of British Columbia)

TEM-MLN1: Quantum Machine Learning and Neural Network Architectures - I

Wednesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

476 - Deep Learning for Low-Latency, Quantum-Ready RF Classification
Pranav Gokhale (Infleqtion), Caitlin Carnahan (Infleqtion), William Clark (Infleqtion), Fred Chong (Infleqtion), Teague Tomesh (Infleqtion)

233 - Reinforcement Learning based Actor Critic and Policy Agent for Optimizing Quantum Sensor Circuit Design
Temitope Adeniyi (Cleveland State University), Sathish Kumar (Cleveland State University)

485 - Using optimal control to guide neural-network interpolation of continuously-parameterized gates
Bikrant Bhattacharyya (Illinois Mathematics and Science Academy), Fredy An (Illinois Mathematics and Science Academy), Dominik Kozbiel (Illinois Mathematics and Science Academy), Andy Goldschmidt (University of Chicago), Frederic Chong (University of Chicago)

APP-OPT1: Quantum Optimization I

Wednesday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

635 - Solving MAX-3SAT using QUBO approximation
Sebastian Zielinski (LMU Munich), Jonas Nüßlein (LMU Munich), Michael Kölle (LMU Munich), Thomas Gabor (LMU Munich), Claudia Linnhof-Popien (LMU Munich), Sebastian Feld (TU Delft)

647 - Quantum Relaxation for Solving Multiple Knapsack Problems
Monit Sharma (Singapore Management University), Yan Jin (Singapore Management University), Hoong Chuin Lau (Singapore Management University), Rudy Raymond (IBM Quantum, IBM Japan)

132 - Identifying Bottlenecks of NISQ-friendly HHL algorithms
Marc Andreu Marfany (Fraunhofer IKS; Ludwig-Maximilian University; Technical University of Munich), Alona Sakhnenko (Fraunhofer IKS), Jeanette Lorenz (Fraunhofer IKS; Ludwig-Maximilian University)

QML-RLG1: Quantum Reinforcement Learning I

Wednesday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

121 - Warm-Start Variational Quantum Policy Iteration
Nico Meyer (Fraunhofer Institute for Integrated Circuits IIS), Jakob Murauer (Fraunhofer Institute for Integrated Circuits IIS), Alexander Popov (Fraunhofer Institute for Integrated Circuits IIS), Christian Ufrecht (Fraunhofer Institute for Integrated Circuits IIS), Axel Plinge (Fraunhofer Institute for Integrated Circuits IIS), Christopher Mutschler (Fraunhofer Institute for Integrated Circuits IIS), Daniel D. Scherer (Fraunhofer Institute for Integrated Circuits IIS)

332 - Over the Quantum Rainbow: Explaining Hybrid Quantum Reinforcement Learning
Junghoon Park (Seoul National University), Samuel Yen-Chi Chen (Wells Fargo), Shinjae Yoo (Brookhaven National Laboratory), Huan-Hsin Tseng (Brookhaven National Laboratory)

156 - Model-based Offline Quantum Reinforcement Learning
Simon Eisenmann (Technical University of Munich (TUM)), Daniel Hein (Siemens AG, Technology), Steffen Udluft (Siemens AG, Technology), Thomas Runkler (Technical University of Munich (TUM), Siemens AG, Technology)

TEM-MLN2: Quantum Machine Learning and Neural Network Architectures II

Wednesday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

532 - QRA: Quantum Reinforcement Agent for Generating Optimal Quantum Sensor Circuits
Sathish Kumar (Cleveland State University)

609 - A Hybrid Quantum-Classical Physics-Informed Neural Network Architecture for Solving Quantum Optimal Control Problems
Nahid Binandeh Dehaghani (University of Porto), A. Pedro Aguiar (University of Porto), Rafal Wisniewski (University of Aalborg)

634 - PO-QA: Portfolio Optimization-Quantum Algorithm using Quantum Machine Learning
Kamila Zaman (New York University Abu Dhabi), Alberto Marchisio (New York University Abu Dhabi), Muhammad Kashif (New York University Abu Dhabi), Muhammad Shafique (New York University Abu Dhabi)

APP-OPT2: Quantum Optimization II

Wednesday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

427 - Hybrid Classical-Quantum Algorithms for Large Maximum Independent Set on Separable Graphs
Hanjing Xu (Purdue University), Alex Pothen (Purdue University)

376 - Efficient Internal Strategies in Quantum Relaxation based Branch-and-Bound
Hiromichi Matsuyama (Jij Inc.), Wei-Hao Huang (Jij Inc.), Kohji Nishimura (Jij Inc.), Yu Yamashiro (Jij Inc.)

