Superconducting Dome and Anisotropy in Holographic Striped Superconductor

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SUMAN GANGULI, GEOGRE SIOPSIS, JASON THERRIEN, University of Tennessee at Knoxville — Using gauge/gravity duality, we study the properties of a strongly coupled striped superconductor with unidirectional charge density wave order. By including the effects of fluctuations, we show that there is a regime in which this holographic model exhibits a superconducting dome. Furthermore, we study the anisotropy of the optical conductivity at temperature below the critical temperature and compare it with the experimental results in cuprate.

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