

# CURRICULUM VITAE

## Dongsheng Wu

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### **Research Interests**

Stochastic Processes and Random Fields  
Stochastic Partial Differential Equations  
Statistical Properties of Gaussian Random Fields  
Random Fractal  
High Accuracy Finite Element Analysis

### **Education**

5/2006: Ph.D. in Mathematics

Michigan State University

Thesis Advisor: Professor Yimin Xiao

7/1999: Ph.D. in Applied Mathematics

Institute of Systems Science, Chinese Academy of Sciences

Thesis Advisor: Professor Qun Lin

### **Professional Experience**

8/2006— Assistant Professor  
Department of Mathematical Sciences  
The University of Alabama in Huntsville

### **Selected Publications and Preprints**

1. Davar Khoshnevisan, Dongsheng Wu and Yimin Xiao (2006), Sectorial local nondeterminism and the geometry of the Brownian sheet. *Electronic J. Probab.* **11**, 817-843.
2. Dongsheng Wu and Yimin Xiao (2005), Dimensional properties of fractional Brownian motion. *Acta Math. Sinica*. To appear.
3. Dongsheng Wu and Yimin Xiao (2006), Fractal properties of the random string processes. *IMS Lecture Notes* **51**, 128-147.

4. Dongsheng Wu and Yimin Xiao (2006), Geometric properties of fractional Brownian sheets. Submitted.
5. Antoine Ayache, Dongsheng Wu and Yimin Xiao (2006), Joint continuity of the local times of fractional Brownian sheets. Submitted.
6. Mark Meerschaert, Dongsheng Wu and Yimin Xiao (2006), Multiple times and joint continuity of self-intersection local times of fractional Brownian sheets. Preprint.
7. Dongsheng Wu (2001), High accuracy analysis of elliptic eigenvalue problem for the Wilson nonconforming finite element. *Acta Math. Appl. Sinica (English Ser.)* **17**, 200-206.
8. Dongsheng Wu (2001), Convergence and superconvergence of Hermite bicubic elements for eigenvalue problem of the biharmonic equation. *J. Comput. Math.* **19**, 139-142.
9. Dongsheng Wu (2001), Probabilistic numerical approach for PDE and its application in the valuation of European options. *J. Comput. Math.* **19**, 591-600.
10. Qun Lin and Dongsheng Wu (1999), High-accuracy approximations for eigenvalue problems by the Carey nonconforming finite element. *Comm. Numer. Methods Engrg.* **15**, 19-31.
11. Dongsheng Wu and Honglu Wu (1996), The Dirichlet problem of a diffusion equation with vibration boundary values. (Chinese) *J. Math. Res. Exposition*, **16**, 213-218.
12. Dongsheng Wu (1995), A probabilistic solution to the Cauchy problem for the convection-diffusion equation. (Chinese) *Chinese Sci. Bulletin*, **40**, 2209-2211.