

Chao Zhu

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University of Wisconsin-Milwaukee
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EMPLOYMENTS

Professor, Department of Mathematical Sciences, University of Wisconsin-Milwaukee, September 2018–present.

Associate Professor, Department of Mathematical Sciences, University of Wisconsin-Milwaukee, September 2012–August 2018.

Visiting Scholar, Institute for Mathematics and its Applications, University of Minnesota, May–July 2018.

Visiting Scholar, Beijing Institute of Technology, Beijing, China, July, 2015, 2016 and 2017.

Visiting Senior Research Fellow, City University of Hong Kong, June 2013 and March 2014.

Assistant Professor, Department of Mathematical Sciences, University of Wisconsin-Milwaukee, August 2007–August 2012.

Graduate Research Assistant and Graduate Teaching Assistant, Department of Mathematics, Wayne State University, January 2003–August 2007.

EDUCATION

Wayne State University, Detroit, Michigan, USA, Ph.D. in Mathematics, August 2007.

- Thesis title: Asymptotic properties of hybrid stochastic systems.
- Advisor: George Yin.

Wayne State University, Detroit, Michigan, USA, M.A. in Mathematical Statistics, December 2006.

East China Normal University, Shanghai, China, M.S. in Mathematics, July 2002.

East China Normal University, Shanghai, China, B.S. in Mathematics, July 1999.

GRANTS

1. PI, “Stochastic analysis and control problems with applications,” Simons Foundation, award number 523736, 09/2017–08/2022. (\$42,000.00)
2. co-PI, “Regime-Switching Jump Diffusion Processes and Applications,” National Science Foundation of China, 11671034. (PI: Fubao Xi, Beijing Institute of Technology, China.)
3. PI, “On Nonnegative Stochastic Processes and Their Financial Applications,” the Research Growth Initiative Grant, University of Wisconsin-Milwaukee, 2014–2015.
4. PI, “Complex Stochastic Systems: Analysis, Control and Applications,” National Science Foundation, DMS-1108782, 2011–2014. (\$114,999.00)

5. PI, “Singular Stochastic Control of Regime Switching Diffusion: Viscosity Solution and Linear Programming,” the Research Growth Initiative Grant, University of Wisconsin-Milwaukee, 2011–2012.
6. co-PI, “Stochastic Control and Its Applications on Optimal Harvesting Problems,” City University of Hong Kong, (SRG) 7002677, 2011–2013. (PI: Qingshuo Song, City University of Hong Kong, Hong Kong)

AWARDS

1. Most Cited Articles 2005–2010, Stochastic Processes and their Applications, for the paper entitled “Stability of regime-switching diffusions” published in *Stochastic Process. Appl.*, **117** (2007), 1037–1051. (It was the fifth most highly cited paper, published between 2005 - 2010, with 21 citations as of March 2011.)
2. Graduate School Research Fellow, University of Wisconsin-Milwaukee, 2010. April 2007.

RESEARCH INTERESTS

Applied probability, stochastic analysis, stochastic control, mathematical finance, mathematical biology, and actuary science.

PUBLICATIONS

A. Book

1. G. Yin and C. Zhu, *Hybrid Switching Diffusions: Properties and Applications*, Vol. 63 of *Stochastic Modeling and Applied Probability*, Springer, New York, 2010.

B. Journal Papers

1. Fubao Xi and C. Zhu, Jump Type Stochastic Differential Equations with Non-Lipschitz Coefficients: Non Confluence, Feller and Strong Feller Properties, and Exponential Ergodicity, *Journal of Differential Equations*, **266**, 4668–4711, 2019.
2. K. Helmes, R. Stockbridge, and C. Zhu, A Weak Convergence Approach to Inventory Control Using a Long-term Average Criterion, *Advances in Applied Probability*, **50**, 1032–1074, 2018.
3. Fubao Xi and C. Zhu, On the Martingale Problem and Feller and Strong Feller Properties for Weakly Coupled Lévy Type Operators, *Stochastic Process. Appl.*, **128**, 4277–4308, 2018.
4. Zhen Chao, Kai Wang, C. Zhu and Yanling Zhu, Almost Sure and Moment Exponential Stability of Regime-Switching Jump Diffusions, *SIAM J. Control and Optimization*, **55**(6), 3458–3488, 2017.
5. Dang Hai Nguyen, G. Yin, and C. Zhu, Certain Properties Related to Well Posedness of Switching Diffusions, *Stochastic Process. Appl.*, **127**, 3135–3158, 2017.
6. K. Helmes, R. Stockbridge, and C. Zhu, Continuous Inventory Models of Diffusion Type: Long-term Average Cost Criterion, *Annals of Applied Probability*, **27**(3), 1831–1885, 2017.
7. Fubao Xi and C. Zhu, On Feller and Strong Feller Properties and Exponential Ergodicity of Regime-Switching Jump Diffusion Processes with Countable Regimes, *SIAM J. Control and Optimization*, **55**(3), 1789–1818, 2017.

