V80 — QCE20 — IEEE Quantum Week Advance Program — Thursday, October 15, 2020

Mountain Time MDT (UTC-6)	Session Name	Session Type	Session Room	Monday Sessions
08:00–19:45	Thu-ONB-10	Onboard	Discover1	QCE20 Welcome, Onboarding & Quote of the Day
08:00–19:45	Thu-OVE-10	Onboard	Discover2	QCE20 Daily Sessions Overview & Announcements
08:30–10:00	Thu-KEY-11	Keynote	Eagle	Announcements, Awards Keynote: Alán Aspuru-Guzik, University of Toronto, Canada Quantum Computing for Chemistry and Materials Simulation in Near-term Devices Session Chair: Greg Byrd, NC State University
10:00–10:45	Thu-KEY-12	Network	Eagle	Hang out with Keynote Speaker Alán Aspuru-Guzik
				https://www.cmc.ca/
10:00–10:45	Thu-ECMC-12	Exhibit	CMC.ca	CMC — Scheduled Exhibits
10:00–10:45	Thu-ECTR-12	Exhibit	Q-Ctrl	Q-Ctrl — Scheduled Exhibits
10:00–10:45	Thu-EBLU-12	Exhibit	Bluefors	Bluefors — Scheduled Exhibits
10:00–10:45	Thu-EZUR-14	Exhibit	Zurich-Inst	Zurich Instruments — Scheduled Exhibits
10:00–10:45	Thu-POS-12	Posters	Bison	Poster Session on Quantum Optimization 1 — Session Chair: Urike Stege, University of Victoria Pos1: Sara Ayman Metwalli, Francois Le Gall and Rodney Van Meter: A Practical Quantum Approach to the k-clique Problem Pos2: Rebekah Herrman, Phillip Lotshaw, James Ostrowski and Travis Humble: Graph Coloring, Circuit Depth, & Optimality in QAOA
10:00–10:45	Thu-BOF-12	BoF	Hawk	Open BoF Session
10:00–10:45	Thu-NW1-12	Network	WiseOwl1	Networking Session — Meet Quantum Newcomers
10:00–10:45	Thu-NW2-12	Network	WiseOwl2	Networking Session — Meet Quantum Enthusiasts
10:00–10:45	Thu-COL-12	Break	Rockies	Relax in Beautiful Colorado
10:45–11:15	Thu-QC4-13	Paper	Bighorn1	Paper Session on Quantum Computing QC4 — Session Chair: Megan Lilly, University of Tennessee QC4: Toshinari Itoko and Takashi Imamichi, IBM Research Tokyo. Scheduling of operations in quantum compiler
11:15–11:45	Thu-QC4-13	Paper	Bighorn1	QC4: Ellis Wilson, Sudhakar Singh and Frank Mueller, North Carolina State University. Just-in-time quantum circuit transpilation reduces noise
11:45–12:15	Thu-QC4-13	Paper	Bighorn1	QC4: Lukas Burgholzer, Johannes Kepler University Linz; Rudy Raymond, IBM Research Tokyo and Robert Wille, Johannes Kepler University Linz. Verifying results of the IBM Qiskit quantum circuit compilation flow
10:45–11:15	Thu-QEDU-13	Paper	Bighorn2	Paper Session on Quantum Education — Session Chair: Scott Koziol, Baylor University QEDU: Parham Pashaei, Haris Amiri, Rafael Haenel, Pedro Lopes and Lukas Chrostowski, The University of British Columbia. Education resources for promoting talent in quantum computing
11:15–11:45	Thu-QEDU-13	Paper	Bighorn2	QEDU: Prashanti Angara, Ulrike Stege and Andrew MacLean, University of Victoria. Quantum computing for high school students: An experience report
11:45–12:15	Thu-QEDU-13	Paper	Bighorn2	QEDU: Thomas Plunkett, Terrill Frantz, Hamida Khatri, Praveen Ragendran and Sunny Midha, Harrisburg University of Science and Technology. A Survey of Quantum Computing Workforce Education
10:45–12:15	Thu-TUT-13	Tutorial	Bear1	Part 1: Assessing the Quality of Qubits and Quantum Computers—Córcoles, Scholten: IBM Quantum Session Chair: Elie Track, nVizix LLC
10:45–12:15	Thu-TUT-13	Tutorial	Bear2	Part 1: Quantum Algorithms for Chemical Simulation—Barkoutos, Jones, Ollitrault, Earnest: IBM Quantum Session Chair: Hausi Müller, University of Victoria

