



University
of Windsor

Department of Mathematics & Statistics

Colloquium

“A Review of Developments in Accumulating Priority Queues”

Who:	Dr. David Stanford Department of Statistical and Actuarial Sciences University of Western Ontario
When:	Thursday, February 7, 2019 3:00 PM
Where:	Room 113, Biology Building

Abstract:

This talk will review the developments that have occurred in the past five years in the field of Accumulating Priority Queues (APQs). Starting from the 2014 Stanford, Taylor, and Ziedins paper in *Queueing Systems*, we introduce the concept of accrediting customers and see the role that Maximum Priority Processes play in the determination of the waiting time distributions for the various classes of customers. We then consider nonlinear APQs, and establish the conditions under which no further generality in waiting time behaviour can be obtained than is available with linear APQs. A related optimisation problem is posed for the minimisation of the number of customers present who have waited in excess of delay limit specifications. We close with recent results pertaining to Delayed APQs, in which lower-class customers do not accumulate priority credits until an initial delay period has elapsed.

Refreshments to follow in the 10th floor, Room 10-118 Lambton Tower