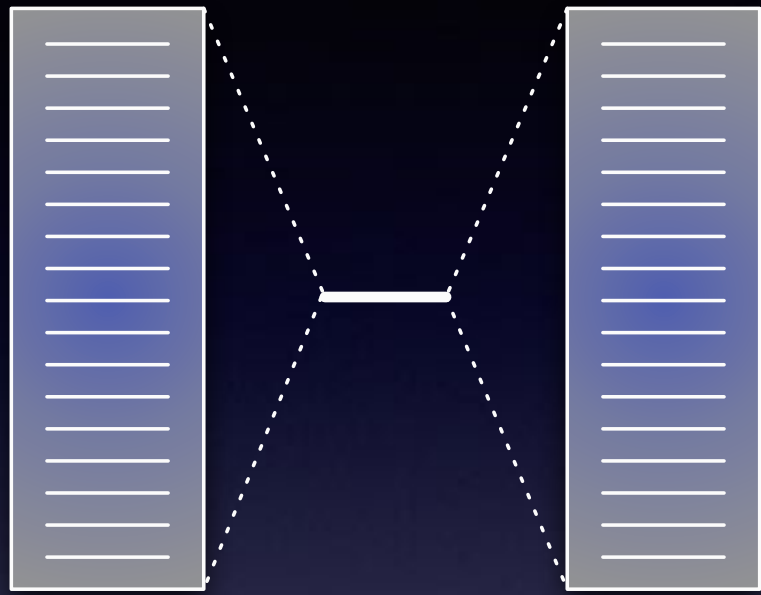
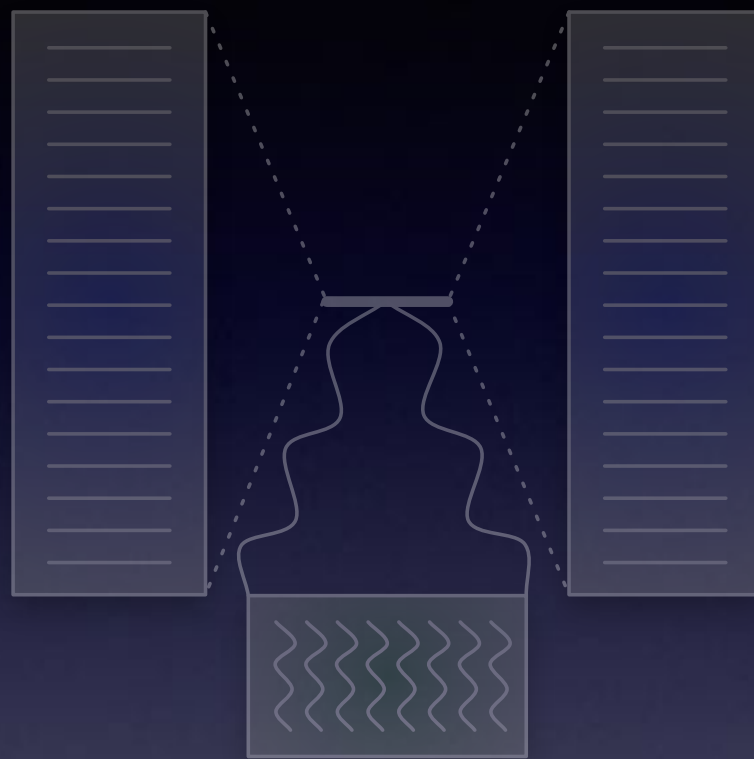


