2019 Quantum Computing Summer School Lecture Schedule

The ISTI Quantum Computing Summer School lectures are open to all badge holders. If space becomes limited, seating preference will be given to (i) the students participating in the summer school, (ii) their mentors, and then (iii) other badge holders.

Lectures are held in the Sig Hecker Room (03-32-134) unless otherwise noted.

**Week 1**

**Tuesday June 4th:**
Patrick Coles, LANL, 3-30pm-4:30pm
“Mathematical Concepts for Quantum Computing”

**Wednesday, June 5th:**
John Martinis, Google, 10:00am-11:30am
“Experimental Quantum Computing- Part 1”

John Martinis, Google, 3:00pm—4:30pm
“Experimental Quantum Computing-Part 2”

**Thursday, June 6th:**
John Martinis, Google, 3:00pm—4:30pm
“Experimental Quantum Computing-Part 3”

**Friday, June 7th:**
John Martinis, Google, 10:00am-11:30am
“Experimental Quantum Computing- Part 4”

Seth Merkel, IBM, 1:00pm-2:30pm
“Benchmarking noise on Quantum Computers”

Will Zeng, Stanford U, 3:00pm-4:00pm
“Quantum Approximate Optimization Algorithm”
Week 2

Monday, June 10th:
Chris Monroe, U Maryland, 10:00am-11:00am
“Quantum Computing Hardware: Requirements and Comparisons”

Elizabeth Crosson, U New Mexico, 1:00pm-2:00pm
“Hamiltonian Complexity- Part 1”

Elizabeth Crosson, U New Mexico, 3:30pm-4:30pm
“Hamiltonian Complexity-Part 2”

Tuesday, June 11th:
Chris Monroe, U Maryland, 10:00am-11:00am
“Quantum Computing Operations and Apps with Trapped Ions”

Alejandro Perdomo-Ortiz, Zapata Computing, 1:00pm-2:00pm
“Quantum-Assisted Machine Learning-Part 1”

Travis Humble, ORNL, 3:30pm-4:30pm
“Quantum High-Performance Computing”

Wednesday, June 12th:
Alejandro Perdomo-Ortiz, Zapata Computing, 10:00am-11:00am
“Quantum-Assisted Machine Learning in Near-Term Quantum Devices-Part 2”

Christopher Granade, Microsoft Research, 1:00pm-2:00pm
“High-Level Programming of Quantum Computers-Part 1”

Christopher Granade, Microsoft Research, 3:00pm-4:00pm
CNLS Conference Room (03-1690-102)
“High-Level Programming of Quantum Computers-Part 2”

Thursday, June 13th:
Joel Gottlieb, D-Wave, 10:00am-11:00am
“D-Wave-Part 1”

Mauricio Reis, D-Wave, 12:30pm-1:30pm
“D-Wave-Part 2”

Friday, June 14th:
Lukasz Cincio, LANL, 10:00am-11:00am
“Machine Learning of Quantum Algorithms”
**Week 3**

**Monday, June 17th:**
Fernando Brandao, CalTech, 10:00am-11:00am
“Quantum Lanczos”

**Tuesday, June 18th:**
Jarrod McClean, Google, 2:00pm-3:00pm
“Quantum Chemistry on Quantum Computers”

**Wednesday, June 19th:**
Carleton Coffrin, LANL, 10:00am-11:00am
“Solving Optimization Problems on Quantum Computers”

**Thursday, June 20th:**
Rolando Somma, LANL, 10:00am-11:00am
“Quantum Simulation”

Margaret Martonosi, Princeton U, 3:30pm-4:30pm
“Quantum Compiling”

**Week 4**

**Tuesday, June 25th:**
Wojciech Zurek, LANL, 2:00pm-3:00pm
“Quantum Foundations and Quantum Computing”

**Thursday, June 27th:**
Scott Aaronson, UT Austin, 1:00pm-3:00pm
“NP-Complete Problems and Physics”