



Friday, June 29<sup>th</sup> 2018 - 11:00  
CFEL Seminar room I, II (Bldg. 99)

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## 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-T<sub>c</sub> 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].

[1] K. Katsumi et al, PRL 120, 117001 (2018).

[2] Y. Murotani et al, PRB 95, 104503 (2017).

Host: Andrea Cavalleri