8. Xiaoshan Chen, Yu-Jui Huang, Qingshuo Song, and C. Zhu, The Stochastic Solution to a Cauchy Problem for Degenerate Parabolic Equations, *Journal of Mathematical Analysis and Applications*, **451** (2017), 448–472.
9. Q.S. Song and C. Zhu, On Singular Control Problems with State Constraints and Regime-Switching: A Viscosity Solution Approach, *Automatica*, **70** (2016), 66–73.
10. A. Weerasinghe and C. Zhu, Optimal Inventory Control with Path-Dependent Cost Criteria, *Stochastic Process. Appl.*, **126**(6) (2016), 1585–1621.
11. Zhihong Chen, Yanling Zhu, and C. Zhu, Adaptive bridge estimation for high-dimensional regression models, *J. Inequal. Appl.*, **2016**, 2016:258, 8 pp. DOI: 10.1186/s13660-016-1205-y
12. K. Helmes, R. Stockbridge and C. Zhu, A Measure Approach for Continuous Inventory Models: Discounted Cost Criterion, *SIAM J. Control Optim.*, **53**(4) (2015), 2100–2140.
13. C. Zhu, G. Yin, and N.A. Baran, Feynman–Kac formulas for regime-switching jump diffusions and their applications, *Stochastics An International Journal of Probability and Stochastic Processes*, **87**(6) (2015), 1000–1032.
14. R. Feng, S. Zhang, H. Volkmer, and C. Zhu, Optimal Dividend Payments for the Piecewise Deterministic Poisson Risk Models, *Scandinavian Actuarial Journal*, **5** (2015), 423–454.
15. Tayyeb Mohammadi, Baolin Wan, Jian-Guo Dai, and Chao Zhu, Prediction of Load Capacity Variation in FRP Bonded Concrete Specimens Using Brownian Motion, *Mathematical Problems in Engineering*, vol. 2015, Article ID 632912, 9 pages, 2015. doi:10.1155/2015/632912.
16. N. Baran, G. Yin, and C. Zhu, Feynman-Kac Formula for Switching Diffusions: Connections of Systems of Partial Differential Equations and Stochastic Differential Equations, *Advances in Difference Equations*, 2013, **2013:315**. doi:10.1186/1687-1847-2013-315.
17. Z. Jin, G. Yin, and C. Zhu, Numerical Solutions of Optimal Risk Control and Dividend Optimization Policies under a Generalized Singular Control Formulation, *Automatica*, **48** (2012), 1489–1501.
18. Q.S. Song, G. Yin and C. Zhu, Optimal Switching with Constraints and Utility Maximization of an Indivisible Market, *SIAM J. Control Optim.*, **50** (2012), 629–651.
19. C. Zhu, Optimal control of risk process in a regime switching environment, *Automatica*, **47** (2011), 1570–1579.
20. Q.S. Song, R. Stockbridge, and C. Zhu, On optimal harvesting problems in random environments, *SIAM J. Control Optim.*, **49** (2011), 859–889.
21. G. Yin and C. Zhu, Properties of solutions of stochastic differential equations with continuous-state-dependent switching, *J. Differential Equations*, **249** (2010), 2409–2439.
22. C. Zhu, G. Yin, and Q.S. Song, Stability of random switching systems of differential equations, *Quart. App. Math.*, **67** (2009), 201–220.
23. C. Zhu and G. Yin, On strong Feller, recurrence, and weak stabilization of regime-switching diffusions, *SIAM J. Control Optim.*, **48** (2009), 2003–2031.

