Yonsei Institute of Statistical Science

연세대학교 통계연구소 세미나

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"Transform Analysis for Markov Processes and its Applications to Financial Engineering"

Abstract: We present a transform analysis of one-dimensional Markov processes through their infinitesimal generators. More precisely, we characterize the joint double (Laplace) transforms of additive functionals of Markov processes and their terminal values. We also establish a simple duality relationship between continuous positive additive functionals of processes and their right inverses. Through this duality, we obtain the single Laplace transforms of inverses of additive functionals of Markov processes. Applications to financial engineering such as Asian option pricing and default time simulation will be discussed.

약력

Associate Professor, School of Business, Stevens Institute of Technology, 2015
Associate Professor, Department of Statistics, Colorado State University, 2014-2015
Assistant Professor, Department of Statistics, Colorado State University, 2008-2014
Ph.D., Statistics, University of North Carolina at Chapel Hill, 2008
B.Sc., Statistics and Mathematics, Seoul National University, Korea, 2003

연구 분야

- Application Areas: Large-Scale Service Operations, Call Centers, Infectious Disease Modeling, Stochastic Networks, Business Analytics
- Methodological Areas: Statistics for Stochastic Processes, Applied Probability, Stochastic Control, Computational Statistics

Thursday, August 17, 2017 · 11 am
102 Daewoo Hall, Yonsei University
2017년 8월 17일 (목요일) 오전 11시
상경대학 대우관 본관 102호