Jasmine Y. Noory

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Education

PhD Candidate, Mathematics — 2023–present
University of Minnesota, Minneapolis, MN — expected 2026 graduation

Master of Science, Mathematics with Statistics minor — 2022
University of Minnesota, Minneapolis, MN

Bachelor of Science, Mathematics and Statistics, — 2017
University of Missouri, Kansas City, KC, MO

Fellowships

GAANN Fellowship, U.S. Department of Education — 2025–2026
"Temperature Tipping in the AMOC"

Mathematics of Climate Research Network Student Fellowship — 2024–2025

Lecturing at University of Minnesota

Math 1272 – Calculus II

Spring 2024: 35 students in evening course – most a mix of high school, 1st and 2nd year undergraduates with varying course programming. Increased scaffolding for students to navigate group collaborations and piloted self assessments. Students assessed with in-class quiz mastery, three exams, course participation, and final exam.

Fall 2023: 30 students comprised a cohort of the online, asychronous course. Developed instructional videos and written learning materials; managed group collaborations and created quizzes using Canvas. Students were assessed with in-class quiz mastery, three exams, course participation, and relative to all departmental Calculus II sections.

Teaching Assistantships

Position at University of Minnesota Twin Cities unless noted otherwise. Responsibilities: Facilitate biweekly discussions and develop course materials (quizzes, worksheets) and collaborate with lecturer and other TAs towards coordinated curriculum.

Math 2243, Differential Equations and Linear Algebra — Fall 2025
Math 1272, Calculus II — Fall 2024
Math 1272, Calculus II — Fall 2020
Math 1031, College Algebra & Probability — Spring 2020
Math 1271, Calculus I — Fall 2019
Math 120, Precalculus — Spring 2018

Service

MCRN Mentorship Pods – *co-founder, leader* 2024–present

Developed and led the launch of the Mentorship Pods program of the Math Climate Research Network, an online research community of the American Institute of Mathematics. Coordinated vertically integrated mentorship groups and program discussions.

Deadlines Lifeline – *organizer* 2024–2025

An independent working accountability group. Facilitated members of UMN graduate students and MCRN community through online pomodoro sessions. Provided productivity tricks and led discussions on time management.

Graduate Scholars Program, Institute on the Environment – *participant, leader* 2023–2024

Selected as co-leader for the Boreas Sustainability and Outreach cohort. Reviewed applications and attended trainings on science communication and group facilitation.

Científico Latino, GSMI – *mentor* 2019–2020

Mentored international applicant within the Graduate Student Mentorship Initiative (GSMI) who was navigating the application process of American graduate programs in mathematics. Reviewed and edited application materials and hosted weekly check-ins.

Talks

Cusp Singularities in a Two Box Model of Thermohaline Circulation

Invited Talk, SIAM MPE, Cleveland, OH July 2026
Invited Talk, AMS Eastern Sectional, Boston, MA Mar. 2026
Contributed poster, AGU Ocean Sciences Meeting 2026, Glasgow, UK Feb. 2026

Early conceptual models in ocean dynamics

UMN Climate Seminar, Minneapolis, MN Aug. 2025

Introducing AMOC tipping points through a conceptual climate model

Contributed talk, MAA MathFest, Sacramento, CA Aug. 2025

Detecting the onset of the Indian monsoon using topological data analysis

Contributed poster, ATMCS11, Bozeman, MT Jul. 2025

An introduction to climate tipping

UMN Undergraduate Math Club, Minneapolis, MN Apr. 2025

Combining energy balance and ocean circulation models toward AMOC tipping

UMN oral examination, Minneapolis, MN Dec. 2024

Understanding water resource management through an indigenous knowledge lens

UMN Climate Math Student Seminar Feb. 2024
Graduate scholars seminar, Institute on the Environment, Minneapolis, MN Jan. 2024

Blocking out the sun: or how Dick [McGehee] got us to read about celestial mechanics

UMN Math 5490, Topics in Applied Math, Minneapolis, MN Dec. 2023

Data analysis for DECIPHER, a mixture deconvolution model

Foo & Leder Lab Seminar, Minneapolis, MN Jan. 2020

The variety of interleavings

UMN Climate Math Student Seminar Oct. 2019
Joint Math Meetings, Baltimore MD Jan. 2019

Analysis of a reduced model for tumor immune dynamics

Summit for Women in STEM, Norton, MA Feb. 2019

Publications

Peer Reviewed

Alvaro Köhn-Luque, Even Moa Myklebust, Dagim Shiferaw Tadele, Mariaserena Gilberto, Leonard Schmiester, **Jasmine Noory**, Elise Harivel, Polina Arsenteva, Shannon M Mumenthaler, Fredrik Schjesvold, Kjetil Taskén, Jorrit M Enserink, Kevin Leder, Arnoldo Frigessi, Jasmine Foo (2023) Phenotypic deconvolution in heterogeneous cancer cell populations using drug-screening data. *Cell Reports Methods* 3(3):100417.

Preprints

J. Noory, two contributed problem sets: *Tipping in the Atlantic Meridional Overturning Circulation*, in "Climate Applications for the College Mathematics Classroom", eds. Kaitlin Hill, Katherine Meyer, Katherine Slyman. Accepted, under contract with *AMS/MAA Press.*

J. Noory. Temperature tipping in an ocean circulation box model. July 2025. https://arxiv.org/abs/2507.07078

Enrique Alvarado, Daniela Beckelhymer, Joshua Dorrington, Tung Lam, Sushovan Majhi, **J. Noory**, María Sánchez Muniz, Kristian Strommen. *Detecting the Indian Monsoon Using Topological Data Analysis.* Submitted to Atmospheric and Oceanic Physics arXiv, May 9th, 2025. arXiv:2504.01022.

Professional Development

ICMS: Workshop on Climate Tipping Points and their Impacts– *participant* Spring 2025

Accepted as participant of an exploratory workshop on the mathematical foundations of tipping points at International Center of Mathematical Sciences (ICMS) at University of Edinburgh. Attended panel discussions, conference talks, and presented exploratory exercises to training group on the role of mathematics in climate science.

AMS MRC: Climate, Dynamics, and Topological Data Analysis – *participant* Summer 2024

Selected to participate in a weeklong, intensive research program fostering early-career collaboration in Dynamical Systems, and Topological Data Analysis technique applied to climate science. Engaged in structured group problem-solving, mentored by senior mathematicians, and contributed to the development of TDA research directions with a cohort of emerging scholars.

Graduate Scholars Program, Institute on the Environment – *participant* 2023–2024

Member of a cohort of UMN graduate students who developed an interdisciplinary strategy to build foundations in researching ecosystem and planetary health. Program is meant to develop interdisciplinary discussion skills.

Non-Academic Work Experience

Dame Errant Ceramics Studio – Teacher 2025–present

Lead 1.5–2 hour workshops for beginner to intermediate students at a community ceramics studio that integrates art and wellness. Instruct participants in foundational hand-building techniques and the creation of three-dimensional forms, fostering both technical skill and mindful engagement with the creative process.

Accenture LLC – Functional and Industry Analytics, Senior Analyst 2022–2023

Supported Enterprise Asset Management integration for nuclear power generation. Translated and built condition report workflows in in compliance with nuclear safety regulations. Built custom reports using BIRT and SQL. Co-led Women's Employee Resource Group and coordinated seminars to up-skilling functional analysts in the practice.