450 - Scaling Up the Quantum Divide and Conquer Algorithm for Combinatorial Optimization
Cameron Ibrahim (University of Delaware), Teague Tomesh (Infleqtion), Zain Saleem (Argonne National Laboratory), Ilya Safro (University of Delaware)

QML-RLG2: Quantum Reinforcement Learning II

Wednesday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

459 - Challenges for Reinforcement Learning in Quantum Circuit Design
Philipp Altmann (LMU Munich), Jonas Stein (LMU Munich), Michael Kölle (LMU), Adelina Bärligea (TU Munich), Maximilian Zorn (LMU Munich), Thomas Gabor (LMU), Thomy Phan (University of Southern California), Sebastian Feld (Delft University of Technology), Claudia Linnhof-Popien (LMU Munich)

645 - Cohesive Quantum Circuit Layer Construction with Reinforcement Learning
Maximilian Zorn (LMU Munich), Jonas Stein (LMU Munich), Philipp Altmann (LMU Munich), Michael Kölle (LMU Munich), Claudia Linnhof-Popien (Ludwig-Maximilian-University Munich), Thomas Gabor (Ludwig Maximilian University of Munich)

Quantum Machine Learning Track (QML) Best Paper – 3rd Place – Awarded Wednesday PM Keynote

505 - Hamiltonian-based Quantum Reinforcement Learning for Neural Combinatorial Optimization

Georg Kruse (Fraunhofer IISB), Rodrigo Coelho (Fraunhofer IISB), Andreas Rosskopf (Fraunhofer IISB), Robert Wille (Technical University of Munich & SCCH GmbH), Jeanette Miriam Lorenz (Fraunhofer-Institute for Cognitive Systems IKS)

APP-BNCH: Benchmarking and Assessment

Wednesday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

482 - Quantum-Enabled Distributed Transient Stability Assessment of Power Systems

Sijia Yu (Stony Brook University), Yifan Zhou (Stony Brook University), Lizhi Wang (Sustainable Building and Grid Group, Siemens Technology)

433 - Towards Robust Benchmarking of Quantum Optimization Algorithms

David Bucher (Aqarios GmbH), Nico Kraus (Aqarios GmbH), Jonas Blenninger (Aqarios GmbH), Jonas Stein (Aqarios GmbH), Michael Lachner (Aqarios GmbH), Claudia Linnhoff-Popien (LMU Munich)

527 - Benchmarking Quantum Annealers with Near-Optimal Minor-Embedded Instances

Valentin Gilbert (Université Paris-Saclay CEA-List F91120 Palaiseau), Julien Rodriguez (Université de Montpellier LIRMM, CNRS Montpellier), Stéphane Louise (Université Paris-Saclay CEA-List F91120 Palaiseau)

APP-CHEM: Applications for Chemistry

Thursday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

304 - Noise-Robust Molecule Decomposition for Variational Quantum Eigensolver

Naoki Iijima (Fujitsu Limited), Satoshi Imamura (Fujitsu Limited), Akihiko Kasagi (Fujitsu Limited), Eiji Yoshida (Fujitsu Limited)

423 - An Experimental Approach to Quantum Molecular Docking

Giacomo Lancellotti (Politecnico di Milano), Gianmarco Accordi (Politecnico di Milano), Gianluca Palermo (Politecnico di Milano)

622 - Ground Energy and Related Properties Estimation in Quantum Chemistry with Linear Dependence on the Number of Atoms

Taehee Ko (School of Computational sciences, Korea Institute for Advanced Study), Xiantao Li (Penn State University), Chunhao Wang (Penn State University)

QML-OPT1: Quantum Optimization I

Wednesday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

178 - The Questionable Influence of Entanglement in Quantum Optimisation Algorithms

Tobias Rohe (LMU Munich), Daniëlle Schuman (LMU Munich), Jonas Nüßlein (LMU Munich), Leo Sünkel (LMU Munich), Jonas Stein (LMU Munich), Claudia Linnhoff-Popien (LMU Munich)

196 - Guided-SPSA: Simultaneous Perturbation Stochastic Approximation assisted by the Parameter Shift Rule
Maniraman Periyasamy (Fraunhofer-IIS, Nuremberg), Axel Plinge (Fraunhofer-IIS, Nuremberg), Christopher Mutschler (Fraunhofer-IIS, Nuremberg), Daniel D. Scherer (Fraunhofer-IIS, Nuremberg), Wolfgang Mauerer (Technical University of Applied Sciences Regensburg, Regensburg)

395 - Adaptive Learning for Quantum Linear Regression
Costantino Carugno (Politecnico di Milano), Maurizio Ferrari Dacrema (Politecnico di Milano), Paolo Cremonesi (Politecnico di Milano)

