

**Center for Emergent Superconductivity Workshop**

**November 14-16, 2016**

**Monday, November 14, 2016**

Student/Postdoc Day

6 – 8 pm Welcome Reception, Hilton Garden Inn

**Tuesday, November 15, 2016**

8 am Breakfast

8.45 – 9.25 a.m. Peter Johnson  
*Director's report and **Mechanisms** Overview*

9.25 – 9.50 a.m. Mark Dean  
*Precursor charge density waves in  $La_{2-x}BaxCuO_4$*

9.50 – 10.15 a.m. Peter Sprau  
*Discovery of Orbital-Selective Cooper Pairing in FeSe*

10.15 – 10.30 *Break*

10.30 – 10.40 Wai Kwok  
***Vortices** Overview*

10.40 – 11.10 Ulrich Welp  
*Vortices Progress Report*

**Updates from Industry**

11.10 – 11.30 Marty Rupich (AMSC)

11.30 – 11.50 Yifei Zhang (SuperPower)

11.50 – 12.10 Andreas Glatz  
*Large Scale Simulations of Critical Currents: (SciDAC/OSCON program)*

12.10 – 12.30 Discussion for the Renewal from a Vortices perspective (20 mins)

12.30 – 1.30 pm *Lunch*

**Mechanisms Part 2**

1.30 – 1.50 Ivan Bozovic

*Demise of superfluid density with overdoping in LSCO*

- 1.50 – 2.10 Jon Rameau  
*Energy Dissipation from a Correlated System Driven Out of Equilibrium*
- 2.10 – 2.30 Alexei Koshelev  
*Surface Nematic State*
- 2.30 – 2.45 **Materials** Introduction Jim Eckstein
- 2.45 – 3.15 Lucas Wagner  
*Progress on predictors for unconventional superconductivity*
- 3.15 – 3.30 *Break*
- 3.30 – 3.50 Daniel Shoemaker  
*Genomic approaches to synthesis of correlated chalcogenides*
- 3.50 – 4.10 Cedomir Petrovic  
*Superconducting and normal state in iron chalcogenides*
- 4.10 – 4.30 Antia Botana  
*Electronic structure of CuTeO<sub>4</sub> and its relationship to the cuprates*
- 4.30 – 5.00 Summary and Discussion Jim Eckstein
- 6.00- 8.30 pm *Buffet Dinner, Hilton Garden Inn*

**Wednesday, November 16, 2016**

- 8.00 am *Breakfast*
- 9.00 – 9.40 am John Tranquada  
*BRN report on Quantum Materials – Superconductivity*
- 9.40 – 10.15 am Mike Norman  
*Topological Superconductors*
- 10.15 – 10.30 *Break*
- 10.30 – 11.00 Qiang Li  
*Chiral Magnetic Effect in Condensed Matter*
- 11.00 – 12.00 Renewal Discussion
- 12.00 *Lunch*