

# Curriculum Vitae

## Dongsheng Wu

### WORK ADDRESS

Department of Mathematical Sciences, Shelby Center, 201L

The University of Alabama in Huntsville

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### EMPLOYMENT

August 2019–, **Professor**, Department of Mathematical Sciences, The University of Alabama in Huntsville, Huntsville

August 2012–July 2019, **Associate Professor**, Department of Mathematical Sciences, The University of Alabama in Huntsville, Huntsville

August 2006–July 2012, **Assistant Professor**, Department of Mathematical Sciences, The University of Alabama in Huntsville, Huntsville

2005–2006, **Research Assistant**, Department of Statistics and Probability, Michigan State University East Lansing, Michigan

1999–2005, **Teaching Assistant**, Department of Mathematics, Michigan State University, East Lansing, Michigan

1996–1999, **Research Assistant**, Institute of Systems Science, Chinese Academy of Sciences, Beijing, China

1989–1996, **Instructor**, Department of Mathematics, Hebei University, Baoding, China

### EDUCATION

**Ph.D.** in Mathematics, Michigan State University, East Lansing, Michigan, 2006.

Dissertation: *Geometric properties of anisotropic Gaussian random fields.*

Dissertation Advisor: Yimin Xiao.

**M.S.** in Statistics, Michigan State University, East Lansing, Michigan, 2005.

**Ph.D.** in Applied Mathematics, Institute of Systems Science, Chinese Academy of Sciences, Beijing, China, 1999.

Dissertation: *High accuracy finite element analysis for elliptic eigenvalue problems.*

Dissertation Advisor: Qun Lin.

**M.S.** in Applied Mathematics, Hebei University, Baoding, China, 1989.

**B.S.** in Mathematics, Hebei University, Baoding, China, 1986.

## **COURSES TAUGHT AT UAH (Since 2006)**

**Undergraduate Courses:** MA 172 (Calculus B), MA 238 (Applied Differential Equations), MA 244 (Introduction to linear Algebra), MA 385 (Introduction to Probability and Statistics), MA 452/502 (Introduction to Real Analysis), MA 487 (Introduction to Mathematical Statistics), Hon 499 (Honors Thesis)

**Graduate Courses:** MA 538 (Metric Spaces with Applications), MA 585 (Probability), MA 653 (Real Analysis I), MA 654 (Real Analysis II), MA 685 (Stochastic Processes with Applications I), MA 6856 (Stochastic Processes with Applications II), MA 699 (Master's Thesis), MA 799 (Doctoral Dissertation)

## **PH.D. STUDENTS ADVISED AS COMMITTEE CHAIR**

- Margaret Lund, graduated in May 2019  
Title of Dissertation: Local Supervised Methods and Uncertainty Quantification for Boundary Detection in Images
- Yunzhu He, graduated in December 2015  
Title of Dissertation: Wavelet Estimators in Nonparametric Regression Model and Simulation Study

## **PH.D. STUDENTS AS DISSERTATION COMMITTEE MEMBER**

Luis Deganis (MAE, Chair: Dr. Wang), Jinnan Chen (ECE, Chair: Dr. Guo), Kumar Sharshembiev (ECE, Chair: Dr. Yoo), Zhuocheng Jiang (ECE, Chair: Dr. Pan), Yuhang Dong (ECE, Chair: Dr. Pan), Bernard Benson (ECE, Chair: Dr. Pan), Jonathan Louis Sewell (Math, Chair: Dr. Zhang), Eric Forrest (ECE, Chair: Dr. Joiner), Amir Liaghati (ECE, Chair: Dr. Pan), Yang Li (Math, Chair: Dr. Li), Omkar Kulkarni (CS, Chair: Dr. Zhang), David Moody (ECE, Chair: Dr. Joiner), Lei Xiahou (Math, Chair: Dr. Siegrist), Anthony Hester (Math, Chair: Dr. Morales), Farshad Kheiri (ECE, Chair: Dr. Joiner), B.J. Smith (CS, Chair: Dr. Delugach), Bradley Butler (ECE, Chair: Dr. Joiner), Shawn German (ECE, Chair: Dr. Joiner), Leif Sandstrom (ECE, Chair: Dr. Fork), Allen O'Neal (Math, Chair: Dr. Slater), Olusegun Sholiyi (ECE, Chair: Dr. Williams), Yi Wang (CS, Chair: Dr. Zhu), Hai Quang Dinh (ECE, Chair: Dr. Adhami).