24. C. Zhu and G. Yin, On competitive Lotka-Volterra model in random environments, *J. Math. Anal. Appl.*, **357** (2009), 154–170.
25. G. Yin, Bo Zhang, and C. Zhu, Practical stability and instability of regime-switching diffusions, *J. Control Theory and Applications*, **6** (2008), 105–114.
26. R.Z. Khasminskii, C. Zhu, and G. Yin, Stability of regime-switching diffusions, *Stochastic Process. Appl.*, **117** (2007), 1037–1051.
27. C. Zhu and G. Yin, Asymptotic properties of hybrid diffusion systems, *SIAM J. Control. Optim.*, **46** (2007), 1155–1179.
28. G. Yin and C. Zhu, On the notion of weak stability and related issues of hybrid diffusion systems, *Nonlinear Analysis: Hybrid Systems*, **1** (2007), 173–187.
29. R.Z. Khasminskii, C. Zhu, and G. Yin, Asymptotic behavior of parabolic systems for null-recurrent switching diffusions, *Acta Mathematicae Applicatae Sinica*, **23** (2007), 177–194.
30. G. Yin and C. Zhu, Regularity and recurrence of switching diffusions, *Journal of Systems Science and Complexity*, **20** (2007), 273–283.
31. C. Zhu, L. Cao, and G. Chen, Some properties of three kinds of generalized inverses, *Journal of East China Normal University (Natural Science Edition)*, **2006**, no. 3, 26–31.
32. Y. Liu, C. Zhu, and G. Chen, Generalized inverses of matrices of an arbitrary division ring, *Acta Mathematica Scientia Series A. (Chinese Edition)*, **25** (2005), no. 6, 770–776.
33. J. Pian and C. Zhu, Algebraic perturbation theory for Bott-Duffin inverse and generalized Bott-Duffin inverse, *Journal of University of Science and Technology of China*, **35** (2005), no. 3, 334–338.
34. C. Zhu, J. Cai, and G. Chen, Perturbation analysis for the reduced minimum modulus of bounded linear operator in Banach spaces, *Applied Mathematics and Computation*, **145** (2003), no.1, 13–21.
35. C. Zhu and G. Chen, Index splitting for the Drazin inverse of linear operator in Banach space, *Applied Mathematics and Computation*, **135** (2003), no.2-3, 201–209.
36. M. Wei and C. Zhu, On the total least squares problem, *Mathematica Numerica Sinica*, **24** (2002), no. 3, 345–352.
37. J. Cai, C. Zhu, and G. Chen, Perturbation theory for the α - β generalized inverse and its application, *Journal of East China Normal University (Natural Science Edition)*, **2001**, no. 4, 22–27.

C. Invited Book Chapters

1. Fubao Xi, G. Yin and C. Zhu, Regime-Switching Jump Diffusions with Non-Lipschitz Coefficients and Countably Many Switching States: Existence and Uniqueness, Feller, and Strong Feller Properties, in *IMA Volume on Modeling, Stochastic Control, Optimization, and Applications*, G. Yin and Q. Zhang, eds, Springer, 2019.

2. R.H. Stockbridge and C. Zhu, “Harvesting in Stochastic Environments: Optimal Policies in a Relaxed Model,” in *System Modeling and Optimization*, Dietmar Hömberg and Fredi Tröltzsch, eds., Springer, 2013, 197–206.
3. R.H. Stockbridge and C. Zhu, A direct approach to the solution of optimal multiple-stopping problems, in D. Hernández-Hernández and A. Minjárez-Sosa, editors, *Optimization, Control, and Applications of Stochastic Systems: In Honor of Onésimo Hernández-Lerma*, Birkhäuser, New York, 2012.
4. C. Zhu and G. Yin, Invariance principle of regime-switching diffusions. In Allanus Tsoi, David Nualart, and George Yin, editors, *Stochastic analysis, stochastic systems, and applications to finance*, World Sci. Publ., Hackensack, NJ, 2011.

