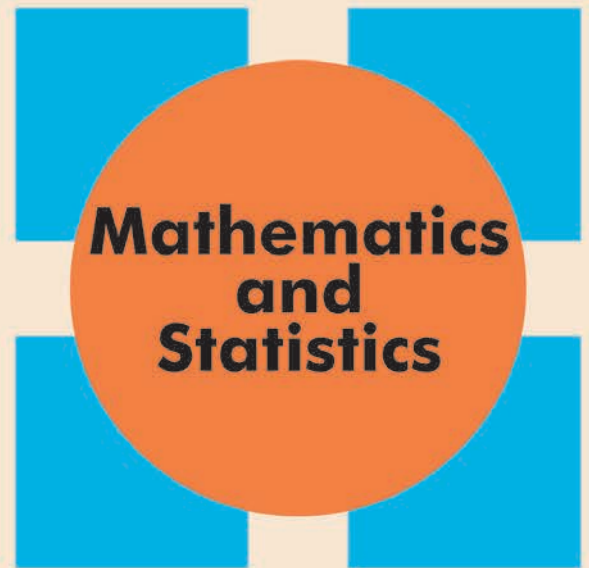


COLLOQUIUM

Paul Arnaud Songhafouo
Tsopmene
University of Regina

Goodwillie-Weiss manifold
calculus and applications



Date: Friday, October 07, 2016

Time: 3:30 - 4:30 PM

Room: RIC 208

Abstract: Manifold calculus, due to Goodwillie and Weiss, is a tool which enables to “compute” a contravariant functor, F , from a the category of m -dimensional manifolds to the category of topological spaces (or alike), by its successive approximations called Taylor tower of F . The k th layer, $0 \leq k \leq \infty$, of the tower is denoted $T_k F$, and is called the k th polynomial approximation for F . In this talk I will explain the construction of the Taylor tower of F , with a couple of examples. I will also give some nice applications of the theory. The talk will end with a result, due to Boavida, Lambrechts, Pryor, and S., saying that there is a fairly explicit computable cosimplicial model for $T_\infty F(M)$ when M is a manifold endowed with a “nice” triangulation.