## MASTER'S STUDENTS SUPERVIZED

### As Committee Chair (All in Math)

Tianwei Yang, Catherine Wilson, Chloe Mazzone, Michael Palmer

### As Committee Member

Sopan Sarkar (ECE), Colton Smallwood (Math), Amir Liaghati (ECE), Peipei Cao (ECE), Mark DeVirgilio (ECE), Andrew Paul (Math), Byunghoon Lee (Math), Andrew Eadon (Math), Kelly Krause (Math), Reem Albashaireh (Math), Siavash Mohammadalipoor (Math), Joe Valentine (Math)

## UNDERGRADUATE HONOR THESIS SUPERVIZED

- Austin Deavers

## AREAS OF RESEARCH INTERESTS

Stochastic processes and random fields, stochastic partial differential equations, statistical properties of random fields, random fractal, numerical methods for stochastic computations, nonstationary time series econometrics, statistical image segmentation.

## GRANTS, FELLOWSHIPS AND SPONSORED RESEARCH

- PI (with co-PI: Dr. T. Diagana): NSF Conference Grant, NSF/CBMS Research Conference in the Mathematical Sciences “Gaussian Random Fields, Fractals, SPDEs, and Extremes” (Main Speaker: Prof. Yimin Xiao from Michigan State University), \$35,000, January 01, 2020-December 31, 2020. (Due to COVID-19, the grant has been extended to December 31, 2021.)
- PI: “Statistical Frameworks for Image Segmentation Methods”, National Security Technologies, \$500,000, August 2016-September 2021.
- Co-PI (with PI: Dr. W. D. Pan): “Deep Generative Context Modeling and Learning Methods for Big Data Compression”, 2016 UAH Cross-College Faculty Research (CCFR) Program, \$5,000, October 2016-October 2017.
- PI: 2017 Distinguished Lecturer Grant (Invited Speaker: A/Prof. Qiyang Wang of University of Sydney, Australia), \$2,000.
- Visiting Associate Professor: School of Mathematics and Statistics, University of Sydney, Sydney, Australia. August 2014-November 2014 and April 2015-June 2015, AU\$32,100, sponsored by University of Sydney and a Discovery Project from Australian Research Council.
- PI: 2015 Distinguished Lecturer Grant (Invited Speaker: Prof. Zheng-Qing Chen of University of Washington Seattle), \$2,000.

- Co-PI (with PI: Dr. W. D. Pan): “Efficient Data Compression Via Adaptive Statistical Source Modeling”, 2014 UAH Cross-College Faculty Research (CCFR) Program, \$5,000, August 2014-May 2015.
- PI (with co-PI: Dr. K. Siegrist): NSF/CBMS Research Conference in the Mathematical Sciences “Small Deviation Probabilities: Theory and Applications” (Main Speaker: Prof. Wenbo V. Li from University of Delaware), NSF (DMS-1137804), \$39,125, October 01, 2011-September 30, 2012.
- NSF travel grant \$450 to attend 33rd Midwest Probability Colloquium, Northwestern University, Evanston. (October 2011)
- NSF travel grant \$750 to attend Seminar on Stochastic Processes 2011, University of California Irvine, Irvine. (March 2011)
- NSF travel grant \$700 to attend 9th Northeast Probability Seminar, CUNY, New York (November 2010)
- NSF travel grant \$500 to attend Seminar on Stochastic Processes 2010, University of Central Florida, Orlando. (March 2010)
- NSF travel grant \$400 to attend 1st IMS-Asia Pacific Rim Meeting, Seoul, Korea. (June 2009)
- ANR (France) grant \$3,000 (approx.) to attend Spring School on Random Differential Equations and Gaussian Fields, Chateau de Mons, France (June 2009)
- NSF travel grant \$400 to attend 2009 Barrett Lectures at The University of Tennessee, Knoxville. (April 2009)
- PI: 2009 Distinguished Lecturer Grant (Invited Speaker: Prof. Davar Khoshnevisan of University of Utah), \$2,000.
- NSF and AIM travel grant \$2,000 (approx.) to attend Workshop on Small Ball Inequalities in Analysis, Probability, and Irregularities of Distribution, American Institute of Mathematics, Palo Alto. (December 2008)
- NSF travel grant \$800 to attend 7th Northeast Probability Seminar, New York University, New York. (November 2008)
- NSF travel grant \$400 to attend CBMS Research Conference on Malliavin Calculus and its Applications, Kent State University, Kent. (August 2008)
- NSF travel grant \$500 to attend Seminar on Stochastic Processes 2008, University of Delaware, Newark. (April 2008)
- NSF travel grant \$600 to attend 6th Northeast Probability Seminar, CUNY, New York (November 2007)
- NSF travel grant \$600 to attend 32nd Conference on Stochastic Processes and their Applications, UIUC, Urbana-Champaign. (August 2007)

