

Shashank Sule

CONTACT INFORMATION	1304 William E. Kirwan Hall 4176 Campus Drive University of Maryland College Park, MD 20740-4015	ssule25@umd.edu
EDUCATION	University of Maryland, College Park Ph.D. candidate in Applied Mathematics, Statistics, and Scientific Computation	2020–2025
	Amherst College A.B. Mathematics, <i>summa cum laude</i> Thesis: Two Multiresolution Frameworks on Graphs	2016–2020
	Massachusetts Institute of Technology Special Student in the Mathematics Department	Spring 2019
	Budapest Semesters in Mathematics	Fall 2018
RESEARCH INTERESTS	Applied harmonic analysis, spectral graph theory, machine learning theory and applications to rare events and inverse problems.	
PUBLICATIONS	<i>Sobolev Orthogonal Polynomials on the Sierpinski Gasket</i> (Journal of Fourier Analysis and Applications, 2021). Qingxuan Jiang, Tian Lan, Kasso Okoudjou, Shashank Sule , Robert Strichartz, and Sreeram Venkat, and Xiaoduo Wang.	
IN PREPARATION	<i>Error analysis of target measure diffusion maps and applications to transition path theory.</i> Shashank Sule , Luke Evans, Maria Cameron.	
	<i>Emergence of the SVD as an interpretable factorization in deep learning for inverse problems.</i> Shashank Sule , Richard G. Spencer, Wojciech Czaja (Submitted, available upon request).	
AWARDS & FELLOWSHIPS	Jacob K. Goldhaber Travel Grant:	Sept. 2022
	Michael Brin Graduate Fellowship	Aug. 2020–Jun. 2024
	Dean’s Fellowship, University of Maryland	Aug. 2020–Jun. 2022
	The Robert H. Breusch Prize for the best undergraduate thesis in Mathematics and Statistics	May 2020
	The Walker Award in Mathematics and Statistics	May 2020

	Amherst Memorial Fellowship	Aug. 2020–Jun. 2021
	Loeb Center Summer Experience Fellowship	Jun. 2019
	Sarles Fellowship, Amherst College	Jun. 2018
	Gregory S. Call Academic Internship	Aug. 2017–May 2018
	Davis United World College Scholarship	Aug. 2016–May 2020
	First Place and Outstanding Award (SCUDEM 2018)	Apr. 2018
TALKS	Joint Mathematics Meetings 2020	Jan. 2020
	AMS Contributed Session on Functional Analysis, Operator Theory, and Operator Algebras I	
	University of Maryland	
	Norbert Wiener Center RIT	Sept. 2021
	Deep Learning RIT	Dec. 2021
	Machine Learning for rare events RIT	Dec. 2021
	Student PDE seminar	Apr. 2022
	Southeastern Undergraduate Mathematics Workshop	Aug. 2019
	Georgia Institute of Technology	
POSTERS	University of Maryland	Oct. 2022
	Fall Fourier Talks	
	<i>Descrambling the descrambler: Do all roads lead to the SVD?</i>	
	Universita di Genova	Sept. 2022
	Applied Harmonic Analysis and Machine Learning Summer School	
	<i>Error analysis of Target Measure Diffusion Maps on \mathbb{R}^d</i>	
	Ohio State University	Aug. 2019
	Young Mathematicians Conference	
	<i>Sobolev Orthogonal Polynomials on the Sierpinski Gasket</i>	
	Amherst College	Aug. 2018
	Annual Summer Research Symposium	
	<i>Normality of Toric Rings and Rees Algebras of Strongly Stable Ideals</i>	
ACTIVITIES	Co-Chair	Spring 2018
	Amherst College International Students' Association	
	Treasurer	Spring 2017
	Amherst College South Asian Students' Association	
	Staff Writer	Fall 2017
	The Indicator	
	Support Facilitator	Jun. 2015, 2016, 2017
	UWC Mahindra College	

TEACHING
EXPERIENCE

Teaching Assistant, Amherst College

- MATH 250–Number Theory Spring 2020
- MATH 320–Wavelets and Fourier Analysis Fall 2019
- MATH 220–Mathematical Reasoning and Proof Fall 2019
- ECON 330–Macroeconomics Spring 2018
- CHEM 160–Chemical thermodynamics Fall 2017

SKILLS AND
LANGUAGES

MATLAB, Mathematica, Python (including TensorFlow, Pytorch, scikitlearn), Julia (including Flux)

Github: <https://github.com/ShashankSule>

English (native), Marathi (native), Hindi (native), Spanish (reading and writing proficiency), Hungarian (reading proficiency)