

ANIKET DESHPANDE

PERSONAL INFORMATION

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EDUCATION

Expected 2026

B.S. Physics University of Illinois, Urbana-Champaign

Specialization in Mathematical Physics

Minors in Scientific Computing & Mathematics

RELEVANT COURSEWORK

- Graduate Optimal Control
- Quantum Information Theory
- Electromagnetism I
- Classical Mechanics I
- Relativity & Math. Methods for Physics
- Graduate Theory of Probability I
- Applied Random Processes
- Real Analysis
- Abstract Linear Algebra
- Ordinary Differential Equations

RESEARCH EXPERIENCE

Sept. 2024– Present Research Scholar, ILLINOIS MATHEMATICS LAB

Advisor: Dr.
Marius Junge

Researching quantum random walks on graphs and analyzing their relation to graph Laplacians, quantum channels, and cost (complexity) functions. Simulating mixing times for error models in graph random walks.

Sept. 2023– May 2024 Researcher, THEORETICAL POLYMER PHYSICS LAB

Advisor: Dr.
Charles E. Sing

Simulated coarse-grain models of free-draining bottlebrush polymers using stochastic differential equations and brownian dynamics in C. Visualized relationships between physical properties of polymers using Python.

WORK EXPERIENCE

Summer 2024 Ionospheric Analyst, SPACE DYNAMICS LABORATORY

Albuquerque, NM

Developed noise-reduction methods for ionograms using singular value decomposition and machine learning. Built deep learning-based autoscalers for ionograms and researched atmospheric/ionospheric theory.

SKILLS

Languages PYTHON, C/C++, JAVA

Frameworks MATPLOTLIB, SCIPY, NUMPY, PANDAS

Utilities ANACONDA, GIT, JUPYTER, SHELL, L^AT_EX

January 10, 2025