V80 — QCE20 — IEEE Quantum Week Advance Program — Thursday, October 15, 2020

Mountain Time MDT (UTC-6)	Session Name	Session Type	Session Room	Monday Sessions
10:45–12:15	Thu-TUT-13	Tutorial	Bear3	Part 1: Combinatorial Optimization on Quantum Computers—Shaydulin, Safro: Clemson University; Alexeev: Argonne Session Chair: Ulrike Stege, University of Victoria
10:45–12:15	Thu-WKS-13	Workshop	Elk1	Part 1: Photonic Technologies for Quantum Information Science—Chrostowski, UBC; McKinstrie, LGS; Srinivasan, NIST Amr Helmy, University of Toronto
10:45–12:15	Thu-WKS-13	Workshop	Elk2	Part 1: Cryogenic Electronics for Quantum Systems—Fahim: Fermilab, IL Charbon: EPFL, Switzerland Session Chair: Erik DeBenedictis, Zettaflops, LLC
10:45–12:15	Thu-WKS-13	Workshop	Elk3	Part 1: Practical Quantum Sensing from a Photonic and Atomic Physics Perspective—Pooser, Humble: ORNL Session Chair: Travis Humble, Oak Ridge National Laboratory (ORNL)
10:45–12:15	Thu-WKS-13	Workshop	Elk4	Part 1: IEEE P7130 Quantum Technology Nomenclature Working Group Meeting—IEEE P7130 Working Group Session Chair: Bruce Kraemer, IEEE Quantum Initiative
12:15–13:00	Thu-EZAP-14	Exhibit	Zapata	Zapata — Scheduled Exhibits
12:15–13:00	Thu-EINT-14	Exhibit	Intel-Labs	Intel Labs — Scheduled Exhibits
12:15–13:00	Thu-EPAS-14	Exhibit	Pasqal	Pasqal — Scheduled Exhibits
12:15–13:00	Thu-ETQC-14	Exhibit	ACM-TQC	ACM TQC — Scheduled Exhibits
12:15–13:00	Thu-POS-14	Posters	Bison	Poster Session on Quantum Optimization 2 — Session Chair: Andreas Bergen, engageLively Pos1: Matias Jonsson, Jason Larkin and Gian Guerreschi: Assessment of Alternative Objective Functions for Quantum Variational Combinatorial Optimization Pos2: Alex Fischer and Don Towsley: Distributing Graph States Across Quantum Networks
12:15–13:00	Thu-BOF-14	BoF	Hawk	Open BoF Session
12:15–13:00	Thu-NW1-14	Network	WiseOwl1	Networking Session — Meet Quantum Newcomers
12:15–13:00	Thu-NW2-14	Network	WiseOwl2	Networking Session — Meet Quantum Enthusiasts
12:15–13:00	Thu-COL-14	Break	Rockies	Relax in Beautiful Colorado — Hike the Rockies
13:00–13:30	Thu-QC5-15	Paper	Bighorn1	Paper Session on Quantum Computing QC5 — Session Chair: Alex McCaskey, Oak Ridge National Laboratory (ORNL) QC5: Mathias Soeken and Martin Roetteler, Microsoft Quantum. Quantum circuits for functionally controlled NOT gates
13:30–14:00	Thu-QC5-15	Paper	Bighorn1	QC5: Sima Esfandiarpour Borujeni, Wichita State University; Nam Nguyen, Boeing Research & Technology; Saideep Nannapaneni, Elizabeth Behrman and James Steck, Wichita State University. Experimental evaluation of quantum Bayesian networks on IBM QX hardware
14:00–14:30	Thu-QC5-15	Paper	Bighorn1	QC5: Pranav Gokhale, University of Chicago; Olivia Angiuli, University of California, Berkeley; Yongshan Ding, Kaiwen Gui, University of Chicago; Teague Tomesh, Princeton University & Argonne National Laboratory; Martin Suchara, University of Chicago & Argonne National Laboratory; Margaret Martonosi, Princeton University and Frederic T. Chong, University of Chicago. Optimization of simultaneous measurement for variational quantum eigensolver applications
13:00–14:30	Thu-PAN-15	Panel	Moose	Panel on Training the Next Generation of Quantum Scientists, Engineers, and Software Developers Organizers: Abraham Asfaw, Rajeev Malik, Travis Scholten: IBM Quantum; Moderator: Irene Qualters, LANL Panelists: Sophia Economou, Virginia Tech; Matt Langione, Boston Consulting Group; Peter Johnson, Zapata Computing; AbrahamAsfaw, IBM Quantum; Steve Sanders, Honeywell
13:00–14:30	Thu-TUT-15	Tutorial	Bear1	Part 2: Assessing the Quality of Qubits and Quantum Computers—Córcoles, Scholten: IBM Quantum
13:00–14:30	Thu-TUT-15	Tutorial	Bear2	Part 2: Quantum Algorithms for Chemical Simulation—Barkoutos, Jones, Ollitrault, Earnest: IBM Quantum
13:00–14:30	Thu-TUT-15	Tutorial	Bear3	Part 2: Combinatorial Optimization on Quantum Computers—Shaydulin, Safro: Clemson University; Alexeev: Argonne