## PUBLICATIONS

1. M. Lund, M. Howard, **D. Wu**, R. Crum, D. Miller and M. Akin, An anisotropic local method for boundary detection in images. *WiSDM 2021 Proceedings*, accepted, 2021.
2. Z. Chen, J. Wang and **D. Wu**, On intersections of independent space-time anisotropic Gaussian fields. *Statistics and Probability Letters*, **166** (2020), Paper 108874.
3. R. Harrell, R. Song, **D. Wu** and Y. Xiao, Sharp space-time regularity of the solution to a stochastic heat equation driven by a fractional-colored noise. *Stochastic Analysis and Applications*, **38** (2020), 747-768.
4. Y. Dong, W.D. Pan and **D. Wu**, Impact of misclassification rates on compression efficiency of red blood cell images of malaria infection using deep learning. *Entropy*, **21** (2019), Paper 1062.
5. Q. Wang, **D. Wu** and K. Zhu, Model checks for nonlinear cointegrating regression. *Journal of Econometrics*, **207** (2018), 261-284.
6. Y. He and **D. Wu**, Wavelet based estimators of multivariable mean regression function with long memory data. *Communications in Statistics-Theory and Methods*, **47** (2018), 2389-2406.
7. W. D. Pan, Y. Dong, and **D. Wu**, Classification of Malaria Infected Cells Using Deep Convolutional Neural Networks, Book Chapter in *Machine Learning - Advanced Techniques and Emerging Applications*, ISBN 978-1-78923-753-5, 2018.
8. C. Ouyang, Y. Shi and **D. Wu**, Mutual intersection for rough differential systems driven by fractional Brownian motions. *Statistics and Probability Letters*, **135** (2018), 83-91.
9. S. Smith, G. Wang and **D. Wu**, Bayesian approach to breathing crack detection in beam structures. *Engineering Structures*, **148** (2017), 829-838.
10. H. Shen, W. D. Pan and **D. Wu**, Predictive lossless compression of regions of interest in hyperspectral images with no-data regions. *IEEE Transactions on Geoscience and Remote Sensing*, **55** (2017), 173-182.
11. H. Shen, W. D. Pan, **D. Wu** and M. Lubna, Fast Golomb coding parameter estimation method using partial data and its application in hyperspectral image compression. *Proc. IEEE SoutheastCon 2016*, July 2016.
12. Y. Du, J. Miao, **D. Wu** and Y. Xiao, Packing dimensions of the images of Gaussian random fields. *Statistics and Probability Letters*, **106** (2015), 209-217.
13. Z. Chen, **D. Wu** and Y. Xiao, Smoothness of local times and self-intersection local times of Gaussian random fields. *Frontiers of Mathematics in China*, **10** (2015), 777-805.
14. **D. Wu**, Fractional Brownian sheets run with nonlinear clocks. *Journal of Mathematical Physics*, **53** (2012), Paper 013514.