APP-LERN: Quantum Computing and Learning

Thursday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

126 - Quantum Patch-Based Autoencoder for Anomaly Segmentation
Maria Francisca Madeira (Fraunhofer Institute for Cognitive Systems IKS, Ludwig-Maximilians-Universität München), Alessandro Poggiali (Fraunhofer Institute for Cognitive Systems IKS, University of Pisa), Jeanette Miriam Lorenz (Fraunhofer Institute for Cognitive Systems IKS, Ludwig-Maximilians-Universität München)

312 - Hype or Heuristic? Quantum Reinforcement Learning for Join Order Optimisation
Maja Franz (OTH Regensburg), Tobias Winker (University of Lübeck), Sven Groppe (University of Lübeck), Wolfgang Mauerer (Technical University of Applied Science Regensburg)

556 - A flexible hybrid quantum algorithm for vehicle routing
Arun Vellat Sadashivan (Jio Platforms Ltd), Robin Ajmera (Jio Platforms Ltd), Shantom Kumar Borah (Jio Platforms Ltd), Akansha Kumar (Jio Platforms Ltd), Shailesh Kumar (Jio Platforms Ltd)

SYS-SECU: Security

Thursday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

550 - Protecting Quantum Computers with a Trusted Controller
Theodoros Trochatos (Yale University), Chuanqi Xu (Yale University), Sanjay Deshpande (Yale University), Yao Lu (Yale University), Yongshan Ding (Yale University), Jakub Szefer (Yale University)

454 - SHARE: Secure Hardware Allocation and Resource Efficiency in Quantum Systems
Suryansh Upadhyay (Penn State, University Park), Swaroop Ghosh (The Pennsylvania State University)

108 - Multi-Stage Watermarking for Quantum Circuits
Min Yang (Indiana University Bloomington), Xiaolong Guo (Kansas State University), Lei Jiang (Indiana University Bloomington)

APP-FINA: Applications for Finance

Thursday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

15 - Quantum Amplitude Loading for Rainbow Options Pricing
Francesca Cibrario (Intesa Sanpaolo), Or Samimi Golan (Classiq Technologies), Giacomo Ranieri (Intesa Sanpaolo), Emanuele Dri (Politecnico di Torino), Mattia Ippoliti (Intesa Sanpaolo), Ron Cohen (Classiq

Technologies), Christian Mattia (Intesa Sanpaolo), Bartolomeo Montrucchio (Politecnico di Torino), Amir Naveh (Classiq Technologies), Davide Corbelletto (Intesa Sanpaolo)

109 - Exploring Quantum Annealing for Enhanced International Financial Stock Portfolio Management
Yao-Hsin Chou (National Chi Nan University), Ching-Hsuan Wu (National Chi Nan University), Pei-Shin Huang (National Chi Nan University), Jyun-Yi Shen (National Chi Nan University), Shu-Yu Kuo (National Taiwan University), Sy-Yen Kuo (National Taiwan University), Ching-Ray Chang (National Taiwan University & Chung Yuan Christian University)

426 - Quantum Computational Algorithms for Derivative Pricing and Credit Risk in a Regime Switching Economy
Eric Ghysels (Professor, UNC Chapel Hill), Jack Morgan (Researcher, UNC Chapel Hill), Hamed Mohammadbagherpoor (IBM Quantum, USA)

QML-QNN1: Quantum Neural Networks I

Thursday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

256 - Graph Neural Networks for Parameterized Quantum Circuits Expressibility Estimation
Shamminuj Aktar (New Mexico State University), Andreas Bärtschi (Los Alamos National Laboratory), Diane Oyen (Los Alamos National Laboratory), Stephan Eidenbenz (Los Alamos National Laboratory), Abdel-Hameed Badawy (New Mexico State University)

530 - An Empirical Analysis of Realistic Noise in Quantum Neural Networks for Medical Classifications of Tabular, Signal and Imaging Data
Philipp Moser (Research Unit Medical Informatics, RISC Software GmbH), Alexander Maletzky (Research Unit Medical Informatics, RISC Software GmbH), Michael Giretzlehner (Research Unit Medical Informatics, RISC Software GmbH)

153 - On Optimizing Hyperparameters for Quantum Neural Networks
Sabrina Herbst (TU Wien), Vincenzo De Maio (TU Wien), Ivona Brandic (TU Wien)

SYS-DQC: Distributed Computing

Thursday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

97 - Integration of Quantum Accelerators into HPC: Toward a Unified Quantum Platform
Amr Elsharkawy (Technical University of Munich), Xiaorang Guo (Technical University of Munich), Martin Schulz (Technical University of Munich)

