



Arthur Imperatore School of Sciences and Arts

Department of Mathematical Sciences
Seminar in Stochastic Systems

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Wayne State University

Two-time-scale Markovian Systems and Applications

Tuesday, November 16, 2004
4:00 pm
Pierce 218

Abstract: Originated from applications in signal processing, random evolution, telecommunications, financial engineering, and manufacturing systems, two-time-scale Markovian systems have received much attention recently. This talk summarizes some of our recent work. It includes asymptotic expansions of solutions to the forward equations, scaled and unscaled occupation measures, approximation error bounds, and associated switching diffusion processes. Controlled dynamic systems and Markov decision processes will also be mentioned.

George Yin holds a M.S. degree in Electrical Engineering, and Ph.D. degree in Applied Mathematics, from Brown University in 1987. He joined the Department of Mathematics, Wayne State University in 1987 and has been a professor since 1996. He has served or is serving as an associate editor of 6 journals, including IEEE Transactions on Automatic Control and SIAM Journal on Control and Optimization. He has served on a number of technical committees, including Mathematical Review Data Base Committee, IFAC Technical Committee on Modeling, Identification and Signal Processing, and many conference program committees. He chaired the 1996 AMS-SIAM Summer Seminar in Applied Mathematics on Stochastic Manufacturing Systems and the 2003 AMS-IMS-SIAM Summer Research Conference on Mathematics of Finance. Professor Yin was elected IEEE Fellow in 2002. He is the author of more than 150 scientific publications in the area of stochastic control and stochastic approximations. His book "Stochastic approximation and recursive algorithms and applications" co-authored with H.J. Kushner is a standard reference.

Refreshments will be served at 3:50 pm.

For more information contact Barbara Moh at bmoh@stevens.edu or call 201-216-5449.