

Subir Sachdev – Colloquium – 2/6/2020
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Title: Strange metals and black holes

Abstract:

The ‘strange metal’, a state of matter formed by electrons in many modern materials, including the compounds which exhibit high temperature superconductivity.

I will discuss models of the strange metal, building upon quantum critical states with long-range quantum entanglement. Surprisingly, some of these models have a dual representation which describes the low energy quantum theory of charged black holes. This connection has led to mutually beneficial insights in studies of strange metals and quantum black holes