428 - Scalable Circuit Cutting and Scheduling in a Resource-constrained and Distributed Quantum System
Shuwen Kan (Fordham University), Zefan Du (Fordham University), Miguel Palma (Fordham University), Samuel A Stein (Pacific Northwest National Laboratory), Chenxu Liu (Pacific Northwest National Laboratory), Wenqi Wei (Fordham University), Juntao Chen (Fordham University), Ang Li (Pacific Northwest National Laboratory), Ying Mao (Fordham University)

339 - QGroup: Parallel Quantum Job Scheduling Using Dynamic Programming
Aaron Orenstein (Case Western Reserve University), Vipin Chaudhary (Case Western Reserve University)

SYS-ANEL: Annealing

Thursday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

565 - Benchmarking Quantum Annealers with linear system solving
Stephane Louise (CEA, LIST)

91 – QuantumAnnealing: A Julia Package for Simulating Dynamics of Transverse Field Ising Models
Zachary Morrell (Los Alamos National Laboratory), Marc Vuffray (Los Alamos National Laboratory), Sidhant Misra (Los Alamos National Laboratory), Carleton Coffrin (Los Alamos National Laboratory)

370 - A Predictive Approach for Selecting the Best Quantum Solver for an Optimization Problem
Deborah Volpe (Politecnico di Torino), Nils Quetschlich (Technische Universität München), Mariagrazia Graziano (Politecnico di Torino), Giovanna Turvani (Politecnico di Torino), Robert Wille (Technische Universität München)

SYS-CITD: Hardware-Aware Compilation (Ion-Trap Devices)

Thursday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

318 - Scaling and assigning resources on QCCD Ion Trap architectures
Anabel Ovide González (Universitat Politècnica de València), Daniele Cuomo (Universitat Politècnica de València), Carmen García Almudever (Universitat Politècnica de València)

440 - Using Compiler Frameworks for the Evaluation of Hardware Design Choices in Trapped-Ion Quantum Computers
Daniel Schoenberger (Technical University of Munich), Stefan Hillmich (Software Competence Center Hagenberg GmbH), Matthias Brandl (Infineon Technologies AG), Robert Wille (Technical University of Munich, Software Competence Center Hagenberg GmbH)

417 - Shuttling Compiler for a Trapped-Ion Quantum Computer Architecture with Junctions
Fabian Kreppel (Johannes Gutenberg University Mainz), Christian Melzer (Johannes Gutenberg University Mainz), Janis Wagner (Johannes Gutenberg University Mainz), Janine Hilder (Johannes Gutenberg University Mainz), Ulrich Poschinger (Johannes Gutenberg University Mainz), Ferdinand Schmidt-Kaler (Johannes Gutenberg University Mainz), André Brinkmann (Johannes Gutenberg University Mainz)

NET-DQC: Distributed Quantum Computing

Thursday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

Quantum Networking and Communications Track (QNET) Best Paper – 1st Place – Awarded Monday PM Keynote

136 - Improving Qubit Routing by Using Entanglement Mediated Remote Gates
Gurleen Padda (Université de Sherbrooke), Edwin Tham (IonQ Canada), Aharon Brodutch (IonQ Canada), Dave Touchette (Université de Sherbrooke)

380 - Benchmarking emerging quantum interconnect technologies for modular quantum computers
Sahar Ben Rached (Universiat Politècnica de Catalunya), Sergio Navarro Reyes (Universiat Politècnica de Catalunya), Junaid Khan (Universiat Politècnica de Catalunya), Carmen Garcia Almudéver (Universiat Politècnica de Valencia), Eduard Alarcón (Universiat Politècnica de Catalunya), Sergi Abadal (Universiat Politècnica de Catalunya)

401 - Distributing Quantum Circuits with Minimum Execution Time over Quantum Networks
Ranjani G Sundaram (Stony Brook University), Himanshu Gupta (Stony Brook University), C. R. Ramakrishnan (Stony Brook University)

SYS-ERRC: Error Correction

Thursday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

154 - Leveraging Zero-Level Distillation to Generate High-Fidelity Magic States
Yutaka Hirano (Osaka University), Tomohiro Itogawa (Osaka University), Keisuke Fujii (Osaka University)

Quantum Systems Software (QSYS) Best Paper – 1st Place – Awarded Monday AM Keynote

431 - Averting multi-qubit burst errors in surface code magic state factories
Jason D. Chadwick (University of Chicago), Christopher Kang (University of Chicago), Joshua Viszlai (University of Chicago), Sophia Fuhui Lin (University of Chicago), Frederic T. Chong (University of Chicago)

576 - A simple method for compiling quantum stabilizer circuits
Brendan Reid (Entropica Labs)

