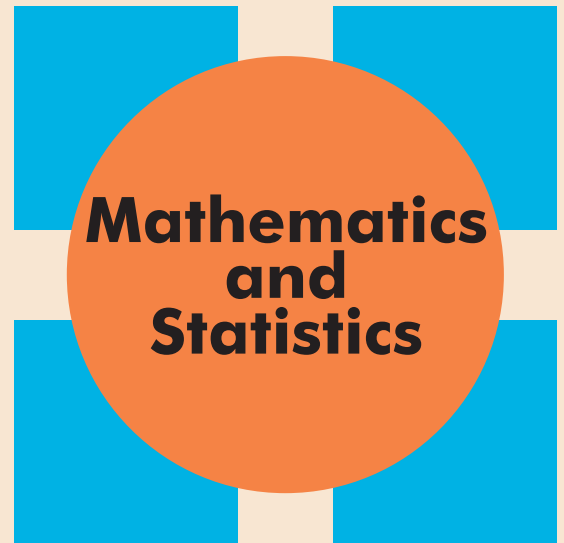


COLLOQUIUM

Maria Gillespie
Colorado State University

Tournaments and the geometry of curves



Date: Friday October 1, 2021

Time: 3:30 PM

Zoom link:

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

Abstract: How many lines pass through four given fixed lines in three dimensional space? How many cubic curves in three dimensions pass through 5 given points and are also tangent to two fixed planes?

The first question is a classical problem of “Schubert calculus”, and can be solved via a simple count of combinatorial objects called Young tableaux. The second can be approached using intersection theory on moduli spaces of curves, and in this talk we present new combinatorial methods via algorithms on labeled trees called “tournaments” that enable us to more easily solve enumerative problems about curves. These results are due to joint work with Sean Griffin and Jake Levinson.