

The Quantum Science Center's Inaugural Quantum Summer School

All Times EDT

Join here: [Webinar Link](#)

MONDAY, MAY 17, 2021

Moderator: Xiaohui Xu, Purdue University

12:30 p.m. – 12:40 p.m.	Opening Remarks David Dean, Director, Quantum Science Center Alexandra Boltasseva, the Ron and Dotty Garvin Tonjes Professor of Electrical and Computer Engineering, Purdue University; Workforce Development Lead, Quantum Science Center
12:40 p.m. – 1:40 p.m.	“New Frontier of Quantum Science and Engineering” Mikhail Lukin, The George Vasmer Leverett Professor of Physics, Harvard University
1:40 p.m. – 2:40 p.m.	“Cooperative Ordered 2D Materials” Susanne Yelin, Professor of Physics, University of Connecticut; Professor of Physics in Residence, Harvard University
2:40 p.m. – 3:00 p.m.	Break
3:00 p.m. – 5:00 p.m.	“Engaged Science Communication” Workshop Sorin Adam Matei, Professor of Communication and Associate Dean of Research and Graduate Education in the College of Liberal Arts, Purdue University Neil R. Dilley, Research Scientist, Birck Nanotechnology Center, Purdue University Moderator: Alex Senichev, Purdue University

TUESDAY, MAY 18, 2021

Moderator: Kubra Yeter Aydeniz, Oak Ridge National Lab

12:30 p.m. – 1:30 p.m.	“Majorana Engineering: Challenges and Opportunities” Jason Alicea, Professor of Theoretical Physics, California Institute of Technology
1:30 p.m. – 2:30 p.m.	“Quantum Simulation with Quantum Computers” Rolando Somma, Technical Staff Member, Los Alamos National Laboratory; Adjunct Assistant Professor, University of New Mexico
2:30 p.m. – 3:30 p.m.	“Running on Quantum Hardware with Azure Quantum” Stefan Wernli, Senior Software Developer, Microsoft
3:30 p.m. – 4:00 p.m.	Break
4:00 p.m. – 6:00 p.m.	“IBM Quantum Programming Lab” Travis Scholten, Quantum Computing Applications Researcher, IBM Quantum Nick Bronn, Research Staff Member – Experimental Quantum Computing, IBM Quantum Moderator: Claire Marvinney, Oak Ridge National Lab

WEDNESDAY, MAY 19, 2021

Moderator: Eugene Dumitrescu, Oak Ridge National Lab

12:30 p.m. – 1:30 p.m.	“Identifying a Quantum Use Case and Building a Workforce for it” Shreyas Ramesh, Senior Manager for Quantum Computing – Artificial Intelligence, Accenture
1:30 p.m. – 2:30 p.m.	“Quantum Computing with Individual Atoms” Christopher Monroe, Founder and Chief Scientist, IonQ; Professor of Physics and of Electrical and Computer Engineering, Duke University
2:30 p.m. – 3:30 p.m.	“The Path to Frictionless Quantum Computing” Blake Johnson, Quantum Platform Lead, IBM Quantum
3:30 p.m. – 4:00 p.m.	Break
4:00 p.m. – 6:00 p.m.	“Introduction to Q# and Microsoft Quantum Development Kit: Part I” Mariia Mykhailova, Senior Software Engineer, Microsoft Moderator: Demid Sychev, Purdue University

THURSDAY, MAY 20, 2021

Moderator: Yun-Yi Pai, Oak Ridge National Lab

10:00 a.m. – 11:30 a.m.	“Introduction to Q# and Microsoft Quantum Development Kit: Part II” Mathias Soeken, Senior Software Engineer, Microsoft Moderator: Alex Senichev, Purdue University
11:30 a.m. – 12:30 p.m.	Break
12:30 p.m. – 1:30 p.m.	“Superconducting Qubits and their Utility in Dark Matter Searches” Daniel Bowring, Scientist, Fermi National Accelerator Laboratory
1:30 p.m. – 2:30 p.m.	“Matterwaves, Matterons, and the Atomtronic Transistor Oscillator” Dana Anderson, CTO, ColdQuanta; Professor of Physics, University of Colorado Boulder
2:30 p.m. – 2:50 p.m.	Break
2:50 p.m. – 3:50 p.m.	“Empowering Quantum Photonics with Nanoplasmonics and Machine Learning” Vladimir Shalaev, The Robert and Anne Burnett Distinguished Professor of Electrical and Computer Engineering, Purdue University
3:50 p.m. – 4:00 p.m.	Break
4:00 p.m. – 5:30 p.m.	Panel Discussion Moderated by Travis Humble, Deputy Director, Quantum Science Center
5:30 p.m. – 6:00 p.m.	Closing Remarks Travis Humble, Deputy Director, Quantum Science Center Alexandra Boltasseva, the Ron and Dotty Garvin Tonjes Professor of Electrical and Computer Engineering, Purdue University; Workforce Development Lead, Quantum Science Center