APP-ANEL: Quantum Annealing

Thursday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

419 - Scaling of Graph Embedding for Quantum Annealers
Ulrik de Muelenaere (University of Notre Dame), Allison O'Brien (University of Notre Dame), Kelly Williams (University of Notre Dame), Peter M. Kogge (University of Notre Dame)

350 - An enhanced hybrid approach using D-Wave's CQM to solve the phase unwrapping problem
Mohammad Kashfi Haghighi (University of Victoria), Nikitas Dimopoulos (University of Victoria)

488 - Quantum Annealings Solutions for Drone Route Planning Problems
Richard Hua (CNRS@CREATE LTD), Daniele Lorenzo (Arts et Métiers ParisTech), Francisco Chinesta (PIMM lab, ENSAM, CNRS@CREATE LTD), Philippe Codognet (JFLI, CNRS, Sorbonne University, University of Tokyo)

QML-QNN2: Quantum Neural Networks II

Thursday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

631 - Benchmarking Quantum-Assisted PINN (QA-PINN) for Computational Fluid Dynamics
Jay Shah (BosonQ Psi (BQP)), Rut Lineswala (BosonQ Psi (BQP)), Abhishek Chopra (BosonQ Psi (BQP))

489 - Hybrid quantum-classical graph neural networks for tumor classification in digital pathology
Anupama Ray (IBM Research, India), Dhiraj Madan (IBM Research, India), Srushti Patil (IISER, Tirupati), Pushpak Pati (IBM Research, Zurich), Marianna Rapsomaniki (IBM), Aviwe Kohlakala (IBM Research, South Africa), Thembelihle Dlamini (IBM Research, South Africa), Stephanie Julia Muller (IBM Research, South Africa), Kahn Rhrissorrakrai (IBM Research, Yorktown Heights), Filippo Utro (IBM Research, Yorktown Heights, United States), Laxmi Parida (IBM Research, Yorktown Heights)

106 - Understanding the effects of data encoding on quantum-classical convolutional neural networks
Maureen Monnet (Fraunhofer Institute for Cognitive Systems IKS, Munich, Germany), Theodora-Augustina Dragan (Fraunhofer Institute for Cognitive Systems IKS, Munich, Germany), Balthasar Schachtner (LMU University Hospital, Munich, Germany), Jeanette Miriam Lorenz (Fraunhofer Institute for Cognitive Systems IKS, Munich, Germany)

PHO-IOPT: Integrated Quantum Optics

Thursday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

P11 - Deterministic entangled photon sources for quantum networks
Michael Reimer (University of Waterloo)

P12 - Perfect pulsed inline twin-beam squeezers
Martin Houde (Xanadu)

P13 - Photonically interconnected silicon colour centres
Nicholas Lee-Hone (Photonic Inc)

Quantum Photonics Track (QPHO) Best Paper – 1st Place – Awarded Friday AM Keynote
690 - Toward a room-temperature fully-integrated photonic quantum simulator
Matteo Sanna (University of Trento), Alessio Baldazzi (University of Trento), Nicolò Broseghini (University of Trento), Gioele Piccoli (Fondazione Bruno Kessler), Martino Bernard (Fondazione Bruno Kessler), Fabio Acerbi (Fondazione Bruno Kessler), Georg Pucker (Fondazione Bruno Kessler), Stefano Azzini (University of Trento), Mher Ghulinyan (Fondazione Bruno Kessler), Lorenzo Pavesi (U Trento)

444 - Development of a fabrication-to-benchtop process for SiN-based quantum devices
Connor Kupchak (Carleton University), Abubaker Tareki (Carleton University), Tara Moradi (Carleton University), Patrick Laferriere (Carleton University), Niall Tait (Carleton University), Khaled Mnaymneh (National Research Council of Canada)

QML-OPT2: Quantum Optimization II

Friday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

546 - Innovative Quantum K-Means Clustering Using a Multi-Distance Measurement Circuit
Razieh Abdolahi (Concordia University), M. Reza Soleymani (Concordia University), Walaa Hamouda (Concordia University)

222 - Discrete Randomized Smoothing Meets Quantum Computing
Tom Wollschläger (Technical University of Munich), Aman Saxena (Technical University of Munich), Nicola Franco (Fraunhofer Institute for Cognitive Systems IKS), Jeanette Miriam Lorenz (Fraunhofer Institute for Cognitive Systems IKS), Stephan Günnemann (Technical University of Munich)

323 - Benchmarking Optimizers for Qumode State Preparation with Variational Quantum Algorithms
Shuwen Kan (Fordham University), Miguel Palma (Fordham University), Zefan Du (Fordham University), Samuel A Stein (Pacific Northwest National Laboratory), Chenxu Liu (Pacific Northwest National Laboratory), Juntao Chen (Fordham University), Ang Li (Pacific Northwest National Laboratory), Ying Mao (Fordham University)

