

Curriculum Vitae

Shaobai Kan

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EDUCATION

Wayne State University, Detroit, Michigan, USA

Ph.D. in Applied Mathematics, August 2008.

Master of Arts in Mathematical Statistics, December 2007.

Tongji University, Shanghai, China

Master of Science in Mathematical Statistics, April 2002.

Bachelor of Science in Applied Mathematics, July 1999.

EXPERIENCE

1. Graduate Research Assistant, Department of Mathematics, Wayne State University, May 2004 – August 2004, and August 2006 – August 2007.
2. Graduate Teaching Assistant, Department of Mathematics, Wayne State University, August 2003 – May 2004, August 2004 – August 2005, August 2005 – August 2006, and August 2007 – July 2008.

HONORS AND AFFILIATIONS

1. PSC-CUNY Research Award # 63643-00 41, July, 2010 - June, 2011.
2. PSC-CUNY Research Award # 60135-39 40, July, 2009 - June, 2010.
3. The Harold (Ted) Slaby Award, Department of Mathematics, Wayne State University, April 2009.
4. Graduate Student Professional Travel Award, Department of Mathematics, Wayne State University, 2007-2008.
5. The Maurice J. Zelonka Endowed Mathematics Scholarship, Department of Mathematics, Wayne State University, April 2007.

RESEARCH INTERESTS

Estimation and system identification
Applied probability and stochastic processes
Stochastic approximation and optimization
Stochastic control
Stochastic system theory
Mathematical statistics
Actuarial sciences and finance

SELECTED PUBLICATIONS

1. **Kan, S.**, Yin, G. & Wang, L. Y. (2011). Persistent Tracking and Identification of Regime-Switching Systems with Structure Uncertainties: Unmodeled Dynamics, Observation Bias, and Nonlinear Model Mismatch, *Submitted*.
2. **Kan, S.**, Yin, G. & Wang, L. Y. (2009). System Identification: Regime Switching, Unmodeled Dynamics, and Binary Sensors, *Nonlinear Analysis, Theory, Methods and Applications*, Vol. **71**, No.12, e1328-e1336.
3. Yin, G., **Kan, S.**, Wang, L. Y. & Xu, C. Z. (2009). Identification of Systems with Regime Switching and Unmodeled Dynamics, *IEEE Transactions on Automatic Control*, Vol. **54**, No.1, 34-47
4. Yin, G., Wang, L. Y. & **Kan, S.** (2009). Tracking and Identification of Regime-Switching Systems Using Binary Sensors, *Automatica*, **45**, 944-955
5. Yin, G., **Kan, S.** & Wang, L. Y. (2006). Identification error bounds and asymptotic distributions for systems with structural uncertainties, *Journal of Systems Science and Complexity*, Vol. **19**, No.1, 22-35
6. Chen, L. X. & **Kan, S.** (2002). Optimal testing of parameter μ in normal Liouville distribution, *Journal of Tongji University*, Vol. **30**, No.6, 773-776
7. **Kan, S.** & Chen, L. X. (2000). Optimal testing of parameter σ^2 in normal Liouville distribution, *C.S.I.A.M. '2000*, **IV:3**, 257-261

SELECTED CONFERENCE PRESENTATIONS

1. Persistent Identification of Regime-Switching Systems with Structural Uncertainties: Unmodeled Dynamics, Observation Bias, and Nonlinear Model Mismatch, presented at "SIAM Conference on Control and Its Applications (CT 11)", Hyatt Regency Baltimore, Baltimore, Maryland, USA, July 25-27, 2011.

2. Identification of Regime-Switching Systems with Structural Uncertainties, presented at “2011 Joint Mathematics Meetings”, New Orleans Marriott & Sheraton New Orleans, New Orleans, Louisiana, USA, January 6-9, 2011.
3. Identification of systems with regime switching and unmodeled dynamics using binary sensors, presented at the “5th World Congress of Nonlinear Analysts”, Hyatt Grand Cypress Resort in Orlando, Florida, July 2008.
4. Identification error bounds and related issues, poster presentation at the Conference of “Asymptotic Analysis in Stochastic Processes, Nonparametric Estimation and Related Problems: A Conference in Honor of Rafail Z. Khasminskii on the Occasion of his 75th Birthday”, Wayne State University, Detroit, Michigan, September 2006.

SELECTED PROFESSIONAL ACTIVITIES

1. Organizer of a mini-symposium on “System Identification and Related Issues” at SIAM Conference on Control and Its Applications (CT 11), Baltimore, MD, 2011.
2. Journal referee service
— e.g. *IEEE Transactions on Automatic Control*, *Automatica*, *Control Theory and Applications*, *Computers and Electrical Engineering*, etc.
3. Conference referee service
— e.g. *CCDC2010*, *CCDC2011*, etc.

PROFESSIONAL ASSOCIATIONS

Society of *IEEE* (Institute of Electrical and Electronics Engineers)

American Mathematical Society

COMPUTER SKILLS

Mathematical Tools: Matlab, SAS, SPSS, Maple, Minitab

Computer Language: C++