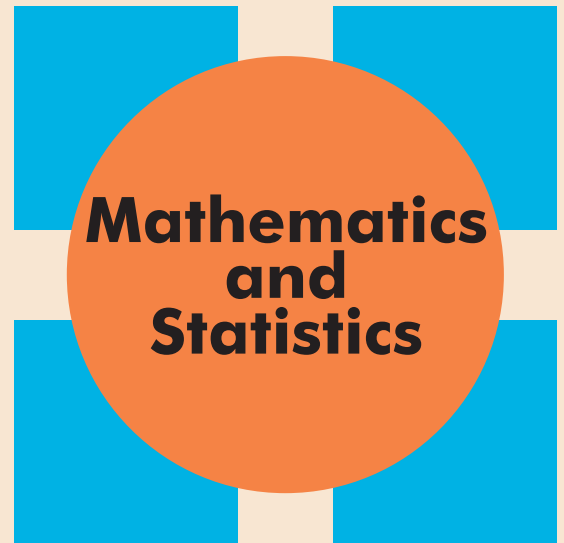


COLLOQUIUM

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Model theory for
functional analysis



Date: Friday March 19, 2021

Time: 3:30 - 4:30 PM

Zoom link:

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

Abstract: Model theory studies the interplay between mathematical structures and their logical properties. Some of its most beautiful theorems involve a construction called an ultrapower. Many standard objects in functional analysis, such as Banach spaces and operator algebras, carry useful notions of ultrapower, but this does not interact well with classical model theory. An elegant solution, very natural for analysts, is to switch to a logic in which truth values are drawn from the interval $[0, 1]$. I will give a “big picture” survey of this approach and its prehistory, not assuming that the audience has any familiarity with logic or ultrapowers.