

## Defects in quantum systems: symmetry, entanglement, and teleportation

*Tuesday, 11 June 2024 10:00 (1 hour)*

In this talk, I will explore the significant role of defects in various aspects of quantum systems. First, I will discuss how global symmetries can be embedded in topological defects and their connection to symmetry-resolved entanglement. Next, I will examine the influence of conformal junctions on various entanglement measures, highlighting how these insertions can affect quantum correlations. Finally, I will delve into the realm of weak measurements of critical wavefunctions, emphasizing their interplay with defect lines. As a concrete example, I will demonstrate how defects can disrupt a quantum teleportation protocol, preventing Alice from successfully transmitting her state to Bob. Through these discussions, I plan to shed light on the connections between defects and fundamental quantum phenomena.

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