会议时间：2023/11/7 10:00-12:00 (GMT+08:00) 中国标准时间 - 北京

地点：智华楼四元厅，腾讯会议同步进行：607-128-288

Speaker: 王若度 & 刘芳达，滑铁卢大学

报告 1: 王若度
Title: A theory of credit rating criteria

Abstract: We propose a theory for rating financial securities in the presence of structural maximization by the issuer in a market with investors who rely on the rating criterion for pricing. Two types of investors, simple investors and model-based investors, who use the rating information differently, are considered separately. Concepts of self-consistency and information gap are proposed to study different rating criterion. While the expected loss criterion used by Moody's satisfies self-consistency, the probability of default criterion used by S&P does not. Moreover, the probability of default criterion typically has a higher information gap than the expected loss criterion. Empirical evidence in the post-Dodd-Frank period is consistent with the theoretical implications. We show that a set of axioms based on self-consistency leads to a tractable representation for all self-consistent rating criteria, which can also be extended to incorporate economic scenarios. New examples of self-consistent and scenario-based rating criteria are suggested. The talk is based on joint work with Nan Guo, Steve Kou, and Bin Wang.

Short Bio
Dr. Ruodu Wang is Tier 1 Canada Research Chair in Quantitative Risk Management and Professor of Actuarial Science and Quantitative Finance at the University of Waterloo. He received his PhD in Mathematics (2012) from the Georgia Institute of Technology, after completing his Bachelor (2006) and Master's (2009) degrees at Peking University. He holds editorial positions in leading journals in actuarial science, operations research and mathematical economics, including Co-Editor of the European Actuarial Journal, and Co-Editor of ASTIN Bulletin - The Journal of the International Actuarial Association. Among other international awards and recognitions, he is the inaugural winner of the SOA Actuarial Science Early Career Award (2021) from the Society of Actuaries, and a Fellow of the Institute of Mathematical Statistics (elected 2022).

报告 2: 刘芳达

Title: Distributional uncertainty with loss functions

Abstract: The model uncertainty is of crucial importance when market participants are making risk management strategies. For a participant who adopts law-invariant risk measures for quantification, the study of the supremum of risk measure values can help the participant to better understand the performance of risk in the worst-case scenario. In this talk, we introduce several model uncertainty settings. The choices of risk measures, uncertainty sets, and transformations of the underlying risk play important roles in the characterization of the worst-case distribution. Motivated by the insurance policies, we mainly focus on stop-loss functions and limited loss functions. Furthermore, we discuss the optimal retention levels for participants in an insurance policy with model uncertainties.

Bio: Dr. Fangda Liu is an assistant professor at the Department of Statistics and Actuarial Science, University of Waterloo. She is also an associated fellow of the Society of Actuaries. Her research focuses on optimal insurance and reinsurance design, risk sharing problems, distributional model uncertainty and its application insurance.