

Quantum Chaos and Effective Field Theory

Friday, 31 May 2019 10:15 (15 minutes)

I discuss the physics of quantum chaos in conformal field theories with a large number of degrees of freedom. We focus on two-dimensional theories, but also comment on the one-dimensional case (related to the SYK model) and higher-dimensional generalizations. A novel formulation using effective field theory methods at large central charge provides a useful perspective and computational framework. For instance, we can compute out-of-time-order correlators diagnosing quantum chaos, as well as certain more fine-grained higher-point generalizations.

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