

## **2018 NSF/DOE/AFOSR Quantum Science Summer School**

Cornell University, June 11-22, 2018

All events will be held in Physical Sciences Building Rm. 401 (PSB 401), unless otherwise noted.

### **Monday, June 11<sup>th</sup>**

<b>TIME</b>	<b>TOPIC</b>	<b>SPEAKERS</b>
8:30-9:00	Welcome & School Overview	J. Checkelsky & K. Shen
9:00-10:30	<i>Overview of Quantum Materials I</i>	Leon Balents
10:30-11:00	<b>COFFEE BREAK</b>	
11:00-12:40	<i>Introduction to Density Functional Theory (DFT)</i>	Feliciano Giustino
12:40-2:00	<b>LUNCH BREAK</b>	
2:00-4:00	<i>DFT : Tutorial &amp; Hands-on Activities I</i>	Feliciano Giustino
4:00-5:30	Participant Introductions & getting around Ithaca	

### **Tuesday, June 12<sup>th</sup>**

<b>TIME</b>	<b>TOPIC</b>	<b>SPEAKERS</b>
9:00-10:30	<i>Overview of Quantum Materials II</i>	Leon Balents
10:30-11:00	<b>COFFEE BREAK</b>	
11:00-12:30	<i>Scanning Tunneling Microscopy &amp; Spectroscopy of Quantum Materials I</i>	J.C. Seamus Davis
12:40-2:00	<b>LUNCH BREAK</b>	
2:00-5:30	<i>DFT : Tutorial &amp; Hands-on Activities II</i>	Feliciano Giustino

### **Wednesday, June 13<sup>th</sup>**

<b>TIME</b>	<b>TOPIC</b>	<b>SPEAKERS</b>
9:00-10:30	<i>Scanning Tunneling Microscopy &amp; Spectroscopy of Quantum Materials II</i>	J.C. Seamus Davis
10:30-11:00	<b>COFFEE BREAK</b>	
11:00-12:30	<i>Synthesis of Quantum Materials I</i>	Julia Chan
12:30-2:00	<b>LUNCH BREAK</b>	
2:00-3:30	<i>Synthesis of Quantum Materials II</i>	Julia Chan
3:30-5:30	<i>Hands-on Crystal Modeling Session</i>	Joe Checkelsky
6:30	QS3 School Dinner (Big Red Barn)	

## Thursday, June 14<sup>th</sup>

TIME	TOPIC	SPEAKERS
9:00-10:30	<i>Scanning Transmission Electron Microscopy I</i>	Lena Kourkoutis
10:30-11:00	<b>COFFEE BREAK</b>	
11:00-12:30	<i>Angle-Resolved Photoemission Spectroscopy of Quantum Materials I</i>	Inna Vishik
12:30-2:00	<b>LUNCH BREAK</b>	
2:00-3:30	Poster Talks	
3:30-5:30	Poster Session (PSB Atrium by Baker Laboratory)	

## Friday, June 15<sup>th</sup>

TIME	TOPIC	SPEAKERS
9:00-10:30	<i>Scanning Transmission Electron Microscopy II</i>	Lena Kourkoutis
10:30-11:00	<b>COFFEE BREAK</b>	
11:00-12:30	<i>Angle-Resolved Photoemission Spectroscopy of Quantum Materials II</i>	Inna Vishik
12:30-2:00	<b>LUNCH BREAK</b>	
2:00-3:30	<i>Active Learning Session I</i>	
3:30-6:15	<i>Hands-on Activities : Transmission Electron Microscopy Workshop or ARPES Lab visit</i>	

**LECTURE**

**HANDS-ON**

**POSTER**

**BREAK**

**OTHER**

## Week Two : June 18-22

### Monday, June 18<sup>th</sup>

TIME	TOPIC	SPEAKERS
9:00-10:30	<i>Optical &amp; Terahertz spectroscopy of Quantum Materials I</i>	N. Peter Armitage
10:30-11:00	<b>COFFEE BREAK</b>	
11:00-12:30	<i>Molecular Beam Epitaxy of Quantum Materials I</i>	Darrell Schlom
12:30-2:00	<b>LUNCH BREAK</b>	
2:00-3:30	<i>Two-Dimensional Quantum Materials</i>	Jie Shan
3:30-6:15	<i>Hands-on Activities : Transmission Electron Microscopy Workshop or ARPES Lab visit</i>	

### Tuesday, June 19<sup>th</sup>

TIME	TOPIC	SPEAKERS
9:00-10:30	<i>Optical &amp; Terahertz spectroscopy of Quantum Materials II</i>	N. Peter Armitage
10:30-11:00	<b>COFFEE BREAK</b>	
11:00-12:30	<i>Molecular Beam Epitaxy of Quantum Materials II</i>	Darrell Schlom
12:30-2:00	<b>LUNCH BREAK</b>	
2:00-3:30	<i>X-Ray Scattering on Quantum Materials I</i>	Jacob Ruff
3:30-4:00	<b>BREAK</b>	
4:00-5:30	<i>Hands-on Activities : MBE Lab Visit</i>	

### Wednesday, June 20<sup>th</sup>

TIME	TOPIC	SPEAKERS
9:00-10:30	<i>Nanoscale Quantum Materials I</i>	Judy Cha
10:30-11:00	<b>COFFEE BREAK</b>	
11:00-12:30	<i>X-Ray Scattering on Quantum Materials II</i>	Jacob Ruff
12:30-2:00	<b>LUNCH BREAK</b>	
2:00-3:30	Poster Talks II	
3:30-5:30	Poster Session II (PSB Atrium by Baker Laboratory)	

**Week Two : June 18-22**

**Thursday, June 21st**

<b>TIME</b>	<b>TOPIC</b>	<b>SPEAKERS</b>
9:00-10:30	<i>Nanoscale Quantum Materials II</i>	Judy Cha
10:30-11:00	<b>COFFEE BREAK</b>	
11:00-12:30	<i>Neutron Scattering on Quantum Materials I</i>	John Tranquada
12:30-2:00	<b>LUNCH BREAK</b>	
2:00-3:30	<i>Active Learning Session II</i>	
3:30-6:15	<b>BREAK</b>	
6:00	<i>QS3 School Dinner (PSB Atrium by Baker Lab)</i>	

**Friday, June 22nd**

<b>TIME</b>	<b>TOPIC</b>	<b>SPEAKERS</b>
9:00-10:30	<i>Neutron Scattering on Quantum Materials II</i>	John Tranquada
10:30-11:00	<b>COFFEE BREAK</b>	
11:00-12:30	School Recap	

**LECTURE**

**HANDS-ON**

**POSTER**

**BREAK**

**OTHER**