

# Jianlei (Jimmy) Huang

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## EDUCATION

<b>Fudan University</b> <i>Bachelor of Engineering in Microelectronic Science and Engineering</i> Relevant courses: <i>Mathematical Analysis (3 semesters); Linear Algebra; Advanced Algebra (2 semesters); Functions of Complex Variable; Probability and Mathematical Statistics (Honorable Level)</i>	Shanghai Sept. 2018-June 2023
<b>Georgetown University</b> <i>Master of Science in Mathematics and Statistics</i> Relevant courses: <i>Real Analysis (Ph.D. Level); Complex Variables (Ph.D. Level); Harmonic Analysis (Ph.D. Level); Partial Differential Equations (Ph.D. Level); Numerical Analysis (Ph.D. Level); Intro Partial Differential Equations; Probability; Mathematical Statistics; Deterministic Math Models</i>	Washington, DC Aug. 2023-May 2025

## RESEARCH & PROJECT EXPERIENCE

<b>Gaussian Priors for Boundary Value Problems of Linear Partial Differential Equations</b> <i>Collaborated Work with Prof. Bogdan Raiță from Georgetown University</i> <ul style="list-style-type: none"><li>● Use Ehrenpreis-Palamodov Theorem to construct priors for solutions of systems of linear PDEs with constant coefficients, including boundary conditions.</li><li>● Prove correctness and convergence properties of our construction. In particular, all our GP realizations satisfy the system of PDEs and boundary conditions.</li><li>● Empirically demonstrate the superiority of our approach over state-of-the-art neural operator approaches.</li><li>● Result in paper [1].</li></ul>	Washington, D.C. Dec. 2023-Nov. 2024
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## PREPRINTS

[1] Jianlei Huang, Marc Härkönen, Markus Lange-Hegermann, and Bogdan Raiță. Gaussian process priors for boundary value problems of linear partial differential equations. <a href="#">arxiv:2411.16663</a> , 2024.
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## TEACHING ASSISTENT EXPERIENCE

<b>Convex Geometry</b> Instructor: Professor David Caraballo	Georgetown University, Washington, D.C. Jan. 2024-May 2024
<b>Real Analysis (Ph.D. level)</b> Instructor: Professor Benjamin Harrop-Griffiths	Georgetown University, Washington, D.C. Aug. 2024-Dec 2024
<b>Complex Analysis (Ph.D. level)</b> Instructor: Professor Der-Chen Chang	Georgetown University, Washington, D.C. Jan. 2025-May 2025

## INVITED TALK

<b>APMA Doctoral Seminar</b> Topic: GP for Boundary Value Problems of Linear Partial Differential Equations	Georgetown University, Washington, D.C. Oct. 11, 2024
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## CONFERENCE ATTENDED

<b>AMS 2024 Spring Eastern Sectional Meeting</b>	Apr. 6-7, 2024
<b>Mid-Atlantic Regional Math Alliance conference</b>	Apr. 20, 2024
<b>Prairie Analysis Seminar 2024</b>	Oct. 25-26, 2024

## AWARDS & TECHNICAL PROFICIENCIES

● 2021 Interdisciplinary Contest in Modeling: <i>Finalist</i>	Feb. 2021
● 2020 China University Mathematics Contest in Modeling: <i>Second Prize</i>	Sept. 2020
● 2020 Interdisciplinary Contest in Modeling: <i>Meritorious Winner</i>	Feb. 2020
● Fudan University COVID-19 Mathematical Modeling Contest: <i>Second Prize</i>	Jan. 2020
● Technical skills: Latex, Python, R, C++, C, MATLAB	
● Languages: Mandarin (native), English (proficient)	