APP-PSCI: Applications for Physical Sciences

Friday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

Quantum Applications Track (QAPP) Best Paper – 3rd Place – Awarded Tuesday AM Keynote
453 - Quantum Functional Expansion to Solve Stochastic Differential Equations
Jinhwan Sul (Georgia Institute of Technology), Jungin Kim (Georgia Institute of Technology), Yan Wang (Georgia Institute of Technology)

614 - Towards Quantum Simulations of Lithium Diffusion in Solid State Electrolytes for Battery Applications
Dario Rocca (QC Ware Corporation), Matthias Loipersberger (QC Ware Corporation), Jerome F. Gonthier (QC Ware Corporation), Robert M. Parrish (QC Ware Corporation), Jisook Hong (POSCO Holdings), Byeol Kang (POSCO Holdings), Chanshin Park (POSCO Holdings), Hong Woo Lee (POSCO Holdings)

616 - Towards a Quantum Algorithm for the Incompressible Nonlinear Navier--Stokes Equations
Muralikrishnan Gopalakrishnan Meena (Oak Ridge National Laboratory), Yu Zhang (Los Alamos National Laboratory), Weiwen Jiang (George Mason University), Youzuo Lin (University of North Carolina at Chapel Hill), Stefanie Guenther (Lawrence Livermore National Laboratory), Xinfeng Gao (University of Virginia)

APP-QAOA: Application of QAOA

Friday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

Quantum Applications Track (QAPP) Best Paper – 1st Place – Awarded Tuesday AM Keynote

458 - MLQAOA: Graph Learning Accelerated Hybrid Quantum-Classical Multilevel QAOA
Bao Bach (University of Delaware), Jose Falla (University of Delaware), Ilya Safro (University of Delaware)

209 - A Quantum Approximate Optimization Algorithm-based Decoder Architecture for NextG Wireless Channel Codes
Srikar Kasi (Princeton University), James Sud (University of Chicago), Kyle Jamieson (Princeton University), Gokul Subramanian Ravi (University of Michigan)

364 - Electric Power Demand Optimization by Fermionic QAOA with Self-Consistent Local Field Modulation
Yoshioka Takuya (Strategic Technology Center, TIS Inc.), Keita Sasada (Strategic Technology Center, TIS Inc.), Yuichiro Nakano (Graduate School of Engineering Science, Osaka University), Keisuke Fujii (Graduate School of Engineering Science, Osaka University)

APP-APPS: Quantum Applications

Friday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

227 - Quantum Resources for Pure Thermal Shadows
Arnav Sharma (Lincoln Laboratory, Massachusetts Institute of Technology), Kevin Obenland (Lincoln Laboratory, Massachusetts Institute of Technology)

439 - Quanta-Bind: A quantum computing pipeline for modeling strongly correlated metal-protein interactions
Tarini S. Hardikar (qBraid), Kenneth Heitritter (qBraid), James Brown (qBraid), Ruhee D'Cunha (University of Chicago), Abhishek Mitra (University of Chicago), Shaun Weatherly (Massachusetts Institute of Technology), Yuan Liu (North Carolina State University), Matthew Otten (University of Wisconsin-Madison), Troy Van Voorhis (Massachusetts Institute of Technology), Laura Gagliardi (University of Chicago), Kanav Setia (qBraid)

575 - Skipper: Improving the Reach and Fidelity of Quantum Annealers by Skipping Long Chains
Ramin Ayanzadeh (Georgia Tech), Moinuddin Qureshi (Georgia Tech)

TEM-CTRL: Quantum Controls

Friday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

Quantum Technologies and Systems Engineering (QTEM) Best Paper – 1st Place – Awarded Thursday AM Keynote

203 - Engineering quantum states with neutral atoms
Jan Balewski (NERSC, Lawrence Berkeley National Laboratory), Milan Kornjača (QuEra Computing Inc), Katie Klymko (Lawrence Berkeley National Laboratory), Siva Darbha (Lawrence Berkeley National Laboratory), Mark R. Hirsbrunner (Dept. of Physics and Institute for Condensed Matter Theory,

University of Illinois at Urbana-Champaign), Pedro L.S. Lopes (QuEra Computing Inc), Fangli Liu (QuEra Computing Inc), Daan Camps (Berkeley Lab)

170 - Investigating the Mitigation of Impact of Nondeterminism on Processes with Control Implemented on Quantum Devices
Shilpa Narasimhan (Wayne State University), Keshav Kasturi Rangan (Wayne State University), Helen Durand (Wayne State University)

302 - Counting Bases from Number of Qubits: Inferring VRP from Quantum Circuits
Jessie Chen (Yale University), Jakub Szefer (Yale University)