15. R.C. Dalang, D. Khoshnevisan, E. Nualart, **D. Wu** and Y. Xiao, Critical Brownian sheet does not have double points. *Annals of Probability*, **40** (2012), 1829-1859.
16. E. Nane, **D. Wu** and Y. Xiao, Local times of multidimensional  $\alpha$ -time fractional Brownian motion. *ESAIM: Probability & Statistics*, **16** (2012), 1-24.
17. M. DeVirgilio, W. D. Pan, L. L. Joiner and **D. Wu**, Internet delay statistics: Measuring internet feel using a dichotomous hurst parameter. *Proc. IEEE SoutheastCon 2012*, March 2012.
18. **D. Wu**, On the solution process of a stochastic fractional partial differential equation driven by space-time white noise. *Statistics and Probability Letters*, **81** (2011), 1161-1172.
19. **D. Wu**, Mixed fractional Brownian sheets and their applications. *Journal of Mathematical Physics*, **52** (2011), Paper 063510.
20. **D. Wu** and Y. Xiao, On local times of anisotropic Gaussian random fields. *Communications on Stochastic Analysis*, **5** (2011), 14-39.
21. A. Estrade, **D. Wu** and Y. Xiao, Packing dimension results for anisotropic Gaussian random fields. *Communications on Stochastic Analysis*, **5** (2011), 41-64.
22. **D. Wu** and Y. Xiao, Regularity of intersection local times of fractional Brownian motions. *Journal of Theoretical Probability*, **23** (2010), 972-1001.
23. J. Fu, H.J. Caulfield, **D. Wu** and T. Montgomery, Effects of hyperellipsoidal decision surfaces on image segmentation in artificial color. *Journal of Electronic Imaging*, **19** (2010), Paper 023003.
24. J. Fu, H.J. Caulfield, **D. Wu** and W. Tadesse, Hyperspectral image analysis using artificial color. *SPIE Journal of Applied Remote Sensing*, **4** (2010), Paper 043514.
25. J. Fu, H.J. Caulfield, S.M. Yoo and **D. Wu**, Fuzzy aggregation with artificial color filters. *Information Sciences*, **180** (2010), 167-180.
26. **D. Wu** and Y. Xiao, Uniform dimension results for Gaussian random fields. *Science in China Series A: Mathematics*, **52** (2009), 1478-1496.
27. **D. Wu** and Y. Xiao, Continuity in the Hurst index of the local times of anisotropic Gaussian random fields. *Stochastic Processes and their Applications*, **119** (2009), 1823-1844.
28. M. Meerschaert, **D. Wu** and Y. Xiao, Local times of multifractional Brownian sheets. *Bernoulli*, **14** (2008), 865-898.
29. A. Ayache, **D. Wu** and Y. Xiao, Joint continuity of the local times of fractional Brownian sheets. *Annales de l'Institut Henri Poincaré - Probabilité s et Statistiques*, **44** (2008), 727-748.
30. F. Kheiri, B. Dewberry, **D. Wu** and L. Joiner, Capacity analysis of an ultrawideband active RFID system. *Proc. IEEE SoutheastCon 2008*, Huntsville, Alabama, April 2008.

31. **D. Wu**, Dimension results for multifractional Brownian sheets. *Journal of Mathematical Physics*, **48** (2007), Paper 073511.
32. **D. Wu**, Generalized Pickands constants. *Journal of Mathematical Physics*, **48** (2007), Paper 053513.
33. **D. Wu** and Y. Xiao, Geometric properties of fractional Brownian sheets. *Journal of Fourier Analysis and Applications*, **13** (2007), 1-37.
34. **D. Wu** and Y. Xiao, Dimensional properties of fractional Brownian motion. *Acta Mathematica Sinica*, **23** (2007), 613-622.
35. D. Khoshnevisan, **D. Wu** and Y. Xiao, Sectorial local nondeterminism and the geometry of the Brownian sheet. *Electronic Journal of Probability*, **11** (2006), 817-843.
36. **D. Wu** and Y. Xiao, Fractal properties of the random string processes. *IMS Lecture Notes: High Dimensional Probability*, **51** (2006), 128-147.
37. **D. Wu**, Probabilistic numerical approach for PDE and its application in the valuation of European options. *Journal of Computational Mathematics*, **19** (2001), 591-600.
38. **D. Wu**, High accuracy analysis of elliptic eigenvalue problem for the Wilson nonconforming finite element. *Acta Mathematicae Applicatae Sinica*, **17** (2001), 200-206.
39. **D. Wu**, Convergence and superconvergence of Hermite bicubic elements for eigenvalue problem of the biharmonic equation. *Journal of Computational Mathematics*, **19** (2001), 139-142.
40. Q. Lin and **D. Wu**, High-accuracy approximations for eigenvalue problems by the Carey nonconforming finite element. *Communications in Numerical Methods in Engineering*, **15** (1999), 19-31.
41. **D. Wu** and X. Yang, Representation of solutions for steady-state convection-diffusion equations. (in Chinese) *Gongcheng Shuxue Xuebao*, **16** (1999), 46-50.
42. **D. Wu**, Superconvergence of eigenvalue problems for the sparse finite element. *Journal of Hebei University*, **18** (1998), (2).
43. **D. Wu**, Probabilistic approach to the initial-boundary value problem for a class of convection-diffusion equations. (in Chinese) *Journal of Mathematical Statistics and Applied Probability*, **12** (1997), (2).
44. **D. Wu**, Probabilistic numerical solution to the Dirichlet problem of quasi-linear PDE. (in Chinese) *Journal of Hebei University*, **16**(1996), (1).
45. **D. Wu**, Probabilistic representation of the solution of diffusion equations. (in Chinese) *Journal of Mathematical Statistics and Applied Probability*, **11** (1996), (4).
46. **D. Wu** and H. Wu, The Dirichlet problem of a diffusion equation with vibration boundary values. (in Chinese) *Journal of Mathematical Research and Exposition*, **16** (1996), 213-218.

