

EDUCATION

National University of Singapore

Ph.D. in Mathematics, Advisor: Prof. Weizhu Bao and Prof. Xuefeng Wang

Singapore

Aug 2018 –present

Southern University of Science and Technology

B.S. in Mathematics, Advisor: Prof. Xuefeng Wang

Shenzhen, China

Aug 2014 –Jul 2018

SKILLS

- **Technical skills:** Python, C/C++, Shell, MATLAB, FreeFEM++, Julia, Latex
- **Tools:** Pytorch, Numpy, Pandas, Matplotlib, Sklearn, Git

RESEARCH INTEREST

- Partial Differential Equations and Their Applications
- Numerical Methods for Systems of Coupled Bulk-surface PDEs

SCHOLARSHIPS AND AWARDS

- Best paper award of Bachelor in **SUSTech**, Shenzhen, China Jul 2018
- Selected as secondary excelent student in **SUSTech**, Shenzhen, China Aug 2015 –Aug 2017
- Government Scholarship in Southern University of Science and Technology, Shenzhen, China Aug 2014 –Aug 2018

PUBLICATIONS

1. **X. Geng**, Error Analysis for the Finite Element Approximation of a Coupled Bulk-surface PDE, working in progress.
2. Y. Wang and **X. Geng**, Effective Interface Arising from Wave Equation, working in progress.
3. H. Huang and **X. Geng**, Asymptotic Spreading of Inter-specific Competition Diffusion Systems with a Road, preprint, 2023.
4. **X. Geng**, Effective Boundary Conditions for Heat Equation Arising from Anisotropic and Optimally Aligned Coatings in Three Dimension, under review, 2023.
5. **X. Geng**, Effective Boundary Conditions Arising from the Heat Equation with Three-dimensional Interior Inclusion, Comm. Pure Appl. Anal. 2022.

CONFERENCES AND TALKS

- 2022 SciCADE, University of Iceland, Reykjavik, Iceland Jul 26, 2022
 - *Title: Effective Boundary Conditions for the Heat Equation with Three-dimensional Anisotropic and Optimally Aligned Coatings*
- PDE and Scientific Computing Seminar, University of Singapore, Singapore Nov 2, 2019
 - *Title: The method of moving planes and sliding domains*

TEACHING EXPERIENCE

- Spring 2021 Ordinary Differential Equations (**TA**)
- Spring 2020 Ordinary Differential Equations (**TA**)
- Spring 2019 Math Clinic(**TA**)
- Fall 2018 Linear Algebra and Mathematical Analysis (**TA**)

INTERESTS

- **Swimming**
- **Running**
- **Boxing**
- **Tennis**

LANGUAGES

- **Chinese:** Native
- **English:** Fluent
- **German:** Basic
- **Japanese:** Basic