PHO-QSAS: Photonic Quantum Sources and Sensing

Friday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

P21 - Single-Photon Imaging for Multi-Viewpoint Visualization of Propagating Light
David Lindell (University of Toronto)

P22 - Building the future of geomagnetic mapping: precision and accuracy with diamond vector magnetometers
Lilian Childress (McGill University)

P23 - Towards room-temperature quantum optical magnetometry with alkali-free noble gases
Gil Porat (University of Alberta)

Quantum Photonics Track (QPHO) Best Paper – 2nd Place – Awarded Friday AM Keynote
578 - Simple rules for two-photon state preparation with linear optics
Grégoire de Gliniasty (Quandela, LIP6), Paul Bagourd (Quandela, EPFL), Sebastien Draux (Quandela), Boris Bourdoncle (Quandela)

681 - Quantum Resource States from Post-selected Classical Mixed States
S. Andrew Lanham (Applied Research Laboratories, The University of Texas at Austin), Brian R. La Cour (Applied Research Laboratories, The University of Texas at Austin

ALG-OCI1: Optimization of quantum circuits - I

Friday 10:00 - 11:30 — Eastern Time (PDT) — UTC-4

271 - A Quantum approach for Implementing Fixed-Point Arithmetic in Solving Ordinary Differential Equations
José Cruz Serrallés (Center for Biomedical Imaging, Department of Radiology, New York University Grossman School of Medicine), Oluwadara Ogunkoya (Superconducting Quantum Materials and System Center (SQMS), Fermilab), Doga Kurkcuoglu (Superconducting Quantum Materials and System Center (SQMS), Fermilab), Nicholas Bornman (Superconducting Quantum Materials and System Center (SQMS), Fermilab), Norm Tubman (NASA Ames Research Center), Silvia Zorzetti (Superconducting Quantum Materials and System Center (SQMS), Fermilab), Riccardo Lattanzi (Center for Biomedical Imaging, Department of Radiology, New York University Grossman School of Medicine)

353 - Approximate Quantum Array Multiplier
Aden Crimmins (Rochester Institute of Technology), Sonia Lopez Alarcon (Rochester Institute of Technology)

397 - Synthesis of Approximate Parametric Circuits for Variational Quantum Algorithms
Blake Burgstahler (North Carolina State University), Ellis Wilson (North Carolina State University), Scott Pakin (Los Alamos National Laboratory), Frank Mueller (North Carolina State University)

TEM-HW1: Quantum Hardware - I

Friday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

161 - Tantalum thin films sputtered on silicon and on different seed layers: material characterization and coplanar waveguide resonator performance
Moritz Singer (Technical University of Munich), Benedikt Schoof (Technical University of Munich), Harsh Gupta (Technical University of Munich), Daniela Zahn (Fraunhofer Institute for Electronic Microsystems and Solid State Technologies EMFT), Johannes Weber (Fraunhofer Institute for Electronic Microsystems and Solid State Technologies EMFT), Marc Tornow (Technical University of Munich, Fraunhofer Institute for Electronic Microsystems and Solid State Technologies EMFT)

Quantum Technologies and Systems Engineering (QTEM) Best Paper – 3rd Place – Awarded Thursday AM Keynote
206 - Development of TiN/AlN-based superconducting qubit components
Benedikt Schoof (Technical University Munich), Moritz Singer (Technical University Munich), Simon Lang (Fraunhofer-Institut für Elektronische Mikrosysteme und Festkörper-Technologien), Harsh Gupta (Technical University Munich), Daniela Zahn (Fraunhofer-Institut für Elektronische Mikrosysteme und Festkörper-Technologien), Johannes Weber (Fraunhofer-Institut für Elektronische Mikrosysteme und Festkörper-Technologien), Marc Tornow (Technical University Munich, Fraunhofer-Institut für Elektronische Mikrosysteme und Festkörper-Technologien)

407 - Study of Phase Method in Tantalum Superconducting Qubit T2* Measurements
Hiu Yung Wong (San Jose State University), Kristin M. Beck (Lawrence Livermore National Laboratory), Vito Mariano Iaia (Lawrence Livermore National Laboratory), Anika Zaman (San Jose State University), Yaniv Jacob Rosen (Lawrence Livermore National Laboratory)

PHO-PCOM: Photonic Quantum Processing and Communication

Friday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

P31 - Quantum applications of ultrafast time-bin encoding
Frédéric Bouchard (National Research Council of Canada)

P32 - Manipulating photons via their momentum to create general optical transformations
Jeff Lundeen (University of Ottawa)

P33 - An optically defined photonic crystal defect
Jack Sankey (McGill University)