47. **D. Wu**, A probabilistic solution to the Cauchy problem for the convection-diffusion equation. (in Chinese) *Chinese Science Bulletin*, **40** (1995), 2209-2211.
48. H. Wu, **D. Wu** and Y. Sun, A simple and practical explicit difference scheme for planar parabolic equations. (in Chinese) *Pure and Applied Mathematics*, **11** (1995), 86-88.
49. **D. Wu**, Generalized Dirichlet problem for quasi-linear diffusion equations. (in Chinese) *Journal of Mathematical Statistics and Applied Probability*, **10** (1995), (1).
50. **D. Wu**, Probabilistic approach to the Dirichlet problem for the steady-state convection-diffusion equations. (in Chinese) *Journal of Xibei University*, **24** (1994), (Supplemental Edition).
51. **D. Wu**, Regular generalized solution for diffusion equations. (in Chinese) *Journal of Hebei University*, **14** (1994), (3).
52. **D. Wu**, Uniqueness of the solution to the stochastic Dirichlet problem for heat equation. (in Chinese) *Journal of Hebei University*, **11** (1991), (2).

## CONFERENCES, SEMINAR TALKS AND ACADEMIC VISITS

1. Statistics Seminar, Department of Mathematics, University of Mississippi, October 11, 2019.
2. Invited Speaker, 15th International Workshop on Markov Processes and Related Topics, Jilin University, Changchun, China, July 11-16, 2019.
3. Colloquium, Donghua University, Shanghai, China, July 1, 2019.
4. Colloquium, Zhejiang Gongshang University, Hangzhou, China, June 28, 2019.
5. Invited Speaker, International Conference on Stochastic Analysis and Related Topics, Jiangsu Normal University, Xuzhou, China, June 22-27, 2019.
6. Invited Speaker, Workshop on Gaussian Random Fields and Related Topics, East China Normal University, Shanghai, China, May 24-26, 2019.
7. Invited Speaker, Special Session on "Probability and Stochastic Processes" at the AMS Spring Southeastern Sectional Meeting, Auburn University, Auburn, Alabama, March 15-17, 2019.
8. Faculty Speaker, The 31st Annual UA System Applied Mathematics Meeting, University of Alabama in Huntsville, Huntsville, Alabama, November 10, 2018.
9. Colloquium, School of Mathematics and Statistics, Jiangsu Normal University, Xuzhou, China, July 2, 2018.
10. Invited Speaker and Invited Paper Session Organizer, The 5th Institute of Mathematical Statistics Asian Pacific Rim Meeting, National University of Singapore, Singapore, June 26-29, 2018.