D. Conference Proceedings

1. K. Helmes, R. Stockbridge and C. Zhu, Impulse Control of Standard Brownian Motion: Discounted Criterion, *Proceeding of the 2013 IFIP Conference on System Modeling and Optimization*, 158–169, 2014.
2. K. Helmes, R. Stockbridge and C. Zhu, Impulse control of standard Brownian motion: long-term average criterion, *Proceeding of the 2013 IFIP Conference on System Modeling and Optimization*, 148–157, 2014.
3. R. Feng, S. Zhang, and C. Zhu, Optimal Dividend Payments for the Piecewise Deterministic Poisson Risk Model, *Proceedings of the 51st IEEE Conference on Decision and Control*, 7309–7314, 2012.
4. T. Mohammadi, B. Wan, J.-G. Dai and C. Zhu, The Effect of RFP Stiffness Variation on FRP Debonding from Concrete. Rome: 6th International Conference on Composites in Civil Engineering, 2012.
5. George Yin and Chao Zhu, Hybrid switching diffusions: Continuity and differentiability, *Proceeding of the 50th IEEE Conference on Decision and Control and European Control Conference*, 5017–5022, 2011.
6. C. Zhu and G. Yin, Feller Continuity, Recurrence, and Stabilization of Regime-Switching Diffusions, *Proceedings of the 49th IEEE Conference on Decision and Control*, 667–672, 2010.
7. George Yin and Chao Zhu, Randomly switching systems: models, analysis, and applications, *Proceeding of the Chinese Control and Decision Conference*, iv– xiii, 2009. DOI: 10.1109/CCDC.2009.5192947.
8. C. Zhu and G. Yin, On Hybrid Competitive Lotka-Volterra Ecosystems, *Nonlinear Analysis: Theory, Methods & Applications*, **71** (2009), e1370–e1379. (Proceeding of the Fifth World Conference of Nonlinear Analysts (WCNA 2008))
9. C. Zhu and G. Yin, On Hybrid diffusions, *Proceedings of the 47th IEEE Conference on Decision and Control*, 1507–1512, 2008.
10. C. Zhu, G. Yin, and Q.S. Song, On stability of hybrid systems with random-switching, *Proceeding of the 44th Annual Allerton Conference on Communication, Control, and Computing*, 177–184, 2006.

E. Preprints

1. K. Helmes, R. Stockbridge, and C. Zhu, On the Modelling of Uncertain Impulse Control for Continuous Markov Processes, 2019.
2. Fuke Wu, George Yin and C. Zhu, Approximation of A Class of Functional Differential Equations with Wideband Noise Perturbations, 2019.
3. Dang Hai Nguyen, George Yin, and Chao Zhu, Long-term Analysis of A Stochastic SIRS Model with General Incidence Rates, 2019.
4. Fubao Xi, Chao Zhu, and Fuke Wu, Stochastic Damping Hamiltonian Systems with State-Dependent Switching: Existence and Uniqueness, Strong Feller Property and Exponential Ergodicity, 2018.

INVITED TALKS

1. July 2019, School of Mathematics and Statistics, Central South University for Nationalities, Wuhan, China.
Title: “Regime-Switching Jump-Diffusion Processes with Countable Regimes”
2. June 2019, SIAM Conference on Control and Its Applications, Chengdu, China.
Title: “Stochastic Damping Hamiltonian Systems with State-Dependent Switching”
3. April 2019, 2019 AMS Spring Eastern Sectional Meeting, University of Connecticut Hartford (Hartford Regional Campus), Hartford, CT.
Title: “A Weak Convergence Approach to Inventory Control Using a Long-term Average Criterion”
4. December 2018, “Mathematics in the City Beautiful: PDEs, SDEs, Control Theory, and Applications to Finance and Life Sciences,” University of Central Florida, Orlando, FL.
Title: “Regime-Switching Jump Diffusions with Non-Lipschitz Coefficients and Countably Many Switching States”
5. August 2018, Department of Applied Mathematics, Illinois Institute of Technology, Chicago, IL.
Title: “A Weak Convergence Approach to Inventory Control Using a Long-term Average Criterion”
6. July 2018, The 14h Workshop on Markov Processes and Related Topics, Sichuan University, Chengdu, China.
Title: “A Weak Convergence Approach to Inventory Control Using a Long-term Average Criterion”
7. July 2018, The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Taipei, Taiwan
Title: “On Feller and Strong Feller Properties of Regime-Switching Jump Diffusion Processes with Countable Regimes”
8. July 2018, The 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Taipei, Taiwan

