

- Planckian dynamics (*i.e.* fastest possible local thermalization in a time $\hbar/(k_B T)$) is realized in the ‘solvable’ SYK models.
- Black holes thermalize in a Planckian time $\sim \hbar/(k_B T_H)$, where T_H is the Hawking temperature.
- A Schwarzian theory of a time reparameterization mode, with $SL(2, \mathbb{R})$ symmetry, (along with a phase fluctuating mode) describes the quantum dynamics of
 - the SYK models
 - black holes with near-extremal AdS_2 horizons
- Lattices of SYK islands have led to a partial understanding of strange metals.