

2025 Quantum Photonics MURI Review

Drs. Grace Metcalfe, Jiwei Lu, and Roberto Diener | May 14-15, 2025 |
Arlington, VA

Basic Research Innovation Collaboration Center (BRICC)
4100 N Fairfax Drive, Suite 450, Arlington, VA 22203

Agenda Day 1 | May 14, 2025

Time	Topic	Speaker
8:00-8:30	Check-in/Log-in	
8:30-9:00	Yale Intro & Shaping and Controlling High Coherence Phonons In Crystalline Media	Peter Rakich, Yale
9:05-9:30	Harnessing Surface Acoustic Waves for Circuit QED Systems	Rob Schoelkopf, Yale
9:35-10:00	High Coherence Quantum Acoustics	Andrew Cleland, Chicago
10:00-10:20	BREAK	
10:20-10:45	Quantum Acoustic Information Processing	Liang Jiang, Cornell
10:50-11:15	Quantum Acoustics with Piezoelectric Oscillators	Amir Safavi-Naeini, Yale
11:20-11:45	Quantum Phononics with Diamond	Eliza Cornell, Harvard
11:50-12:15	Interface Mechanical Resonators with Single Spin Qubits	Yiqi Wang, Harvard
12:15-1:45	LUNCH	
1:45-2:10	Mechanical Sensing in the Presence of Thermal Gradients	Cindy Regal, CU -Bolder
2:15-2:40	Interfacing a Long-lived Mechanical Oscillator with a Transmon	Mohammad Mirhosseini, Caltech
2:45-3:10	Diamond Membranes for Quantum Phononics	Alex High, Chicago
3:10	End of Presentations	
3:10-4:50	Poster Session (Part 1)	
4:50	REVIEW ADJOURN FOR THE DAY	

Agenda Day 2 May 15, 2025		
Time	Topic	Speaker
8:00-8:30	Check-in/Log-in	
8:30-9:00	Colorado Team Intro	Konard Lehnert, Yale
9:05-9:30	Interface Piezoelectric Qubit losses on Silicon and Sapphire	Alp Sipahigil, Berkeley
9:35-10:00	Progress toward Quantum Acoustics with Noble Solids	Jack Harris, Yale
10:05-10:20	BREAK	
10:20-10:45	Quantum Phononics at Sub-THz Frequencies	Hong Tang, Yale
10:50-11:15	Surface Acoustic Waves and Silicon Vancy Centers	Depdeep Jena, Cornell
11:20-11:45	Maximizing FOM (k^2Q) of Silicon and Diamond Reso	Sunil Bhawe, Purdue
11:45-12:10	Enabling Dissipation Dilution in Diamond Nanomechanics	Guanhao Huang (Loncar) Harvard
12:15-1:45	LUNCH	
12:45-2:00	Posters/Sidebars	
2:00-2:20	Posters/Sidebars	
2:25-2:55	Posters/Sidebars	
3:00-3:20	Posters/Sidebars	
3:25-3:45	Posters/Sidebars	
3:45-4:05	Posters/Sidebars	
4:10-4:30	Posters/Sidebars	
4:30-4:50	REVIEW ADJOURN	