Tongtong Li

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EDUCATION: UNIVERSITY OF PITTSBURGH Pittsburgh, PA

Doctor of Philosophy in Mathematics, June 2021 (expected)
GPA: 4.00

- Recipient of Mathematics Teaching Assistant Excellence Award
- Arts and Sciences Graduate Fellowship (two times)

RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY New Brunswick, NJ
Master of Science in Mathematical Finance, June 2016
GPA: 3.96

HUAZHONG AGRICULTURAL UNIVERSITY Wuhan, China
Bachelor of Economics, June 2014
GPA: 3.82 Valedictorian

- Recipient of National Scholarship (10/852, two times), Best College Student Award (8/18625), Xingfa Scholarship (20/852), Academic Scholarship (every year)
- First Class Award (Meritorious) in the Mathematical Contest in Modeling (COMAP MCM)

RESEARCH INTERESTS:

- Numerical analysis, solution of partial differential equations, finite element methods, interaction of fluid flow and poroelastic media

PUBLICATIONS:

S. Caucao, T. Li and I. Yotov, *An augmented fully mixed formulation for the coupling of the quasi-static Navier-Stokes and Biot models.* In Preparation.

X. Wang, T. Li and I. Yotov, *Non-Newtonian and poroelastic effects in simulations of arterial flows.* Arxiv. Preprint.

S. Caucao, T. Li and I. Yotov, *A multipoint stress-flux mixed finite element method for the Stokes-Biot model.* Arxiv. Preprint.

S. Caucao, T. Li and I. Yotov, *A cell-centered finite volume method for the Navier-Stokes/Biot model.* Klöfkorn R., Keilegavlen E., Radu F., Fuhrmann J. (eds) Finite Volumes for Complex Applications IX - Methods, Theoretical Aspects, Examples. FVCA 2020. Springer Proceedings in Mathematics & Statistics, vol 323. Springer, Cham.

T. Li and I. Yotov, *A mixed elasticity formulations for fluid-poroelastic structure interaction.* Arxiv. Preprint.

PRESENTATIONS:

June, 2020 A cell-centered finite volume method for the Navier-Stokes/Biot model, Finite Volumes for Complex Applications IX, Bergen, Norway (online)

Nov, 2019 A multipoint Stress-flux mixed finite element method for the Stokes-Biot model, Finite Element Circus, Virginia Tech

March, 2019 Introduction to tree-based methods, Machine Learning Study Group, University of Pittsburgh

CONFERENCES AND WORKSHOPS:

June, 2020 2nd Joint SIAM/CAIMS Annual Meeting (AN20) and SIAM Conference on Imaging Science (IS20), Toronto, Ontario, Canada (online)

June, 2020 Finite Volumes for Complex Applications IX, Bergen, Norway

Nov, 2019 Finite Element Circus, Virginia Tech

Spring, 2019 Machine Learning Study Group, University of Pittsburgh

Spring, 2019 Pitt Research Center for Research Computing Cluster Training Workshop, University of Pittsburgh

Aug, 2017 Freefem++ Workshop, University of Pittsburgh

ADDITIONAL RESEARCH PROJECTS:

2015-2016 Empirical analysis of the relationship between GDP and oil price in China: A Bootstrap approach, with Miao Yang

2015-2016 Portfolio construction based on the movement of oil price, with Miao Yang

2015-2016 Pricing finite-maturity European Put-Heston option with barrier discontinuity by FDM

2013-2014 Research of Chinese agricultural commodity futures market volatility spillover effect based on BEKK-GARCH model – taking DCE yellow soybean as an example

2013-2014 Prediction on the supply/demand dynamics in horticulture industry, with Taotao Tu

2012-2013 Analysis on factors affecting online payment within college students based on Probit model, with Huijuan Chen

TEACHING EXPERIENCE:

Summer, 2020 Lecturer, University of Pittsburgh

- Applied Differential Equations (1 section)

2019-Present Teaching Fellow, University of Pittsburgh

- Analytical Geometry and Calculus 1 (1 section)
- Analytical Geometry and Calculus 3 (2 sections)

2017-2019 Teaching Assistant, University of Pittsburgh

- Analytical Geometry and Calculus 1 (3 sections)
- Analytical Geometry and Calculus 2 (3 sections)
- Analytical Geometry and Calculus 3 (3 sections)
- Introduction to Theoretical Mathematics (2 sections)
- University Honors College Introduction to Analysis (1 section)

Summer, 2017 Lecturer, University of Pittsburgh

- Analytical Geometry and Calculus 1 (1 section)

2015-2016 Course Assistant, Rutgers, The State University of New Jersey

- Numerical Analysis I (1 section, Graduate Level)
- Computational Finance (1 section, Graduate Level)

ACTIVITIES:

2019-Present Math Department Graduate Student Organization Member, University of Pittsburgh

2012-2014 Team Leader, Mathematical Modeling Team, Huazhong Agricultural University

Sumer, 2013 Internship Assistant, Industrial and Commercial Bank of China

2011-2012 Team Leader, Voluntary Teaching Organization, Huazhong Agricultural University

SKILLS:

- Programming Languages: C++, LaTeX
- Mathematical Software: Freefem++, FEniCS, MATLAB, R, GAUSS, EVIEWS, SAS, LINGO
- Strong leadership, project management and problem solving skills
- Fluent in English, Native in Chinese, Elementary in Korean