

YUAN CHEN

CONTACT INFORMATION

ADDRESS: MW 330, 231 West 18th Avenue, Columbus, OH
EMAIL: chen.11050@osu.edu
WEB-PAGE: www.iamyuanchen.xyz

EDUCATION

Expected 2026	The Ohio State University Ph.D. in Mathematics
June 2021	The George Washington University M.S. in Statistics
June 2019	Hohai University B.E. in Environmental Science

RESEARCH INTERESTS

1. Broad Areas of Scientific Computing and Numerical Analysis
2. Finite Element Method, Discontinuous Galerkin Method, Virtual Element Method
3. Machine Learning Methods for Partial Differential Equations
4. Interface problems and Coupling Mathematical Models Arising from Applications
5. Design, Analysis and Applications of Immersed Finite Element Method for interface problems

PUBLICATIONS

6. Y. CHEN, AND X. ZHANG. *A High-Order Immersed C^0 Interior Penalty Method for Biharmonic Interface Problems.*, (2022+), preprint.
5. Y. CHEN, AND X. ZHANG. *Solving Navier-Stokes Interface Problems with Fixed/Moving Interfaces on Unfitted Meshes*, (2022+), submitted.
4. Y. CHEN, S. HOU, AND X. ZHANG. *Error Estimates for a Partially Penalized Immersed Finite Element Method for Elastodynamic Interface Problems*, (2022+), preprint.
3. Y. CHEN AND X. ZHANG. *A \mathcal{P}_2 - \mathcal{P}_1 Partially Penalized Immersed Finite Element Method for Stokes Interface Problems*, Int. J. Numer. Anal. Mod., 18(2021), no. 1, 120-141.
2. Y. CHEN, S. HOU, AND X. ZHANG. *A Bilinear Partially Penalized Immersed Finite Element Method for Elliptic Interface Problems with Multi-domains and Triple Junction Points*, Results Appl. Math., 8(2020), 100100.
1. Y. CHEN, S. HOU, AND X. ZHANG. *An Immersed Finite Element Method for Elliptic Interface Problems with Multi-domain and Triple Junction Points*, Adv. Appl. Math. Mech., 11(2019), no. 5, 1005-1021.

TALKS AND POSTERS

5. A High-Order Immersed C^0 Interior Penalty Method for Biharmonic Interface Problems. **The 7th Annual Meeting of SIAM Central States Section**, Oklahoma State University, OK. (October 2022).
4. A High-Order Immersed C^0 Interior Penalty Method for Biharmonic Interface Problems. **2022 SIAM Annual Meeting**, David L. Lawrence Convention Center, Pittsburgh, PA. (July 2022).
3. An Immersed \mathcal{P}_2 - \mathcal{P}_1 Finite Element Method for Stokes Interface Problems. **The 6th Annual Meeting of SIAM Central States Section**, University of Kansas, KS (October 2021, Online).
2. Immersed Finite Element Methods for Interface Problems with Multi-Domains and Triple-Junction Points. **GW Research Day**, The George Washington University, D.C. (April 2020, Online).

1. Immersed Finite Element Methods for Interface Problems with Multi-Domains and Triple-Junction Points. **AMS Southeastern Sectional Meeting**, University of Virginia, VA (March 2020, Cancelled).

TEACHING EXPERIENCES

George Washington University

Fall 2020 Recitation MATH 1051 (Finite Math for the Social and Management Sciences)

SCHOLARSHIPS & CERTIFICATES

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| • SIAM Travel Award | 2022 |
| • OSU Distinguished University Fellowship | 2021 |
| • GWU Award of Graduate Assistantship | 2020 |
| • 3 rd Prize of China Undergraduate Mathematical Contest in Modeling | 2017 |

SKILLS

Programming	C/C++, Python, R, MySQL, \LaTeX , VB, MATLAB
Vectorization	Python(NumPy), MATLAB
Data Analysis	Python (pandas, matplotlib, geopy), R (ggplot, dplyr, tidyr), QGIS, ECHARTS, D ₃ , sas
Sci. Computing	Python (NumPy, SciPy, SymPy, multiprocessing), MATLAB, Mathematica
Deep Learning	Python (Numpy, PyTorch, TensorFlow)