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The holographic dual of thermoelectric transport in SYK models RICHARD DAVISON, WENBO FU, Harvard University, YINGFEI GU, Stanford University, KRISTAN JENSEN, San Francisco State University, SUBIR SACHDEV, Harvard University — Sachdev-Ye-Kitaev (SYK) models are models of fermions with infinite-ranged, random interactions. These models exhibit compressible, metallic states with no quasiparticle excitations. I will show that relations between the thermoelectric conductivities of these states are quantitatively the same as those found by studying charged black holes with AdS_2 geometries near their event horizon. This is evidence that, at low energies, SYK models have a dual, holographic description as a theory of gravity.

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