11. Invited Speaker, The Joint AMS-CMS Meeting, Fudan University, Shanghai, China, June 11-14, 2018.
12. Colloquium, Department of Mathematics, University of Alabama at Birmingham, Birmingham, January 26, 2018.
13. Colloquium, Department of Applied Mathematics, Communication University of China, Beijing, China, December 14, 2017.
14. The 30th Annual UA System Applied Mathematics Meeting, University of Alabama at Birmingham, Birmingham, Alabama, November 4, 2017.
15. Invited Speaker, SIAM Conference on Computational Science and Engineering 2017, Atlanta, Georgia, February 27-March 3, 2017.
16. Joy of Thinking Seminar, University of Alabama in Huntsville, Huntsville, February 10, 2017.
17. Invited Speaker, 2017 Joint Mathematical Meetings, Atlanta, Georgia, January 4-7, 2017.
18. The 29th Annual UA System Applied Mathematics Meeting, University of Alabama, Tuscaloosa, Alabama, November 2016.
19. Invited Speaker and Contributed Paper Session Organizer, The 4th Institute of Mathematical Statistics Asian Pacific Rim Meeting, Chinese University of Hong Kong, Hong Kong, June 27-30, 2016.
20. Colloquium, School of Statistics and Mathematics, Zhejiang Gongshang University, Hangzhou, China, May 24, 2016.
21. The 28th Annual UA System Applied Mathematics Meeting, University of Alabama in Huntsville, Huntsville, Alabama, November 7, 2015.
22. Colloquium, Department of Mathematical Sciences, University of Alabama in Huntsville, Huntsville, September 18, 2015.
23. Special Session on "Stochastic Processes and Related Topics" at AMS 2015 Spring Southeastern Meeting, The University of Alabama in Huntsville, Huntsville, Alabama, March 27-29, 2015. (Co-organizer, with Dr. P. Jung and Dr. E. Nane)
24. Visiting Associate Professor, School of Mathematics and Statistics, University of Sydney, Sydney, Australia, August - November, 2014, and April - June 2015.
25. Statistics Seminar Talk, School of Mathematics and Statistics, University of Sydney, Sydney, Australia, September 26, 2014.
26. Probability and Statistics Colloquium, School of Mathematics and Statistics, Jiangsu Normal University, Xuzhou, China, July 2, 2014.
27. Colloquium, College of Applied Sciences, Beijing University of Technology, Beijing, China, June 18, 2014.

28. Colloquium, School of Mathematics and Statistics, Zhejiang Gongshang University, Hangzhou, China, May 29, 2014.
29. Colloquium, College of Science, Hangzhou Normal University, Hangzhou, China, May 20, 2014.
30. The 26th Annual UA System Applied Mathematics Meeting, University of Alabama, Tuscaloosa, Alabama, November 2, 2013.
31. NSF/CBMS Research Conference in the Mathematical Sciences on “Analysis of Stochastic Partial Differential Equations”, Michigan State University, East Lansing, August 19-23, 2013.
32. Lectures on Numerical Methods for Stochastic Computations, Communication University of China, Beijing, China, July 8-12, 2013. (A series of ten hours of lectures)
33. The 4th IMS-China Conference on Statistics and Probability, Southwestern University of Finance and Economics, Chengdu, China, June 30-July 4, 2013. (Invited Talk)
34. International Conference on Advances of Fractals and Related Topics, Chinese University of Hong Kong, Hong Kong, December 10-14, 2012. (Invited Talk)
35. NSF/CBMS Research Conference in the Mathematical Sciences on “Small Deviation Probabilities: Theory and Applications”, University of Alabama in Huntsville, Huntsville, June 4-8, 2012. (Organizer)
36. Mathematical Colloquium, University of Alabama at Birmingham, Birmingham, April 20, 2012.
37. Seminar on Stochastic Processes 2011, University of California Irvine, Irvine, California, March 24-26, 2011. (Contributed Talk)
38. The 9th Northeast Probability Seminar, CUNY, New York, November 18-19, 2010. (Contributed Talk)
39. The 23rd Annual UA System Applied Mathematics Meeting, University of Alabama, Tuscaloosa, Alabama, October 30, 2010.
40. Seminar on Stochastic Processes 2010, University of Central Florida, Orlando, Florida, March 11-13, 2010.
41. Probability Seminar Talk, Department of Mathematical Sciences, University of Delaware, Newark, Delaware, December 18, 2009.
42. Probability Seminar Talk, Department of Mathematics, UIUC, Urbana-Champaign, Illinois, December 08, 2009.
43. The 22nd Annual UA System Applied Mathematics Meeting, University of Alabama in Huntsville, Huntsville, Alabama, November 07, 2009.

