

Guanglian Li

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Education

Ph.D. Mathematics, Department of Mathematics, Texas A& M University, United States, May 2015. (Supervisor: Professor Yalchin Efendiev), GPA: 4/4

M.S. Mathematics, School of Mathematics, Fudan University, China, June 2011 (Supervisor: Professor Zhijie Cai), GPA: 3.7/4; mathematics: 3.8/4.

B.S. Mathematics, School of Mathematics, Qingdao University, China, June 2008, GPA: 90/100.

Employment

Hausdorff Postdoctoral, June 2015 to May 2017. Mentor: Michael Griebel, University of Bonn, Germany.

Honors, Awards, & Fellowships

SIAM travel award, Aug. 2015;

AWM best poster award, March, 2015;

AWM travel grant, March, 2015;

AMS travel award, Jan, 2015;

AWM travel grant, Jan. 2015;

Jun Liu Math Memorial Scholarship, School of Mathematics, Fudan University, 2011. (only one master student each year)

Excellent Graduate, Fudan University, 2011

Guanghua Scholarship, Fudan University, 2010

First-class Prize in the Mathematical Modeling Contest, Shandong Province, 2007

Outstanding Undergraduate, Shandong Province, P.R. China, 2006

Research

Publications

submitted

1. E. T. Chung, Y. Efendiev, W. T. Leung and G. Li, Sparse Generalized Multiscale Finite Element Methods and their applications, submitted;
2. V. Calo, Y. Efendiev, J. Galvis, and G. Li, Randomized oversampling for Generalized Multiscale Finite Element Method, submitted;

Journal papers

1. Y. Efendiev, S. Lee, G. Li, J. Yao, and N. Zhang, Hierarchical multiscale modeling for flows in fractured media using Generalized Multiscale Finite Element Method, to appear in *International Journal on Geomathematics*, 2015;
2. E. T. Chung, Y. Efendiev, G. Li and M. Vasilyeva, Generalized Multiscale Finite Element Methods for problems in perforated heterogeneous domains, to appear in *Applicable Analysis*, 2015;
3. D. Brown, Y. Efendiev, G. Li, and V. Savatorova, Homogenization of High Contrast Brinkman flows, to appear in *SIAM MMS*, 2015;
4. J. Galvis, G. Li, and K. Shi, A Generalized Multiscale Finite Element Method for the Brinkman Equation, *Journal of Computational and Applied Mathematics*, 280(2015), 294-309;
5. Y. Efendiev, J. Galvis, G. Li and M. Presho, Generalized Multiscale Finite Element Methods. Oversampling Strategies, *International Journal for Multiscale Computational Engineering*, 12(2014), no. 6, 465-484;
6. Y. Efendiev, J. Galvis, G. Li and M. Presho, Generalized Multiscale Finite Element Methods. Nonlinear Elliptic Equations, *Commun. Comput. Phys.* 15 (2014), no. 3, 733 - 755;
7. E. T. Chung, Y. Efendiev and G. Li, An adaptive GMSFEM for high-contrast flow problems, *Journal of Computational Physics*, 273(2014), 54-76.

Teaching

Record of Instructor

Math 142: Business Math, Texas A&M University, Summer 2014.

Teaching assistant

Grader of Math 131: Mathematical Concepts, Texas A& M University, Summer 2012;

Help session of Math 308: Differential Equations, Texas A& M University, Spring, 2012;

Grader of Math 602: Methods of Applied Mathematics, Texas A& M University, Fall, 2011;

Teaching assistant, Fudan University, Sep. 2008 to Jun. 2011;

Teaching assistant, Qingdao University, 2007.

Workshops and conferences attended

Presentations and talks

1. Talk, ICIAM, Beijing, Aug.10-14, 2015;
2. Poster, AWM workshop at SIAM CSE, Salt Lake City, March 14 -18, 2015;
3. Talk, Finite Element Rodeo, SMU, Dallas, Feb. 27-28, 2015;
4. Poster, AWM workshop in JMM, San Antonio, Texas, Jan.10-12, 2015;
5. Talk, Finite Element Circus, IMA, Oct. 24-25, 2014;
6. poster, Structure Preserving Discretizations of Partial Differential Equations, IMA, Oct. 22-24, 2014;
7. group presentation, Women in Applied Mathematics: Numerical Partial Differential Equations and Scientific Computing, IMA, Aug. 12-15, 2014;
8. Finite Element Rodeo, March 1 to 2, U T Austin, 2014;

9. group presentation, Mathematical Modeling in Industry workshop, IMA, UMN, Aug. 7-16, 2013.

Workshops and conferences

1. Structure Preserving Discretizations of Partial Differential Equations, IMA, Oct. 22-24, 2014.
2. Inverse Problem and Spectral Theory, Texas A& M University, Oct. 17-19, 2014;
3. International summer school: Numerical simulation: Energy conversion and storage, Mechanical Engineering, Texas A& M University, Aug. 29-Sep. 2, 2014;
4. Women in Applied Mathematics: Numerical Partial Differential Equations and Scientific Computing, IMA, Aug. 12-15, 2014.
5. International workshop on Multiscale Modeling and Simulation, IPAM, UCLA, April. 25 - 27, 2014.
6. Finite Element Rodeo, March 1 to 2, U T Austin, 2014.
7. Batteries and Fuel cells, Nov. 4 - Nov. 8, IPAM, UCLA, 2013.
8. Mathematical Modeling in Industry workshop, IMA, UMN, Aug. 7-16, 2013.
9. Workshop on Multiscale Modeling, ICES, UT Austin, April 28-May 1, 2013.
10. South Central Conference on Advanced Numerical Methods and Applications, University of Arkansas at Little Rock, Apr. 5 - Apr. 7, 2013.
11. Finite Element Circus and Finite Element Rodeo, LSU, March 8 - 9, 2013.
12. NumPor meeting, KAUST, Feb.2 -3, 2013.
13. Numerical Methods in PDES, Texas A& M University, Jan. 25 - 26, 2013.

Membership

SIAM, AMS and AAAS.

References

Yalchin Efendiev, Texas A&M University, College Station, TX, 77843-3368
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Eric T. Chung, Chinese University of Hong Kong, Hong Kong,
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Teaching

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