#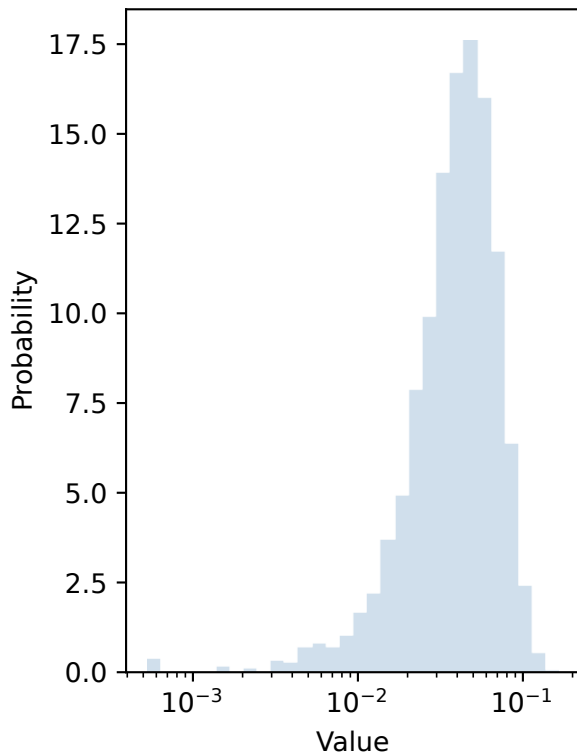 Cluster interaction probability