44. Probability Seminar Talk, Department of Mathematics, University of Tennessee at Knoxville, Knoxville, Tennessee, October 19, 2009.
45. Colloquium Talk, Department of Mathematical Sciences, University of Alabama in Huntsville, Huntsville, Alabama, August 28, 2009.
46. The 3rd International Conference on Stochastic Analysis and Its Applications, Beijing Institute of Technology, Beijing, China, July 13-17, 2009. (Contributed Talk)
47. IMS-China International Conference on Statistics and Probability 2009, Shandong University, Weihai, China, July 3-6, 2009. (Invited Talk)
48. The 1st IMS Asia Pacific Rim Meeting, Seoul National University, Seoul, Korea, June 28-July 1, 2009. (Invited Talk)
49. Spring School on Random Differential Equations and Gaussian Fields, Chateau de Mons, France, June 15-19, 2009. (Contributed Talk)
50. 2009 Barrett Lectures at The University of Tennessee, Knoxville, Tennessee, April 17-18, 2009.
51. Workshop on "Small Ball Inequalities in Analysis, Probability, and Irregularities of Distribution", American Institute of Mathematics, Palo Alto, California, December 8-12, 2008. (By Invitation)
52. The 7th Northeast Probability Seminar, New York University, New York, November 20-21, 2008. (Contributed Talk)
53. The 21st Annual UA System Applied Mathematics Meeting, University of Alabama at Birmingham, Birmingham, Alabama, November 1, 2008.
54. Special Session on "Gaussian Analysis & Stochastic Partial Differential Equations" at AMS 2008 Fall Southeastern Meeting, The University of Alabama in Huntsville, Huntsville, Alabama, October 24-26, 2008. (Co-organizer, with Dr. D. Khoshnevisan)
55. NSF/CBMS Research Conference on Malliavin Calculus and its Applications, Kent State University, Kent, Ohio, August 7-12, 2008. (Contributed Talk)
56. IMS-China International Conference on Statistics and Probability 2008, Zhejiang University, Hangzhou, China, June 11-13, 2008. (Invited Talk)
57. Seminar on Stochastic Processes 2008, University of Delaware, Newark, Delaware, April 03-05, 2008.
58. The 6th Northeast Probability Seminar, CUNY, New York, November 15-16, 2007. (Contributed Talk)
59. The 20th Annual UA System Applied Mathematics Meeting, University of Alabama, Tuscaloosa, Alabama, October 27, 2007. (Faculty Talk)

60. The 29th Midwest Probability Colloquium, Northwestern University, Evanston, Illinois, October 19-20, 2007.
61. The 32nd Conference on Stochastic Processes and their Applications, UIUC, Urbana-Champaign, Illinois, August 06-10, 2007. (Invited Talk)
62. The 19th Annual UA System Applied Mathematics Meeting, University of Alabama in Huntsville, Huntsville, Alabama, October 21, 2006.
63. 2006 AMS Western Section Meeting, University of Utah, Salt Lake City, Utah, October 07-08, 2006.
64. 2006 CNA Summer School, Carnegie Mellon University, Pittsburgh, Pennsylvania, May 29-June 06, 2006. (Contributed Talk)
65. VIGRE Mini-Course on Stochastic Partial Differential Equations, University of Utah, Salt Lake City, Utah, May 08-19, 2006.
66. Probability Seminar Talk, Department of Mathematical Sciences, University of Delaware, Newark, Delaware, April 28, 2006.
67. Colloquium Talk, Department of Mathematics, University of Texas Pan-American, Edinburg, Texas, February 13, 2006.
68. Colloquium Talk, Department of Mathematical Sciences, University of Alabama in Huntsville, Huntsville, Alabama, February 08, 2006.
69. The 27th Midwest Probability Colloquium, Northwestern University, Evanston, Illinois, October 20-22, 2005.
70. The 4th International Conference on High Dimensional Probability, Santa Fe, New Mexico, June 20-24, 2005. (Contributed Talk)
71. The 26th Midwest Probability Colloquium, Northwestern University, Evanston, Illinois, October 15-16, 2004.
72. Workshop on State of the Art in Finite Element Methods, City University of Hong Kong, Hong Kong, July 21-24, 1998. (Invited Talk)