V80 — QCE20 — IEEE Quantum Week Advance Program — Thursday, October 15, 2020

Mountain Time MDT (UTC-6)	Session Name	Session Type	Session Room	Monday Sessions
13:00–14:30	Thu-WKS-15	Workshop	Elk1	Part 2: Photonic Technologies for Quantum Information Science—Chrostowski, UBC; McKinstrie, LGS; Srinivasan, NIST
13:00–14:30	Thu-WKS-15	Workshop	Elk2	Part 2: Cryogenic Electronics for Quantum Systems—Fahim: Fermilab, IL Charbon: EPFL, Switzerland
13:00–14:30	Thu-WKS-15	Workshop	Elk3	Part 2: Practical Quantum Sensing from a Photonic and Atomic Physics Perspective—Pooser, Humble: ORNL
13:00–14:30	Thu-WKS-15	Workshop	Elk4	Part 2: IEEE P7130 Quantum Technology Nomenclature Working Group Meeting—IEEE P7130 Working Group
14:30–15:15	Thu-EQUA-16	Exhibits	Quantropi	Quantropi — Scheduled Exhibits
14:30–15:15	Thu-ECOQ-16	Exhibits	ColdQuanta	ColdQuanta — Scheduled Exhibits
14:30–15:15	Thu-ETQE-16	Exhibits	IEEE-TQE	IEEE TQE — Scheduled Exhibits
14:30–15:15	Thu-POS-16	Posters	Bison	Open Posters
14:30–15:15	Thu-BOF-16	BoF	Hawk	BoF: Quantum Education
14:30–15:15	Thu-NW1-16	Network	WiseOwl1	Networking Session — Meet Quantum Experts
14:30–15:15	Thu-NW2-16	Network	WiseOwl2	Networking Session — Meet Quantum Enthusiasts
14:30–15:15	Thu-COL-16	Break	Rockies	Relax in Beautiful Colorado — Ski the Rockies
15:15–15:45	Thu-QC6-17	Paper	Bighorn1	Paper Session on Quantum Computing QC6 — Session Chair: Pranav Gokhale, University of Chicago QC6: Thien Nguyen, Anthony Santana and Alexander McCaskey, Oak Ridge National Laboratory. Extending XACC for quantum optimal control
15:45–16:15	Thu-QC6-17	Paper	Bighorn1	QC6: C. A. Morrison, A. J. Landahl, D. S. Lobser, K. M. Rudinger, A. E. Russo, J. W. Van Der Wall and Peter Maunz, Sandia National Laboratories and University of New Mexico. Just another quantum assembly language (Jaqal)
15:15–16:45	Thu-PAN-17	Panel	Moose	Panel on Bringing Quantum Programming into Quantum Computing Education Organizer: Mark Tsang, Microsoft; Moderator: Mariia Mykhailova, Microsoft; Panelists: Mathias Soeken, EPFL/MSFT, Jens Palsberg, UCLA, Brian La Cour, UT-Austin, Rafael Sotelo, University Montevideo, George Siopsis, University of Tennessee, Christopher Ferrie, University Technology Sydney (UTS)