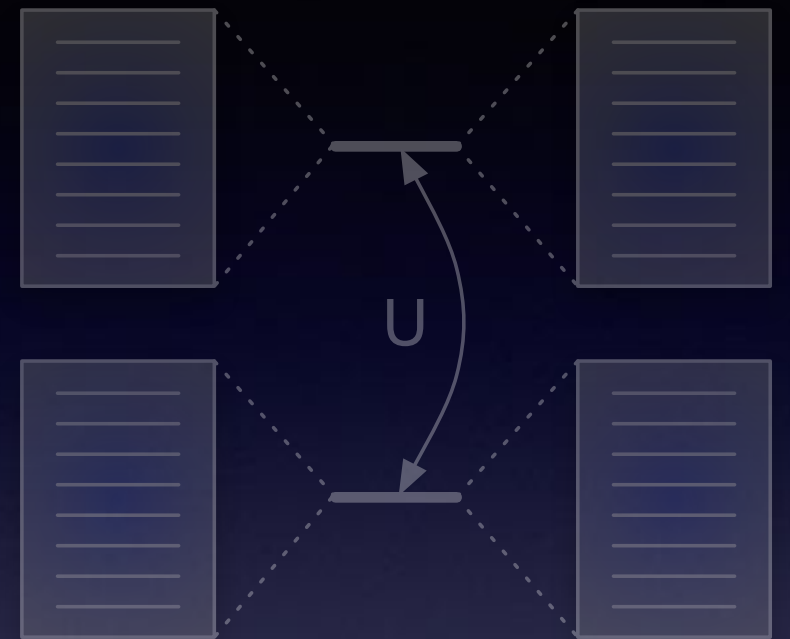
# Three Systems



Landauer

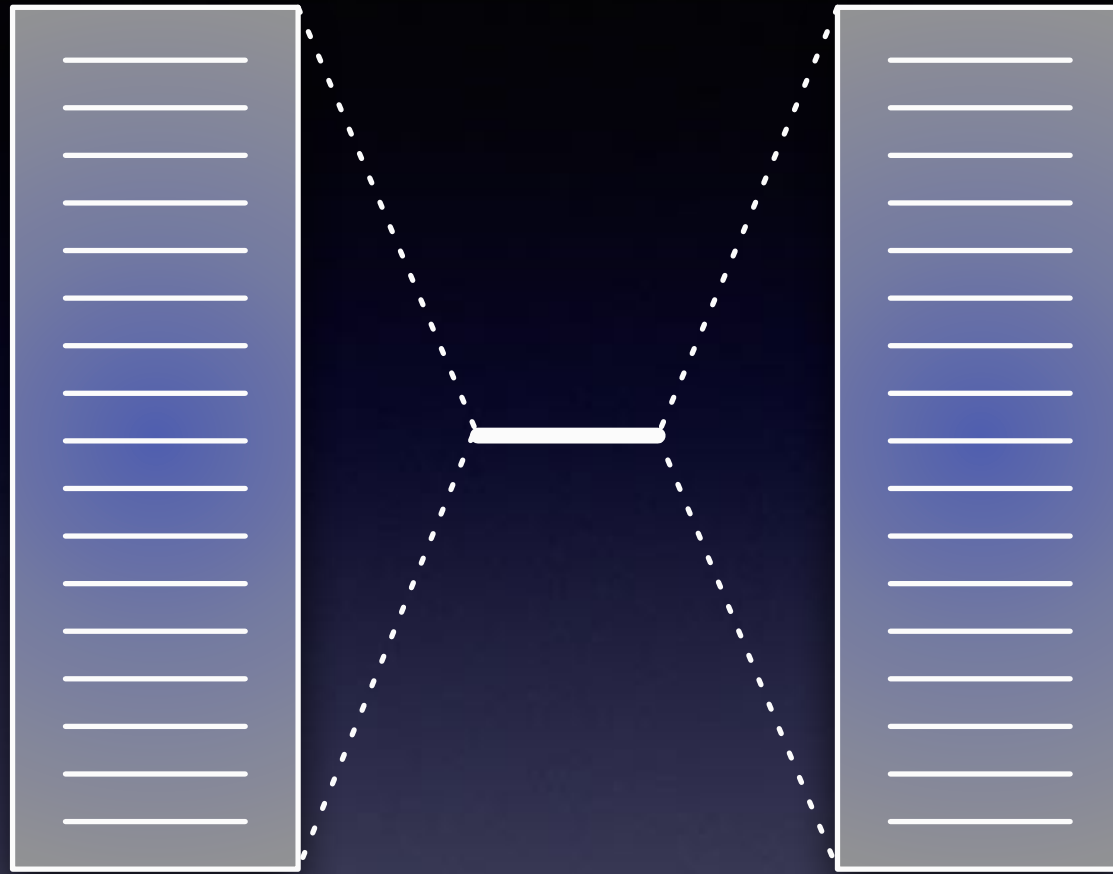


Holstein



Anderson

# Landauer Model



$$\begin{aligned}\hat{H} = & \sum_{k \in L} \epsilon_k \hat{a}_k^\dagger \hat{a}_k + \epsilon_0 \hat{a}_0^\dagger \hat{a}_0 + \sum_{k \in R} \epsilon_k \hat{a}_k^\dagger \hat{a}_k \\ & + \sum_{k \in L} t_k \left( \hat{a}_0^\dagger \hat{a}_k + \hat{a}_k^\dagger \hat{a}_0 \right) + \sum_{k \in R} t_k \left( \hat{a}_0^\dagger \hat{a}_k + \hat{a}_k^\dagger \hat{a}_0 \right)\end{aligned}$$