621 - Experiences on Developing an On-Demand Entanglement Service Coexisting with Classical Traffic over a Q-LAN Testbed
Md Shariful Islam (Argonne National Lab), Anirudh Ramesh (Northwestern University), Joaquin Chung (Argonne National Laboratory), Prem Kumar (Northwestern University), Rajkumar Kettimuthu (Argonne National Lab and The University of Chicago)

ALG-OCI2: Optimization of Quantum Circuits - II

Friday 13:00 - 14:30 — Eastern Time (PDT) — UTC-4

543 - Fejer Methods for Complex QSP-processing
S. E. Skelton (University of Leibniz Hannover)

472 - Efficient Circuit Wire Cutting Based on Commuting Groups
Xinpeng Li (Case Western Reserve University), Vinooth Rao Kulkarni (Case Western Reserve University), Daniel T Chen (Brown University), Qiang Guan (Kent State University), Weiwen Jiang (George Mason University), Ning Xie (Florida International University), Shuai Xu (Case Western Reserve University), Vipin Chaudhary (Case Western Reserve University)

254 - Dynamic Runtime Assertions in Quantum Ternary Systems
Seyyedehsan Faghih (North Carolina State University), Huiyang Zhou (North Carolina State University)

SYS-AOPT: Application Optimization

Friday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

623 - Variational Quantum Algorithm Landscape Reconstruction by Low-Rank Tensor Completion
Tianyi Hao (University of Wisconsin-Madison), Zichang He (JPMorgan Chase), Ruslan Shaydulin (JPMorgan Chase), Marco Pistoia (JPMorgan Chase), Swamit Tannu (University of Wisconsin-Madison)

195 - Redefining Lexicographical Ordering: Optimizing Pauli String Decompositions for Quantum Compiling
David Winderl (Technical University of Munich), Qunsheng Huang (Technical University of Munich), Arianne Meijer van de Griend (University of Helsinki), Richie Yeung (University of Oxford)

317 - Reducing Mid-Circuit Measurements via Probabilistic Circuits
Yanbin Chen (Technical University of Munich), Innocenzo Fulginiti (Technical University of Munich), Christian Mendl (Technical University of Munich)

TEM-HW2: Quantum Hardware - II

Friday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

130 - Noise Correlation in Silicon Spin Qubits: A Computational Study
Guoting Cheng (University of Florida), Jing Guo (University of Florida)

193 - Gauge Fixed Nonlinear Regression for Two-qubit Processors
Austin Thomas (Booz Allen Hamilton), Colton Mikes (Booz Allen Hamilton), Shawn M. Wilder (Booz Allen Hamilton), Melinda Andrews (Booz Allen Hamilton), Thomas Halverson (BAH), Heath Joshua (BAH)

587 - A High-frequency DC SQUID Magnetic Sensor Design
Shihao Wang (Dalhousie University), Odette Bakam Nguenouho (Dalhousie University), Jean-Francois Bousquet (Dalhousie University)

PHO-APPS: Quantum Photonics and Applications

Friday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

P41 - In-fiber hyper- and hypo-entangled photon sources: Generation and Applications
Li Qian Bouchard (University of Toronto)

P42 - Manipulating photons via their momentum to create general optical transformations
William A. Coish (McGill University)

723 - On the learning abilities of photonic continuous-variable Born machines
Zoltán Kolarovszki (HUN-REN Wigner Research Centre for Physics), Dániel T. R. Nagy (HUN-REN Wigner Research Centre for Physics), Zoltán Zimborás (HUN-REN Wigner Research Centre for Physics)

Quantum Photonics Track (QPHO) Best Paper – 3rd Place – Awarded Friday AM Keynote
695 - From Master equation to SPICE: a platform to model cryo-CMOS control for qubits
Vladimir Pešić (EPFL), Andrew Wright (EPFL), Edoardo Charbon (EPFL)

657 - A Quantum Cooperative Game Approach to Resilience-Oriented Microgrids Operation
Khezr Sanjani, Peng Zhang, Nima Nikmehr, Yacov Shamash (Stony Brook University)

ALG-COPT: Quantum Combinatorial Optimization

Friday 15:00 - 16:30 — Eastern Time (PDT) — UTC-4

220 - Non-variational Quantum Combinatorial Optimisation
Tavis Bennett (The University of Western Australia), Lyle Noakes (The University of Western Australia), Jingbo Wang (The University of Western Australia)

625 - Gaussian Boson Sampling to Accelerate NP-Complete Vertex-Minor Graph Classification
Mushkan Sureka (University of Arizona), Saikat Guha (University of Arizona)

252 - Tensor Decompositions and Adiabatic Quantum Computing for Discovering Practical Matrix Multiplication Algorithms
Valter Uotila (University of Helsinki)