15:15–16:45	Thu-TUT-17	Tutorial	Bear1	Part 3: Assessing the Quality of Qubits and Quantum Computers—Córcoles, Scholten: IBM Quantum
15:15–16:45	Thu-TUT-17	Tutorial	Bear2	Part 3: Quantum Algorithms for Chemical Simulation—Barkoutos, Jones, Ollitrault, Earnest: IBM Quantum
15:15–16:45	Thu-TUT-17	Tutorial	Bear3	Part 3: Combinatorial Optimization on Quantum Computers—Shaydulin, Safro: Clemson University; Alexeev: Argonne
15:15–16:45	Thu-WKS-17	Workshop	Elk1	Part 3: Photonic Technologies for Quantum Information Science—Chrostowski, UBC; McKinstrie, LGS; Srinivasan, NIST
15:15–16:45	Thu-WKS-17	Workshop	Elk2	Part 3: Cryogenic Electronics for Quantum Systems—Fahim: Fermilab, IL Charbon: EPFL, Switzerland
15:15–16:45	Thu-WKS-17	Workshop	Elk3	Part 3: Practical Quantum Sensing from a Photonic and Atomic Physics Perspective—Pooser, Humble: ORNL
15:15–16:45	Thu-WKS-17	Workshop	Elk4	Part 3: IEEE P7130 Quantum Technology Nomenclature Working Group Meeting—IEEE P7130 Working Group
16:45–17:30	Thu-EMIC-18	Exhibits	Microsoft	Microsoft Quantum — Scheduled Exhibits
16:45–17:30	Thu-EALI-18	Exhibits	Aliro	Aliro Quantum — Scheduled Exhibits
16:45–17:30	Thu-POS-18	Posters	Bison	Open Posters
16:45–17:30	Thu-BOF-18	BoF	Hawk	Open BoF Session
16:45–17:30	Thu-NW1-18	Network	WiseOwl1	Networking Session — Meet Quantum Experts
16:45–17:30	Thu-NW2-18	Network	WiseOwl2	Networking Session — Meet Quantum Enthusiasts
16:45–17:30	Thu-COL-18	Break	Rockies	Relax in Beautiful Colorado — Enjoy Nature

V80 — QCE20 — IEEE Quantum Week Advance Program — Thursday, October 15, 2020

Mountain Time MDT (UTC-6)	Session Name	Session Type	Session Room	Monday Sessions
17:30–19:00	Thu-KEY-19	Keynote	Eagle	Announcements, Awards Keynote: Anne Matsuura, Intel Labs, USA Quantum Computing: A Scalable, Systems Approach Session Chair: Candace Culhane, Los Alamos National Laboratory (LANL)
19:00–19:45	Thu-KEY-20	Network	Eagle	Hang out with Keynote Speaker Anne Matsuura
19:00–19:45	Thu-EXOP-20	Exhibits	Patrons	Open Exhibits
19:00–19:45	Thu-POS-20	Posters	Bison	Open Posters
19:00–19:45	Thu-BOFO-20	BoF	Hawk	Open BoF Session
19:00–19:45	Thu-NW1-20	Network	WiseOwl1	Networking Session — Meet Quantum Experts
19:00–19:45	Thu-NW2-20	Network	WiseOwl2	Networking Session — Meet Quantum Enthusiasts
19:00–19:45	Thu-COL-20	Break	Rockies	Relax in Beautiful Colorado — Enjoy Nature