

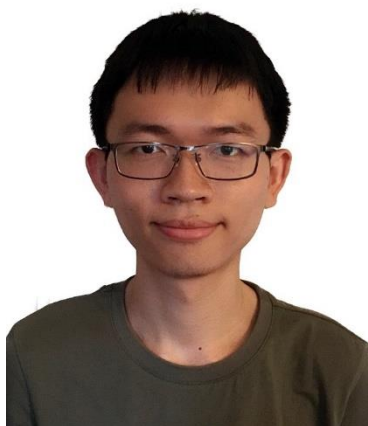


Seminar

Many-body Entanglement: from Replica Fields to Error Corrections

Shao-Kai Jian

Department of Physics, Brandeis University



Time: 9:00am, Nov. 18, 2021 (Thursday)

时间: 2021年11月18日 (周四) 上午9:00

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Abstract

Characterizing many-body entanglement is one of the most important problems in quantum physics. We present our studies on the late-time entanglement entropy and its transition in solvable models. In the first part, we show that the correlations between different replicas account for the Page curve at late time, and a permutation group structure emerges in the calculation. In the second part, we show that the replica symmetry breaking gives a unified description of measurement induced phase transitions in interacting circuits and free fermion models.

About the speaker

Shao-Kai Jian is currently a It From Qubit Fellow at Brandeis University. He received his Ph.D. degree at Institute for Advanced Study, Tsinghua University in 2019 under the supervision of Prof. Hong Yao. Shao-Kai Jian is broadly interested in understanding general organizing principles of quantum dynamics and quantum information, including non-unitary effects resulting from measurements. He also works on condensed matter theory, including quantum criticality and emergent phenomena in many-body quantum systems.