Hideo Aoki  
University of Tokyo, & AIST, Tsukuba, Japan  

Higgs modes in d-wave and multi-band superconductors  

Abstract: Higgs mode (collective amplitude mode) in superconductors, recently detected and analysed in a conventional, s-wave superconductor, opens a novel avenue for probing the U(1) symmetry broken state. Now we have extended the notion to an unconventional, d-wave high-Tc cuprate, where a characteristic third-harmonic generation hallmarks the d-wave superconductor in a space-group resolved manner[1]. We can also predict unique features in Higgs and Leggett (phase) modes if we turn to multi-band superconductors[2].  


Host: Andrea Cavalleri