Jingwei Ma

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EDUCATION BACKGROUND

2016 - 2021 (Expected)   Ph.D. Candidate in Mathematics   - Mathematics Department, Boston University
Advisor: Samuel Isaacson and Konstantinos Spiliopoulos

2012 - 2016   BSc in Computational Mathematics   - Yuanpei College, Peking University

2013 - 2016   BSc (double) in Computer Science   - School of EECS, Peking University

RESEARCH INTERSTS

My research interests are in the area of numerical analysis, applied stochastic analysis and mathematical biology. Recently, my research has focus on the development, numerically solving and rigorously analysis of (stochastic and deterministic) spatial reaction diffusion systems for modeling biochemical reactions at a single cell scale.

RESEARCH EXPERIENCE

- **Work in Progress**

  A Surface Convergent Reaction-Diffusion Master Equation (with Samuel Isaacson)

- **Preprints**

  - J. Ma, M. Do, M. A. Le Gros, C. S. Peskin, C. A. Larabell, Y. Mori, and S A. Isaacson, Strong Intracellular Signal Inactivation Produces Sharper and more Robust Signaling from Cell Membrane to Nucleus, PLOS Computational Biology (2020). [Open Access Journal Version]

  - S. A. Isaacson, J. Ma, K. Spiliopoulos, Mean Field Limits of Particle-Based Stochastic Reaction-Diffusion Models, Submitted (2020). [ArXiv preprint]

  - S. A. Isaacson, J. Ma, K. Spiliopoulos, How Reaction-diffusion PDEs Approximate the Large-population Limit of Stochastic Particle Models, Submitted (2020). [ArXiv preprint]

EMPLOYMENT HISTORY

- **As an Instructor**

  MA583 Introduction to Stochastic Processes (Summer II 2018, 2019)
  MA122 Calculus for the Life and Social Sciences II (Summer II 2017)

- **As an Grader**

  MA779 Probability Theory (Graduate-level)

- **As a Teaching Fellow**

  MA415 Data Science in R, MA569 Introduction to Operations Research,
  MA242 Linear Algebra, MA226 Differential Eqautions, MA225D Multivariable Calculus,
  MA120A Applied Mathematics for Social and Management Sciences,
  MA213 Basic Statistics and Probability, MA121 Calculus for the Life and Social Sciences I

- **Internship**

Mar. 2016 -	Intern at Samsung Electronics China Communication Institude
July. 2016	*Software Test Engineer in Language Computing Group*

ACTIVITIES

Oct.1, 2020   Invited talk in Probability and Statistics Seminar at Boston University

Jan. 15, 2020   Presentation in 7th annual CISE Graduate Student Workshop at Boston University

Dec. 10-14, 2019 Invited Minisymposium talk in SIAM Conference on Analysis of Partial Differential

Equations (PD19) at La Quinta

Sep. 23-27, 2019 Attending Summer School "New Frontiers in Singular SPDEs and Scaling Limits"

at Hausdorff Research Institute for Mathematics (HIM), Bonn, Germany

April. 5-6, 2019 Invited talk in Applied Math Days 2019 at Rensselaer Polytechnic Institute

Feb. 21, 2019   Invited talk in AMS Graduate Student Conference I: Analysis, Probability and PDE

at Brown University

Dec.21-22, 2018 Attending AMS Fall Central Sectional Meeting at University of Michigan, Ann Arbor
with AMS graduate student travel grant

April.19, 2018   Invited talk in Brown/BU Dynamics and PDE Seminar, at Brown University

Aug.10-14, 2015 Attending International Congress on Industrial and Applied Mathematics (ICIAM) 2015

Jul. -Aug. 2015   Introduction to Computational Quantum Chemistry Summer Program at BICMR

AWARDS

Feb. 2016   Honorable Mention in the Mathematical Contest in Modeling

Feb. 2015   Honorable Mention in the Mathematical Contest in Modeling

Sep. 2014   National Second Prize in Chinese Undergraduate Mathematical Contest in Modeling

Skills

- **Programming Languages**

C/C++	- Scientific Computing (PETSc, etc), Parallel Computing(OpenMP, MPI, etc).
Java	- Interactive Games, Web Crawler, etc.
Lisp	- Several Interpreters in Racket.
Python, R	- Basic.

- **Miscellaneous**

Matlab	- Scientific Computing
Latex	- High-quality Typesetting
git	- Source Version Control