- Title:* “A Weak Convergence Approach to Inventory Control Using a Long-Term Average Criterion”
9. June 2018, A Symposium on Optimal Stopping, Rice University, Houston, TX.
Title: “Regime-Switching Jump-Diffusion Processes with Countable Regimes”
 10. May 2018, Workshop on Modeling, Stochastic Control, Optimization, and Related Applications, the Institute for Mathematics and its Applications, University of Minnesota, Minneapolis, MN.
Title: “A Weak Convergence Approach to Inventory Control Using a Long-term Average Criterion”
 11. January 2018, AMS Special Session on Stochastic Processes, Stochastic Optimization and Control, Numerics and Applications, The 2018 Joint Mathematics Meetings, San Diego, CA.
Title: “Jump Type Stochastic Differential Equations with Non-Lipschitz Coefficients: Non Confluence, Feller and Strong Feller Properties, and Exponential Ergodicity”
 12. July 2017, The 13h Workshop on Markov Processes and Related Topics, Wuhan University, Wuhan, China.
Title: “Jump Type Stochastic Differential Equations with non-Lipschitz Coefficients and Feller and strong Feller Properties”
 13. July 2017, SIAM Conference on Control and Its Applications, Pittsburgh, PA.
Title: “Regime-Switching Jump Diffusions: Coupling Method, Feller and Strong Feller Properties”
 14. November 2016, SIAM Conference on Financial Mathematics and Engineering, Austin, TX.
Title: “Continuous Inventory Models of Diffusion Type: Long-Term Average Cost Criterion”
 15. August 2016, Probability Seminar in the Department of Mathematics, Iowa State University, Ames, IA.
Title: “On the Martingale Problem and Feller and Strong Feller Properties for Weakly Coupled Lévy Type Operators”
 16. July 2016, The 12h Workshop on Markov Processes and Related Topics, Jiangsu Normal University, Xuzhou, China.
Title: “On Feller and strong Feller properties of regime-switching jump-diffusion processes with countable regimes”
 17. July 2016, The 11th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Orlando, FL.
Title: “On Feller and strong Feller Properties of regime-switching jump diffusions”
 18. October 2015, AMS Fall Central Sectional Meeting, Special Session on Variational Analysis, Optimization, and Control, Loyola University Chicago, Chicago, IL.
Title: “Optimal Inventory Control with Path-Dependent Cost Criteria”
 19. July 2015 Department of Mathematics, Beijing Normal University, Beijing, China.
Title: “Continuous Inventory Models of Diffusion Type: Long-term Average Cost Criterion.”
 20. July 2015, Department of Mathematics, Beijing Institute of Technology, Beijing, China.

- Title:* “Optimal Inventory Control with Path-Dependent Cost Criteria”
21. July 2015, IMS-China International Conference on Statistics and Probability, Kunming, China.
Title: “On Optimal Ergodic Continuous Inventory Control Problems.”
Title: “Optimal Inventory Control with Path-Dependent Cost Criteria”
 22. June 2015, the 10th Workshop on Markov Processes and Related Fields, Shanghai Jiaotong University, Shanghai, China.
Title: “Optimal Inventory Control with Path-Dependent Cost Criteria”
 23. March 2015, AMS Spring Eastern Sectional Meeting, Special Session on Optimization Theory, Algorithms and Applications, Georgetown University, Washington D.C.
Title: “On Optimal Ergodic Continuous Inventory Control Problems.”
 24. October 2014, Midwest Optimization Meeting, Loyola University Chicago, Chicago, IL.
Title: “On Linear Programming Approach to Optimal Inventory Control Problems.”
 25. October 2014, Department of Mathematics, Iowa State University, Ames, IA.
Title: “A Measure Approach to Optimal Inventory Control Problems.”
 26. July 2014, Department of Mathematics, Beijing Information Science and Technology University, Beijing, China
Title: “A Measure Approach to Optimal Inventory Control Problems.”
 27. July 2014, Department of Mathematics, Gannan Normal University, Ganzhou, China
Title: “A Measure Approach to Optimal Inventory Control Problems.”
 28. June 2014, Department of Mathematics, Beijing Institute of Technology, Beijing, China.
Title: “On the Stochastic Solution to a Cauchy Problem Associated with Nonnegative Price Processes.”
 29. April, 2014, Department of Mathematics, City University of Hong Kong, Hong Kong.
Title: “ A Measure Approach to Continuous Inventory Control Problem.”
 30. January 2014, Department of Mathematics, Wayne State University, Detroit, MI.
Title: “On the Stochastic Solution to a Cauchy Problem Associated with Nonnegative Price Processes.”
 31. October 2013, INFORMS Annual Meeting 2013, Minneapolis, MN.
Title: “A Linear Programming Approach to Some Impulse Control Problems.”
 32. August 2013, Department of Mathematics, Wayne State University, Detroit, MI.
Title: “On Constrained Viscosity Solution to Coupled System of Fully Nonlinear Second Order Differential Equations and Optimal Harvesting Problems in Random Environments.”
 33. July 2013, SIAM Conference on Control and Its Applications, San Diego, CA.
Title: “Some New Perspectives toward Singular Control Problems”
 34. July 2013, IMS-China International Conference on Statistics and Probability, Chengdu, China.
Title: “A Measure Approach to Impulse Control Problems”

