Title: Pair density wave order from electron repulsion

Abstract:
Pair density wave (PDW) superconductors are defined has having Cooper pairing at finite momentum without a uniform component. They are believed to occur in a variety of strongly correlated materials including cuprates, and the recently discovered Kagome metals. Since PDW order generically requires strong interactions, an open challenge has been to provide a robust mechanism for this order.

In this talk we present solved models consisting of electrons with strong repulsive BCS couplings, in which PDW order occurs as the ground state.