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Perimeter Institute Postdoc Welcome

Tsung-Cheng Peter Lu

PhD: University of California - San Diego

Advisor: Tarun Grover

Research Area: quantum matter / quantum information



Research Interests

Quantum matter



Quantum information

Entanglement



Quantum dynamics

Topological phases of matter



Research Interests

Quantum memory at a non-zero temperature

A device for storing / protecting quantum information



Quantum systems with topological order

Stability at a non-zero temperature?

Mixed-state entanglement: entanglement negativity

Stability of quantum **topological order**
at non-zero T



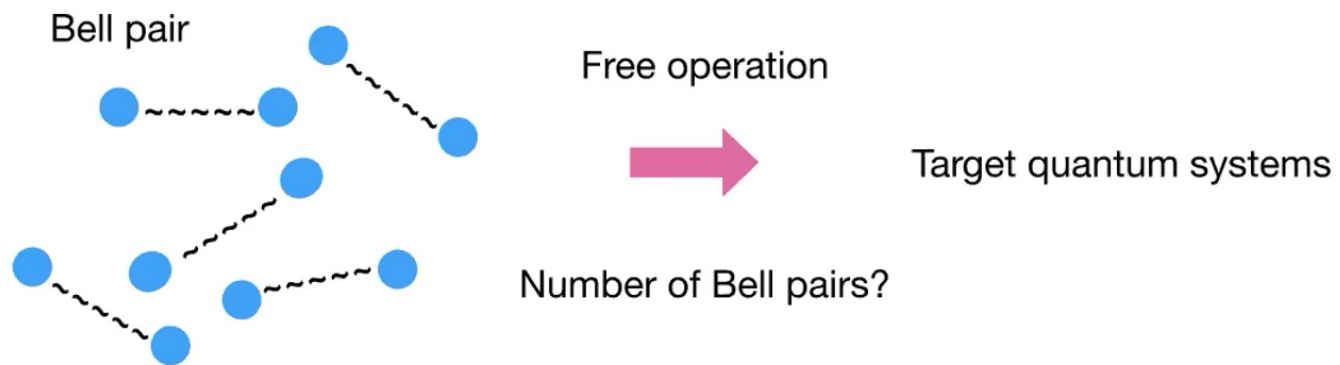
Stability of **symmetry-protected topological order**
under symmetry-breaking fields



Research Interests

Operational meaning of entanglement structure for quantum matter at non-zero temperature

Entanglement cost





Research Interests

Quantum magic: a novel probe of complexity beyond entanglement

Some quantum systems are easy to simulate (via Clifford circuits)

Not universal!

How to achieve universal quantum computation?

By providing sufficient amount of magic

Can one characterize quantum systems from magic?