Kashvi Srivastava

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EDUCATION	**University of Michigan**	Ann Arbor, USA
	Ph.D. in Applied and Interdisciplinary Mathematics and Scientific Computing	Expected 04/2025
	Advisors: Professor Santiago Schnell & Professor Victoria Booth	
	Grade Point Average: 3.976/4.00[1]	
	M.S. in Applied and Interdisciplinary Mathematics	2020-2022
	Delhi Technological University (DTU)	New Delhi, India
	Bachelor of Technology (**B.Tech**) in Mathematics and Computing Engineering	2016 - 2020
	Cumulative Grade Point Average: 9.46/10.00[2]	

PUBLICATIONS & PREPRINTS

- C. Kausik, K. Srivastava and R. Sonthalia. Double Descent and Overfitting under Noisy Inputs and Distribution Shift for Linear Denoisers, Transactions on Machine Learning Research, 2024. (Journal)
- J. Eilertsen, K. Srivastava and S. Schnell. Stochastic enzyme kinetics and the quasi-steady-state reductions: Application of the slow scale linear noise approximation à la Fenichel. J. Math. Biol. 85, 3 (2022). (Journal).
- W. Hare and K. Srivastava. Applying Complex-step Derivative Approximations in Model-based Derivative-Free Optimization. Pacific Journal of Optimization, 2023 (Journal).
- K. Srivastava, M. Ahlawat, J. Singh, and V. Kumar. Learning Partial Differential Equations from Noisy Data using Neural Networks. J. Phys.: Conf. Ser. 1655 012075, 2020 (Journal).

WORK EXPERIENCE

- Computational Science Intern, Molecular Lab Systems, Roche — Santa Clara, USA
  Implemented deep learning models using PyTorch for pharmaceutical R&D — Summer 2023

TALKS

- April 2024, MICDE Conference (SciFM), University of Michigan (Poster)
- May 2023, SIAM Conference on Applications of Dynamical Systems, Portland, Oregon (Abstract)
- March 2023, PhD in Scientific Computing Student Seminar Series, University of Michigan
- April 2022, MCAIM Graduate Seminar, University of Michigan (Abstract)
- October 2021, AIM Student Seminar, University of Michigan
- July 2021, SIAM Conference on Optimization 2021 (Virtual) (Abstract)
- July 2021, 2021 SIAM Student Mini-Symposium in Applied Mathematics (Virtual), University of Michigan (Abstract)
- September 2020, Universitas Riau International Conference on Science and Environment 2020 (Virtual)

OTHER PROJECTS

- Extending the Hodgkin-Huxley model to understand the excitatory-inhibitory imbalance of hippocampal neural network in Alzheimer's disease (Report)
- Agent based modeling of COVID-19 to study impact of public health interventions (Report)
- Prediction of Breast Cancer Survival with Machine Learning Algorithms (Report)
- Literature Review on Interpretable Machine Learning and Explainable Artificial Intelligence (PDF)
- Literature Review on Generalized Inverses (PDF)

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[1] Unofficial Transcript
[2] Undergraduate Consolidated Marksheet

TEACHING &	**Department of Mathematics, University of Michigan**	Ann Arbor, USA
MENTORING	Graduate Student Instructor	

- Math 115 (Calculus I)[3], Winter 2022, Winter 2021 and Fall 2020
- Math 105 (Data, Functions and Graphs)[4], Fall 2022 and Fall 2021

	Lab of Geometry at Michigan LoG(M)[5], University of Michigan	Ann Arbor, USA
	Graduate Mentor	

- A Machine Learning Approach to Classify Microswimmers, Fall 2021
- Flowing through confined geometries, Winter 2021

AWARDS & HONOURS

- **Usha Sharma Bhalla Graduate Fellowship** University of Michigan, 2023-2024
- **Certificate of Recognition for service to the SIAM Student Chapter**, University of Michigan, 2023-2024
- **Rackham Conference Travel Grant**, University of Michigan, May 2023
- **SIAM Student Travel Award**, SIAM DS23, Portland, Oregon, United States, May 2023
- **MICDE Fellowship**, Michigan Institute for Computational Discovery and Engineering, University of Michigan, 2022-2023
- **Rackham International Student Fellowship**, University of Michigan, 2021-2022
- **MCAIM Award**, The Michigan Center for Applied and Interdisciplinary Mathematics, University of Michigan, 2021-2022
- **Mathematics Department Graduate Fellowship**, University of Michigan, Summer 2021
- **Gold Medal**, Department of Mathematics, DTU, 2020 for securing the highest grade point aggregate
- **Mitacs Globalink Research Scholarship**, 2019 for a research internship at the University of British Columbia, Canada

RELEVANT POSITIONS

- **SIAM Student Chapter Representative**, Student Days, SIAM Conference on Computational Science and Engineering (CSE23), Amsterdam, The Netherlands, 2023
- **Organizer**, Student AIM Seminar, University of Michigan, Winter 2021 - Fall 2023
- **Organizer**, Michigan Research Experience for Graduates (MREG) 2023
- **Organizer**, 2022 SIAM Student Mini-Symposium in Applied Mathematics, University of Michigan, 2022
- **Organizer**, Student MCAIM Seminar, University of Michigan, 2021-2022
- **Organizer**, 2021 SIAM Student Mini-Symposium in Applied Mathematics, University of Michigan, 2021
- **SIAM Student Chapter Representative**, The Second Joint SIAM/CAIMS Annual Meeting (AN20), 2020
- **President**, Society for Industrial and Applied Mathematics (SIAM), Chapter DTU, 2018-2019

WORKSHOPS	• Michigan Research Experience for Graduates (MREG)	June 2022
	• MSRI Summer Graduate School, Mathematics of Big Data: Sketching and (Multi-) Linear Algebra	June 2021
	• Workshop on Mathematical and Computational Materials Science, Institute for Mathematical and Statistical Innovation	February 2021

TECHNICAL SKILLS

Languages: Python (PyTorch), MATLAB, C++, C, R, Netlogo
Miscellaneous: LaTeX, Git