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## A toy model of holography: sparse SYK, wormholes, and chaos

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The Sachdev-Ye-Kitaev (SYK) model is a quantum mechanical model that is strongly interacting, chaotic and solvable. It is known to have a gravity dual and exhibit black hole physics. Recently, a sparse version of SYK was proposed. These sparse SYK models can be obtained by randomly pruning the couplings of the all-to-all SYK or defined by random regular hypergraphs. The sparsity makes these models amenable to efficient computer simulations, making possible calculations out of reach in the all-to-all SYK. In this talk, I will review the sparse SYK and present results regarding two coupled sparse SYK systems –the holographic dual of a traversable wormhole–and the spectral form factor of the sparse SYK.

**Authors:** Mr RAZ, Amir (University of Texas at Austin); Dr MISOBUCHI, Anderson (University of Texas at Austin); CACERES, Elena (University of Texas at Austin (US))

**Presenter:** CACERES, Elena (University of Texas at Austin (US))

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