Curriculum Vitae

Wenjia Jing

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Personal Information

Born on March 18, 1984. Citizen of China.

Education

Ph.D. Applied Mathematics, Columbia University, May 2011 (expected).
Advisor: Guillaume Bal.

M.S. Applied mathematics, Columbia University, 2008.

B.S. Theoretical and Applied Mechanics, Peking University, China, 2006.

Employment

Graduate Research Assistantship, Columbia University, 2009-2011.

Graduate Teaching Assistantship, Columbia University, 2006-2008.

Awards

Extraordinary Teaching Assistant Award, Columbia University, 2007.

Outstanding Graduate Award, Peking University, 2006.

Tang Foundation Fellowship, Peking University, 2003-2006.

Research Interests

Analysis of Partial Differential Equations: equations with multi-scale and random coefficients, homogenization and corrector theory. Applications in physics, material sciences, biology and so on.

Limit theorems of stochastic processes, probabilistic approaches to PDEs.

Analysis of numerical schemes for multi-scale problems.

Nonlinear elliptic and parabolic equations; free boundary problems; pseudo-differential and integro-differential equations, micro-local analysis.

Talks

Numerical analysis seminar, University of Texas, Austin, November 2010.

Inverse Problems Seminar, Columbia University, March 2010.

APAM Research Conference, Columbia University, Febraray 2010.

Inverse Problems Seminar, (a series of three lectures), Columbia University, August 2008.

Conferences and Workshops

Joint Mathematics Meetings, San Francisco, (contributed talk), January 2010.

Eighth Northeast Probability Seminar, Columbia University, November 2009.

AMS Mathematics Research Communities summer school on Inverse problems, (contributed talk), Snowbird Resort, June 2009.

Conference in honor of Andrew J. Majda on his 60th birthday, Courant Institute, May 2009.

Workshop on Inverse Problems, Columbia University, May 2007.

Teaching Experience

At Columbia University:

I. Undergraduate level:

Teaching assistant for *Numerical Methods*, Spring 2007, Spring 2008.

Teaching assistant for *Introduction to Dynamical Systems*, Fall 2007, Fall 2008.

Teaching assistant for *Partial Differential Equations*, Fall 2006.

Teaching assistant for *Functions of one complex variable*, Fall 2006.

II. PhD level:

Teaching assistant for *Analytic Methods for PDE's*, Spring 2007, Spring 2008.

Professional Membership

Student member of AMS, SIAM.

References

Prof. Guillaume Bal (thesis advisor), Columbia University, gb2030@columbia.edu
Prof. Michael I. Weinstein, Columbia University, miw2103@columbia.edu
Prof. D.H. Phong, Columbia University, phong@math.columbia.edu
Prof. Lorenzo M. Polvani (teaching), Columbia University, lmp@columbia.edu

List of publications

Publications

1. G. Bal and W. Jing, *Convergence and corrector analysis of a multi-scale finite element scheme for a one-dimensional two-scale random elliptic equation*, to be submitted.

2. G. Bal and W. Jing, *Corrector theory for elliptic equations in random media with singular Green's function*, to appear in Commun. Math. Sci., 2010.

3. G. Bal and W. Jing, *Homogenization and corrector theory for linear transport in random media*, Discrete Contin. Dyn. Syst. **28**(2010) no. 4, 1311-1343.

4. G. Bal and W. Jing, *Fluctuation theory for radiative transfer in random media*, to appear in Journal of Quantitative Spectroscopy and Radiative Transfer, 2010.

In Preparation

5. G. Bal and W. Jing, *Corrector theory for elliptic equations with highly oscillatory and random potentials of long range correlations*, in preparation.

6. G. Bal and W. Jing, *Convergence and corrector analysis of a heterogeneous multiscale method for a one-dimensional two-scale random elliptic equation*, in preparation.