35. December 2012, the 51st IEEE Conference on Decision and Control, Maui, HI.
Title: “Optimal Dividend Policies for the Piecewise-Deterministic Compound Poisson Risk Model”
36. July 2012, Chinese Academy of Science, Beijing, China.
Title: “A Linear Programming Approach to Some Singular and Impulse Control Problems”
37. July 2012, Chinese Academy of Science, Beijing, China.
Title: “On Optimal Harvesting Problems in Random Environments”
38. April 2012, Department of Mathematics, Iowa State University, Ames, IA.
Title: “On Optimal Harvesting Problems in Random Environments”
39. April 2012, Department of Mathematics, Iowa State University, Ames, IA.
Title: “Optimal Dividend Policies for the Piecewise-Deterministic Compound Poisson Risk Model”
40. March 2012, Department of Mathematics, Statistics, and Computer Science, University of Illinois at Chicago, Chicago, IL.
Title: “On Optimal Harvesting Problems in Random Environments,”
41. December 2011, the 50th IEEE Conference on Decision and Control, Orlando, FL.
Title: “Hybrid Switching Diffusions: Continuity and Differentiability”
42. January 2011, the 2011 Joint Mathematics Meetings, New Orleans, LA.
Title: “On Optimal Harvesting Problem in Random Environments”
43. December 2010, the 49th IEEE Conference on Decision and Control, Atlanta, GA.
Title: “On strong Feller, recurrence, and weak stabilization of regime-switching diffusions”
44. May 2010, the Department of Mathematics, Wayne State University, Detroit, MI.
Title: “On Optimal Harvesting Problem in Random Environments”
45. June 2009, the Department of Applied Mathematics, Shanghai Finance University, Shanghai, China.
Title: “Regime Switching Diffusions, a Brief Survey”
46. May 2009, the Department of Mathematics, East China Normal University, Shanghai, China.
Title: “Regime Switching Diffusions, Model, Analysis, and Applications”
47. December 2008, the 47th Conference on Decision and Control, Cancun, Mexico.
Title: “On Asymptotic Properties of Hybrid Diffusion Systems”
48. September 2008, the Department of Mathematics, Wayne State University, Detroit, Michigan.
Title: “Competitive Lotka-Volterra Model in Random Environments”
49. July 2008, the Fifth World Conference of Nonlinear Analysts (WCNA 2008), Orlando, Florida.
Title: “Hybrid Competitive Lotka-Volterra Ecosystems”
50. February 2008, the Kansas-Missouri Winter School of Applied Probability, University of Missouri, Columbia, Missouri.
Title: “On Strong Feller, Recurrence, and Weak Stabilization of Regime Switching Diffusions”

51. January 2007, the Department of Mathematical Sciences, the University of Wisconsin-Milwaukee, Milwaukee, Wisconsin.
Title: "Asymptotic Properties of Stochastic Hybrid Diffusion Systems"
52. January 2007, the Joint Mathematical Meetings, New Orleans, Louisiana.
Title: "On Stability of a Class of Nonsmooth Dynamic Systems"
53. September 2006, the 44th Annual Allerton Conference on Communication, Control, and Computing, the University of Illinois, Urbana-Champaign, Illinois.
Title: "On Stability of Hybrid Systems with Random Switching"
54. May 2006, the International Conference in Hybrid Systems and Applications, the University of Louisiana, Lafayette, Louisiana.
Title: "On the notion of weak stability and related issues of hybrid diffusion systems"

