



# Condensed Matter Theory Center Seminar

**Friday, February 18**  
**11am-12pm**  
**2205 Physics Building**

**Roger Mong, Berkeley**

## “Bound States in Surface Topological Defects”

Topological insulators (TI) and superconductors support surface states, and more generally gapless modes within domain walls and topological defects. We consider systems that have gapped dispersion along their surfaces and defects, but support midgap states bound to where the surfaces / defects terminate. Surprisingly, these features may be found in materials with little engineering. We will discuss how the defect bound states arise from the bulk band structure, focusing on chiral wires in "antiferromagnetic topological insulators" and Majorana bound states in TI-based superconductors as examples. The compounds GdBiPt, doped TlBiTe<sub>2</sub> and pressurized Bi<sub>2</sub>Te<sub>3</sub> are candidates exhibiting these features.

**All are welcome to attend.**