

Zhiwei Fang

EDUCATION

UNIVERSITY OF NEVADA, LAS VEGAS (UNLV)

Doctor of Philosophy in Applied Mathematics

Advisor: Jichun Li

Expected date of award PhD:

Courses: Real Analysis, Advanced Numerical Analysis, Topics in Numerical Analysis, Mathematical Statistic, Variational Approach for PDE

Admitted 08/2015

Las Vegas, U.S.

GPA: 3.9/4.0

12/2019

TIANJIN UNIVERSITY OF FINANCE AND ECONOMICS (TUF)

Master of Science in Applied Mathematics

09/2011-06/2014

Tianjin, China

GPA: 3.89/4.0

Courses: Stochastic Process, Partial Differential Equation, Matrix Analysis, Functional Analysis, Operations and Control Theory, Numerical Method for Differential Equation, Financial Mathematics, Optimization Theory, High Accuracy Finite Element Method

TIANJIN UNIVERSITY OF FINANCE AND ECONOMICS (TUF)

Bachelor of Science in Tourism Management

09/2006-06/2011

Tianjin, China

GPA: 3.0/4.0

Minor: Finance

Courses Related to Mathematics: Calculus I, Calculus II, Linear Algebra, Probability Theory and Mathematical Statistics, Honored Credits in Modeling Contest, Statistics, etc.

PAPERS & THESIS

Published Papers

- Li, J., **Fang, Z.** and Lin, G., 2018. *Regularity analysis of metamaterial Maxwell's equations with random coefficients and initial conditions*. Computer Methods in Applied Mechanics and Engineering, 335, pp.24-51. DOI: 10.1016/j.cma.2018.02.012
- Wang, X., Li, J. and **Fang, Z.**, 2018. *Development and analysis of Crank - Nicolson scheme for metamaterial Maxwell's equations on nonuniform rectangular grids*. Numerical Methods for Partial Differential Equations. DOI: 10.1002/num.22275
- Jia, H., Li, J., **Fang, Z.** and Li, M., 2018. *A new FDTD scheme for Maxwell's equations in Kerr-type nonlinear media*. Numerical Algorithms, pp.1-21. DOI: 10.1007/s11075-018-0602-3
- Li, J. and **Fang, Z.**, 2018. *Analysis and Application of Stochastic Collocation Methods for Maxwell's Equations with Random Inputs*. Adv. Appl. Math. Mech., Vol. 10, No. 6, pp. 1305-1326. DOI: 10.4208/aamm.OA-2018-0101
- Wang, S., Zhang, S. and **Fang, Z.**, 2015. *A superconvergent fitted finite volume method for Black-Scholes equations governing European and American option valuation*. Numerical Methods for Partial Differential Equations, 31(4), pp.1190-1208. DOI: 10.1002/num.21941
- Chang, S., **Fang, Z.**, Liu, X. and Shaydurov, V., 2014. *A fitted finite volume method for unit-linked policy with surrender option*. Computational Research, 2(3), pp.49-53. DOI: 10.13189/cr.2014.020303
- **Fang, Z.**, Li, J., Tang, T. and Zhou, T., 2019. *Efficient Stochastic Galerkin Methods for Maxwell's Equations with Random Inputs*. Journal of Scientific Computing, pp.1-20.

In Preparation

Fang, Z. and Li, J., *An Optimization Model for Electromagnetic Cloaking Metamaterial Design in Frequency Domain*

Graduation Thesis

- The Application of Radial Basis Collocation Method and Multi-grid Particle Swarm Algorithm in Investment Project of Coal Bed Methane Pricing—In the Perspective of Real Options (IN GRADUATE) 06/2014
- Research on Evaluation and Enhanced Strategy of Urban Tourist Attraction (IN UNDERGRADUATE) 06/2011

Graduate Assistant & Research Assistant EXPERIENCES

- GA at UNLV, Teaching discussion class for *calculus, linear algebra, and real analysis* 01/2016-12/2018
- GA for Course of *Calculus*, Professor Shuhua Zhang 09/2011-12/2011

OTHER SKILLS & EXPERIENCES

Computer Skills

MATLAB, C++, VB, Java Programing, Python, FEniCS (Mainly used in scientific programing especially about numerical solver for partial differential equation and optimization solver) and Linux

HONORS & REWARDS

- UNLV Summer Doctoral Research Fellowship (\$7,000, one of 70 Ph.D. students awarded) 2018
- Excellent Graduation Thesis (Master) First Prize 2014
- Excellent Graduation Thesis (Bachelor) First Prize 2011
- Programing Context for University Second Prize 2010
- National Mathematical Contest in Modeling Second Prize and First Prize 2009, 2010
- Mathematical Contest for University Second Prize 2007
- National Computer Rank Examination (NCRE) Lv4 for data base and Software Testing and Lv3 for Network