Interplay of magnetism and superconductivity in the two-dimensional Hubbard model

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Abstract

We apply a functional renormalization-group technique to study the interplay of superconductivity and magnetism, including incommensurate magnetic order, in the two-dimensional Hubbard model. We first determine the phase diagram as a function of density at zero temperature and discuss how the onset temperature of superconductivity can evolve near half-filling by invoking the Kosterlitz-Thouless transition.

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