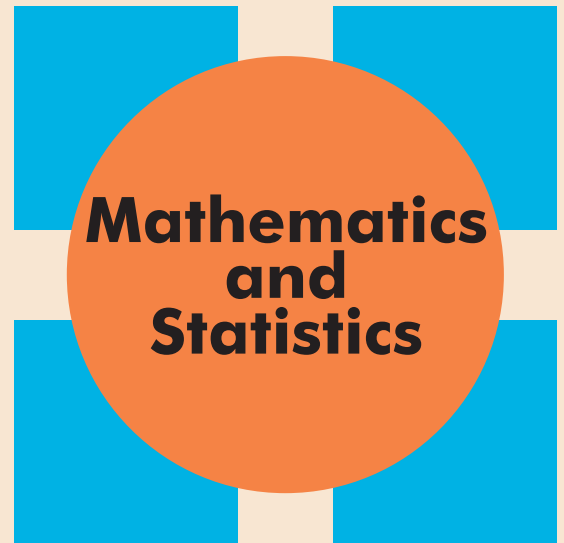


# COLLOQUIUM

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Quantum graphs and  
quantum Cuntz–Krieger  
algebras



Date: Friday October 30, 2020

Time: 3:30 - 4:30 PM

Zoom link:

<https://uregina-ca.zoom.us/j/92508741353?pwd=UzFOMjVMelVhRWhqR215cjd6dTICQT09>

**Abstract:** In this talk I will give a light introduction to the theory of quantum graphs. Quantum graphs are generalizations of directed graphs within the framework of non-commutative geometry, and they arise naturally in a surprising variety of areas including quantum information theory, representation theory, and in the theory of non-local games. I will give an overview of some of these connections and also explain how one can generalize the well-known construction of Cuntz–Krieger  $C^*$ -algebras associated to ordinary graphs to the setting of quantum graphs. Time permitting, I will also explain how quantum symmetries of quantum graphs can be used to shed some light on the structure of quantum Cuntz–Krieger algebras. (This is joint work with Kari Eifler, Christian Voigt, and Moritz Weber.)