2025 APQC Schedule

Sunday, September 21st

Welcome Reception

6:00 - 8:00pm	Registration/Welcome Reception (Holiday Inn)

Monday, September 22nd

Scalable Performance Estimation

7:00 - 8:45am	Breakfast and Registration
8:45 - 9:00am	Welcome and Workshop Overview
9:00 - 10:00am	**Senrui Chen, "**Disambiguating Pauli noise in quantum computers" **(invited)**
10:00 – 10:30am	**Alireza Seif**, "On (non-)Markovianity of Paul channels"
10:30 - 11:15am	Coffee & collaboration break
11:15 - 11:45am	**Jan Nöller**, "Sound and SPAM-agnostic certification of quantum computation"
11:45am-12:15pm	**William Simon**, "Quantum Advantage in Resource Estimation"
12:15am - 1:45pm	Lunch
1:45 - 2:15pm	**Gian Giacomo Guerreschi**, "QCVV Challenges for Exchange-Only Qubits in Silicon Quantum Dots"
2:15 - 2:45pm	**Aniket Rath**, "Benchmarking IQM's effective all-to-all quantum processor"
2:45 - 3:45pm	Coffee & collaboration break
3:45 - 4:45pm	**Alejandro Montañez-Barrera**, "Evaluating the performance of quantum processing units at large width and depth" **(invited)**
4:45 - 5:00pm	Poster session setup / free time
5:00 - 7:00pm	Poster session
7:00pm -	Dinner (on your own)

Tuesday, September 23rd

Logical qubit QCVV

7:00 - 8:30am	Breakfast
8:30 - 9:30am	**Nathan Lacroix**, "Scaling and logic in the color code on a superconducting quantum processor" **(invited)**
9:30 - 10:00am	Coffee break
10:00 - 10:45am	**Jordan Hines**, "Turning Characterization Results into Quantum Error Correction Predictions via Detector Error Models"
10:45 - 11:15am	**Alex Kwiatkowski**, "Constructing an approximate Markovian model of consecutive QEC cycles of a stabilizer code"
11:15 - 11:45am	Coffee break
11:45am - 12:15pm	**Sohan Ghosh** and **Adeeb Kabir**, "Logical Randomized Benchmarking a Qutrit Folded Code"
12:15 - 1:30pm	Lunch (including *Lunch with an Expert*)
1:30 - 2:30pm	**David Hayes**, "Benchmarking QCCD computers: from the physical to the logical layer" **(invited)**
2:30 - 3:00pm	Coffee break
3:00 - 3:30pm	**Wim van Dam**, "Physical and Logical Benchmarking with Random Clifford Circuits"
3:30 - 4:00pm	**Paul Kassebaum**, "Benchmarking Quantum Computers based on Cat-Qubits"
4:00 - 4:30pm	**Matthew Girling**, "Characterization of syndrome-dependent logical noise in detector regions"
4:30 - 4:45pm	Coffee break
4:45 – 5:45pm	**Bence Hetenyi,** "Characterization of logical Bell states on superconducting qubits" **(invited)**
5:45pm -	Dinner (on your own)

Wednesday, September 24th

Characterization and Control

7:00 - 8:30am	Grab & Go Breakfast (burritos & coffee)
8:30 - 2:45pm	**Hiking/Collaboration Free Day**
2:45 - 3:15pm	Coffee break
3:15 - 3:45pm	**Jadwiga Wilkens**, “Robust characterization of average gate set noise: Filtered randomized benchmarking and cross-talk tomography”
3:45 - 4:15pm	**Bharath Hebbe Madhusudhana**, “Error Detection in Quantum Sensing and Quantum Sensing Techniques for Error Detection”
4:15 - 4:45pm	Coffee Break
4:45 - 5:15pm	**Alicia Magann**, “Towards real-time quantum device calibration and drift mitigation”
5:15 - 5:45pm	**Luke Burkhart**, “Efficient and flexible execution of QCVV protocols in constrained control system environments
5:45 - 6:30pm	Free time
6:30 – 9:00pm	Banquet Dinner
7:30 – 8:45pm	Panel Debate (during dinner)

Thursday, September 25th

QCVV on Gates and Measurements

7:00 - 8:30am	Breakfast
9:00 - 10:00am	**Piper Wysocki**, "A hierarchical approach to understanding logical qubit performance" **(invited)**
10:00 - 10:45am	Coffee & collaboration break
10:45 - 11:15am	**Ashe Miller**, "Scalable gate set tomography with a linear error model"
11:15– 11:45am	**John Paul Marceaux**, "Subspace benchmarking with applications to entangling gates in ion traps"
11:45 - 1:15pm	Lunch (perspective talk by **Alex Cronin**, NSF)
1:15 - 2:15pm	**Robin Harper,** "Closing the Loop: Using Noise Characterization to Guide QEC Code Design" **(invited)**
2:15 - 2:45pm	Coffee break
2:45 - 3:15pm	**MengKe Feng**, "Tomographic Study of Mid-Circuit Measurements in Silicon Spin Qubits"
3:15 - 3:45pm	**Alan Tran**, "Gate Set Tomography for Spin Qubits Encoded in a Decoherence-Free Subsystem"
3:45 - 4:00pm	Parting words
4:00pm	Adjourn