CONTRIBUTED PRESENTATIONS

1. November 2014, the SIAM Conference on Financial Mathematics & Engineering, Chicago, IL.
Title: "On Linear Programming Approach to Optimal Inventory Control Problems."
2. July 2012, the SIAM Conference on Financial Mathematics & Engineering, Minneapolis, MN.
Title: "Optimal Dividend Payments for the Piecewise-Deterministic Compound Poisson Risk Model."
3. July 2011, the SIAM Conference on Control and its Applications, Baltimore, MD.
Title: "On Optimal Harvesting in Stochastic Environments: Optimal Policies in a Relaxed Model"
4. June 2010, the 19th International Workshop on Matrices and Statistics, Shanghai Finance University, Shanghai, China.
Title: "On Optimal Harvesting Problem in Random Environments"
5. March 2010, Seminar on Stochastic Processes 2010, Central Florida University, Orlando, FL.
Title: "On Optimal Harvesting Problem in Random Environments"
6. March 2009, Seminar on Stochastic Processes 2009, Stanford University, Stanford, California.
Title: "On Competitive Lotka-Volterra Model in Random Environments"
7. April 2008, Seminar on Stochastic Processes 2008, University of Delaware, Newark, Delaware.
Title: "On Competitive Lotka-Volterra Model in Random Environments"
8. September 2006, 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 at Wayne State University, Detroit, Michigan.
Poster: "Stability of Regime-Switching Diffusions"
9. September 2005, the Conference of Stochastic Control and Numerics at the University of Wisconsin, Milwaukee, Wisconsin.
Poster: "Asymptotic behavior of parabolic systems for null - recurrent switching diffusions"

PH.D. AND M.S. STUDENTS

1. T.M. Furtwaengler, M.S., 2018–2019.
2. L.P. Kunczik, M.S., 2017–2018.
3. S. Oberho, M.S., 2017–2018.
4. I.L. Siebigteroth, M.S., 2016–2017.
5. E. Mueller, M.S., 2015–2016.
6. R. Adhikari, Ph.D., 2011–2015. (co-adviser: Bruce Wade)
7. T. Bielert, M.S., 2012–2013.
8. J. Bluhm, M.S., 2010–2011. (co-adviser: R. Stockbridge)
9. L. Zhuo, M.S., 2009–2010.
10. H.P. Steiner, M.S., 2009–2010. (co-adviser: R. Stockbridge)
11. C. Rolser, M.S., 2008–2009.

PROFESSIONAL SERVICE

1. Associate Editor for *SIAM Journal on Control and Optimization*, January 2018–Present.
2. Associate Editor for *Stochastics An International Journal of Probability and Stochastic Processes*, May 2018–present.
3. Associate Editor for *Statistics and Probability Letters*, January 2014–present.
4. SIAM Liaison and Editor for SIAM Regular Papers for 2014, 2015, 2016, and 2017 IEEE Conference on Decision and Control.
5. Served in the Program Committee of the 2013 and 2019 SIAM Conferences on Control and Its Applications, San Diego, CA.
6. (co-)organized minisymposiums and special sessions in SIAM conferences AMS meetings.
7. Reviewer for
AMS Mathematical Reviews
8. Referee for
Annals of Applied Probability
Journal of Differential Equations
SIAM Journal on Control and Optimization
Stochastic Processes and their Applications
Applied Mathematics and Optimization
Automatica
IEEE Transactions on Automatic Control
Journal of Mathematical Analysis and Applications
Statistics & Probability Letters
System and Control Letters
Journal of Advanced Research in Differential Equations
Asian Journal of Control
Journal of Theoretical Biology
Computer Physics Communications
Science China Mathematics
Taiwanese J. of Mathematics

2010 American Control Conference
Nonlinear Analysis: Modeling and Control
The 47th IEEE Conference on Decision and Control
IMA Journal of Management Mathematics
The 2009 IEEE International Symposium on Circuits and Systems.

9. Proposal reviewer for

Natural Sciences and Engineering Research Council of Canada
The National Fund for Scientific & Technological Development (FONDECYT), Chilean
Department of Mathematics, City University of Hong Kong
The Research Foundation of the City University of New York
The Romanian National Council for Scientific Research

PROFESSIONAL ASSOCIATIONS

1. American Mathematical Society ([AMS](#))
2. Society for Industrial and Applied Mathematics ([SIAM](#))