



ICTS Condensed Matter Seminar

Title : Pair density wave superconductivity from electron repulsion

Speaker : Srinivas Raghu (Stanford University)

Date : Tuesday, 14 December 2022

Time : 11:30 pm (IST)

Abstract : A pair density wave (PDW) is a superconductor whose order parameter is a periodic function of space, without an accompanying spatially-uniform component. Since PDWs are not the outcome of a weak-coupling instability of a Fermi liquid, an intrinsic pairing mechanism for PDW order has remained elusive. We show that Fermi liquids with repulsive BCS interactions can have robust PDW phases. We obtain a phase diagram with both finite temperature transitions to PDW order, and a $T=0$ PDW quantum critical point where the Fermi liquid description breaks down. We will describe the manifestation of these ideas in the case of electrons on the Kagome lattice near the van Hove filling.

Venue : **Hybrid Mode**

Offline: Madhava Lecture Hall

Online: Please click on the below link to join the meeting

<https://icts-res-in.zoom.us/j/86206459142?pwd=aWVUemIrbFU3VG5LeS9mVHoyTXF6dz09>

Meeting ID: 862 0645 9142

Passcode: 141412