

From top-down to bottom-up: a new construction for holographic color-superconductivity

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Taking inspiration from top-down constructions, I revisit the problem of constructing a color superconducting phase in bottom-up holography. The model introduced describes the five-dimensional dynamics of a scalar field dual to a chiral symmetry breaking condensate, which is coupled to the RR 4-form. The coupling is given by a topological WZ term, which is elegantly responsible both for scalar condensation at high density, and color Higgsing in the condensed phase. This construction realizes both properties at finite density and Higgsing fraction.

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