QSUN Quantum Research Group of Stellenbosch University

South African Quantum Technology Initiative (SA QuTI)

NITheCS National Institute for Theoretical and Computational Sciences

Stellenbosch University iYunivesithi Universiteit

SEMINAR

Open Quantum Walks simulation

Pedro Linck (Federal University of Pernambuco, Brazil)

Friday, 29 November 2024 @ 14h00-15h00 SAST

Venues: Online and Physics Seminar Room, Stellenbosch University

ABSTRACT

In this talk we are going to explore a simple topology for the Open Quantum Walk model of Quantum Computation. We will dive into some theoretical aspects of the evolution of the system that are important for designing simulations and experiments, and present a circuit simulation model for this topology based on the locality of the graph, which can be generalised to a certain class of topologies.

BIOGRAPHY

Pedro Linck is a doctoral student in Physics at the Federal University of Pernambuco (UFPE) in Brazil. He holds bachelor's degrees in Mathematics and Physics, as well as a master's degree in Mathematics, where his research explored the use of Category Theory as a bridge between Algebra and Topology. Currently, his research focuses on Quantum Computing and Quantum Information, particularly in the simulation of open quantum systems and the application of open quantum walks to quantum computation.

REGISTER: https://bit.ly/3ZnEx97