

QSTEP 2024 Workshop Schedule

Friday

4 - 5:30 PM	Welcome and Registration	Leighty Commons
5:30 - 7 PM	Pizza, Activities booths, and Tours	Leighty Commons
7 - 9 PM	<u>Topic Session: Quantum Chemistry</u>	WTHR 200
7 - 7:10 PM	Welcome and Opening Remarks	<i>Mike Reppert</i>
7:10 - 8 PM	<i>Quantum Chemistry and Electronic Structure</i>	<i>Adam Wasserman</i>
8 PM - 8:20 PM	<i>How Strong Light-Matter Interactions Alter Intermolecular Forces</i>	<i>Ming Chen</i>
8:20 PM - 8:40 PM	<i>Enabling Sustainable Production of Fuels and Chemicals through Quantum Chemistry.</i>	<i>Viswanath Pasumarthi</i>

Saturday

8:30 - 9 AM	Breakfast	WALC
9 - 10:30 AM	<u>Topic Session: Quantum Dynamics and Sensing</u>	Hiler Theater
9 - 9:50	<i>Introduction to Quantum Dynamics and Sensing</i>	<i>Jon Hood</i>
9:50 - 10:10	<i>Quantum dynamics from spectroscopy</i>	<i>Lee Liu</i>
10:10 - 10:30	<i>Ultrafast Quantum Dynamics with Classical and Quantum Light</i>	<i>Niranjan Shivaram</i>
10:30 - 10:45	Coffee Break	WALC
10:45 AM - 12:10 PM	<u>Topic Session: Quantum Information and Computing</u>	Hiler Theater
10:45 - 11:35	<i>Introduction to Quantum Computing and Information</i>	<i>Jukka Vayrynen</i>
11:35 - 11:55	<i>Quantum Simulation with Superconducting Circuits</i>	<i>Alex Ma</i>
11:55 - 12:15	<i>Distributed Quantum Computing and Quantum Networks</i>	<i>Shengwang Du</i>
12:10 - 1:30 PM	Lunch Break	WALC
1:30 - 3 PM	<u>Core Skills Session #1</u>	WALC
3 PM - 4:30 PM	<u>Core Skills Session #2</u>	WALC
	<i>Quantum Games</i> (Lead: Valentin Walther)	
	<i>Linear Algebra with Python</i> (Lead: Mike Reppert)	
	<i>QisKit Programming</i> (Lead: Manas Sajjan)	
4:30 - 6:30 PM	<u>Poster Session: Purdue Quantum at a Glance</u>	WALC 3087
6:30 PM	Dinner Break + Free Time	WALC

Sunday

8:30 - 9 AM	Breakfast	WALC
9 - 10:30 AM	<u>Topic Session: Quantum Materials</u>	Hiler Theater
9 - 9:50 AM	<i>Introduction to Quantum Materials</i>	<i>Yong Chen</i>
9:50 - 10:10 AM	<i>Ultrafast spectroscopy across different energy and length scales</i>	<i>Hanzhe Liu</i>

10:10 - 10:30	<i>Unconventional superconductors</i>	<i>Laimei Nie</i>
10:30 - 10:45	Coffee Break	WALC
10:45 AM - 12:15 PM	<u>Topic Session: Quantum Optics</u>	Hiler Theater
10:45 - 11:35	<i>Silicon Quantum Photonics with Single-Photon Emitters</i>	<i>Vlad Shalaev</i>
11:35 - 11:55	<i>Quantum optics using cold atoms and nanophotonics</i>	<i>Chen-Lung Hung</i>
11:55 - 12:15 PM	<i>Strongly-interacting photons</i>	<i>Grace Liang</i>