

DEPARTMENT OF MATHEMATICAL SCIENCES
QIT Thinking – Quantum Information Theory Seminar

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Title: Orthogonal Polynomials in Quantum Computing

Abstract: Perfect state transfer is a phenomenon in quantum information theory in which a quantum state placed at one location in a network is transmitted to another location with probability one. Surprisingly, the mathematics underlying this physical process is deeply connected to classical objects from analysis: orthogonal polynomials. In this talk, we will explore how properties of orthogonal polynomials can be used to determine whether perfect state transfer occurs in quantum spin chains. I will introduce the basics of both quantum computing and orthogonal polynomials, so curiosity is the only thing necessary to attend this talk.

Wednesday, October 7

1:00 – 1:50 pm

Higgins Labs 154



WPI