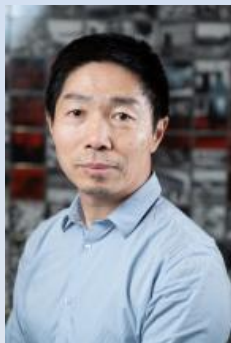


Bounds on the Mean and Squared Coefficient of Variation of Phase-Type Distributions

杰出访问研究员系列报告



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Dr. Qi-Ming He is a professor in the Department of Management Sciences at the University of Waterloo. He received a PhD from the Institute of Applied Mathematics, Chinese Academy of Sciences in 1989 and a PhD from the Department of Management Science at the University of Waterloo in 1996. His main research areas are algorithmic methods in applied probability, queueing theory, and production management. In investigating various stochastic models, his favorite methods are matrix analytic methods. Recently, he is working on queueing systems with multiple types of customers and abandonment, Markov modulated fluid flow processes, representations of phase-type distributions and their applications, and the application of neural networks (big models) in stochastic models.

Abstract: We consider a class of phase-type distributions, to be called the MMPP class of PH-distributions, and find bounds of their mean and squared coefficient of variation (SCV). As an application, we have shown that the SCV of the event-stationary inter-event time of Markov modulated Poisson processes (MMPPs) is greater than or equal to unity, which answers an open problem related to the applicability of MMPPs.

时间：2024年9月20日(周五) 9:30-11:00

地点：中国科学院数学与系统科学研究院思源楼625

主办单位：中国科学院数学与系统科学研究院应用数学研究所