## **SERVICES TO THE INSTITUTE**

### **Department**

- Graduate Program Director (Fall 2019–)
- JUMP Coordinator (Fall 2019–)
- Member of Joint PhD Program Committee (Fall 2019–)
- Member of Lecturer Reappointment Committee (Spring 2019 and Spring 2020)
- Departmental Representative at Graduate Open House (Nov. 15, 2018)
- Member of Two Senior Lecturer Promotion Committees (Fall 2018)

- Graduate Adviser (Fall 2018)
- Member of Review Committee (Fall 2018)
- Member of Graduate Curriculum Committee (Fall 2018)
- Course Coordinator for MA 281, MA 385 and MA 487 since August 2016
- Member of External Department Chair Searching Committee. (2016 and 2017)
- Member of Lecturer Reappointment Committee (2016)
- Member of Faculty Reappointment Committee (2013, 2014)
- Member and Chair of the mathematical faculty searching committee (2012, 2013)
- Chair of the Real Analysis Exam committee for the PhD Joint Program Exam (Spring 2012)
- Member of the Real Analysis Exam committee for the PhD Joint Program Exam (Fall 2008, Spring and Fall 2010, Spring 2017, and Spring 2018)
- Colloquium coordinator of Department of Mathematical Sciences since January 2008
- UAH College Fairs (three times in 2007)
- Graduate recruitment talk at University of Tennessee at Chattanooga (March 2007)
- Appointed as a graduate faculty member since November 2006

## College

- Member of Graduate Council (Fall 2019–)
- Member of Promotion and Tenure Committee (PTC) of College of Science (2017)
- External Member of Promotion Committee (Physics) (2016)
- Member of Recruitment Committee since August 2007

## University

- Trip to China for recruiting potential graduate students coming to UAH (December 2017) [An agreement between Hohai University and UAH for a 3+1+1 Master of Science in Mathematics Program was signed in June 2018.]
- Committee Member of Reappointment Committee (College of Education) (2017, 2018, 2019 and 2020)
- Member of Governance and Operations Committee (Faculty Senate) (August 2016-May 2017)
- Member of Faculty Senate (2008-2012, August 2016-May 2017)
- Member of the Undergraduate Scholastic Affairs Committee (Faculty Senate) (2008-2012)
- Observer of Ph.D. dissertation defense for School of Graduate Studies (Fall 2011, Spring 2014)
- Observer of Masters thesis defense for School of Graduate Studies (Fall 2010, and Fall 2013)

- Volunteer of Faculty Phone A Thon (Spring 2011)
- Mentor for NASA MUST (Motivating Undergraduates in Science and Technology) Mentorship Program, 2009
- Judge for 2007 National JSHS (Junior Science and Humanities Symposium), May 2007, Huntsville

## PROFESSIONAL SERVICES

### Editorial Service

- Associate Editor, Statistics and Probability Letters (since August 2014)

### Review and Referee Service

- Mathematical Reviews (since June 2007, 42 papers reviewed)
- Journal of Applied Mathematics and Computing
- Journal of the Korean Mathematical Society
- Transactions of the American Mathematical Society
- Acta Mathematica Sinica (3)
- Stochastic Processes and their Applications (4)
- Pattern Recognition
- Journal of Theoretical Probability (4)
- Statistics and Probability Letters (16)
- Science in China Series A: Mathematics (6)
- IEEE Transaction on Systems, Man and Cybernetics
- Bernoulli (2)
- Computers and Mathematics with Applications
- IMS Lecture Notes
- Chaos, Solitons & Fractals
- Stochastics and Dynamics
- Journal of Fractal Geometry (2)
- Electronic Communications in Probability
- Stochastics
- Communications in Statistics-Simulation and Computation
- Journal of Probability and Statistical Science
- Stochastics and Partial Differential Equations: Analysis and Computations
- Journal of Mathematical Analysis and Applications
- Probability in the Engineering and Informational Sciences

- Probability and Mathematical Statistics
- International Journal of Stochastic Analysis
- Applied Mathematics Letters
- Abstract and Applied Analysis
- Journal of Inequalities and Applications
- Acta Mathematica Scientia
- Bulletin of the Korean Mathematical Society

## **MEMBERSHIPS**

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