

Abstract Submitted
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Photoemission on holographic fermi arcs BIKASH PADHI, GARRETT VANACORE, PHILIP PHILLIPS, Univ of Illinois - Urbana — We study the coexistence of Fermi arcs, seen in the pseudogap regime of the cuprates, and superconductivity. We use holographic methods, where the fermions live in an asymptotically anti-de Sitter (AdS) space-time with a black hole at the origin. By devising a suitable coupling, the fermions are allowed to interact with a superconducting condensate formed by the scalar field (hair) emanating from this black hole. Additionally, the black hole is assumed to be charged, so that its electric field can be used to probe the Fermi surfaces. This fermion-electric field coupling is assumed to be non-minimal. Computing the dual two-point fermion correlator we study the interplay of these two interactions on the boundary fermion spectrum.

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