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NITheP Webinar Series

Thursday, 23 July 2020, 14h00

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Lazy Open Quantum Walks

Abstract: Open quantum walks (OQWs) describe a quantum walker on an underlying graph whose dynamics is purely driven by dissipation and decoherence. Mathematically, they are formulated as completely positive trace preserving (CPTP) maps on the space of density matrices for the walker on the graph. Any microscopically derived OQW must include the possibility of the walker remaining on its current site when the map is applied. In this talk, we extend the OQW model to describe a lazy walker. We then derive a central limit theorem for the lazy OQW on a d -dimensional lattice where the distribution converges to a Gaussian.

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Date: Thursday, 23th June 2020

Time: 14h00