Shriya V. Nagpal

Center For Applied Mathematics
Cornell University, NY
svn23@cornell.edu

EDUCATION

Ph.D. in Applied Mathematics 2018 - present
Cornell University, Ithaca, NY, United States
Advisors: Francesca Parise and Lindsay Anderson
Minor Members: Steven Strogatz and David Bindel
Expected completion: Spring 2024

Certificate in Science Writing 2023 - present
Johns Hopkins University Online Program

Masters in Applied Mathematics 2018-2022
Cornell University, Ithaca, NY, United States
Minors: Mathematics and Computer Science

Bachelor of Science (*summa cum laude*) 2012 - 2016
Trinity College, Hartford, CT
Major: Mathematics

RESEARCH INTERESTS

Complex Networks, Optimization and Control, Graphon Theory, and Dynamical Systems

HONOURS/ AWARDS

Cornell Research Travel Grant, Cornell University 2023

Graduate Research Assistant, NSF Research Training Group Grant: Dynamics, Probability, and PDEs in Pure and Applied Mathematics 2022

Cornell Research Travel Grant, Cornell University 2022

Graduate Research Assistant, NSF Research Training Group Grant: Dynamics, Probability, and PDEs in Pure and Applied Mathematics 2021

Teaching Award, Department of Computer Science, Cornell University 2021

Teaching Award, Department of Mathematics, Cornell University 2020

Outstanding Poster Award, Joint Math Meetings 2017

Phi Beta Kappa, Trinity College 2016

Phi Gamma Delta Senior Prize, Trinity College 2016

MathFest CUR Student Award, Mathematical Association of America 2016

Pi Mu Epsilon Connecticut Delta Chapter, Trinity College 2014

RESEARCH PUBLICATIONS

1. *Dynamics and synchronization in random networks of coupled phase-oscillators: A graphon approach* (with Francesca Parise), working manuscript (2023)
2. *Designing for Robustness in Electric Grids via a General Effective Resistance Measure*, **Shriya V. Nagpal**, Gokul G. Nair, Francesca Parise, and C. Lindsay Anderson. IEEE Transactions on Control of Network Systems (2022)
3. *A continuous refinement technique for wind farm layout optimization*, **Shriya V. Nagpal**, M. Vivienne Liu, and C. Lindsay Anderson. Renewable Energy (2020)
4. *Lymphatic metastases have more diverse roots than distant metastases*, Johannes G. Reiter, Wei-Ting Hung, I-Hsiu Lee, **Shriya V. Nagpal**, Peter Giunta, Sebastian Degner, Gang Liu, Emma C.E. Wassenaar, William R. Jeck, Martin S. Taylor, Alexander A. Farahani, Hetal D. Marble, Simon Knott, Onno Kranenburg, Jochen K. Lennerz, and Kamila Naxerova. Nature Genetics (2020)
5. *Domination in the hierarchical product and Vizing's conjecture*, Sarah E. Anderson, **Shriya V. Nagpal**, and Kirsti Wash. Discrete Mathematics (2018)

TEACHING EXPERIENCE

- **Teaching Assistant Trainer**, Cornell University
- **Cornell University Teaching Assistant**, Modeling with Calculus for the Life Sciences (Spring 2019, Spring 2020, Spring 2022, & Spring 2023)
- **Cornell University Teaching Assistant**, Introduction to Computing Using Python (Spring 2021)
- **Cornell University Teaching Assistant**, Calculus for Engineers (Fall 2018 & Fall 2019)
- **Academic Tutor at AJ Tutoring**, Calculus 1 & 2 and Multivariable Calculus (2016-2018)
- **Trinity College Math Center Tutor**, Calculus 1 & 2 and Multivariable Calculus, (2014-2016)
- **Trinity College Teaching Assistant**, Philosophy of Logic (Fall 2014)
- **Trinity College Teaching Assistant**, Calculus 1 (Spring 2014)

TALKS

Research Talks

- *Dynamics and Synchronization in Random Networks of Coupled Phase-Oscillators: A Graphon Approach*, SIAM Conference on Applications of Dynamical Systems (May 2023)
- *Designing Robust Networks of Coupled Phase-Oscillators*, SIAM Workshop on Network Science (September 2022)
- *Designing Robust Networks of Coupled Phase-Oscillators*, The Network Science Society: NetSci (July 2022)
- *Designing Robust Networks of Coupled Phase-Oscillators*, Mediterranean School of Complex Networks (June 2022)
- *Robustness in Networks of Coupled Phase-Oscillators*, Introduction to Research Seminar, Association for Women in Mathematics, Cornell University (May 2022)
- *On the Dynamics of Power Grids*, Applied Dynamics Seminar, Cornell University (March 2022)

- *Robustness in Networks of Coupled Phase-Oscillators*, Applied Mathematics Student Seminar, Cornell University (February 2022)
- *Metastasis: Randomness of Seeding and Genetic Heterogeneity*, Stanford Medicine Curtis Lab Meeting, Stanford University (December 2017)
- *Domination in the hierarchical product and Vizing's conjecture*, Nebraska Conference for Undergraduate Women in Mathematics (February 2017)
- *Domination in the hierarchical product and Vizing's conjecture*, Joint Mathematics Meetings (January 2017)
- *Domination in the hierarchical product and Vizing's conjecture*, Mathematical Association of America Northeastern Section (November 2016)
- *Domination in the hierarchical product and Vizing's conjecture*, Trinity College Math Colloquium (September 2016)
- *Domination in the hierarchical product and Vizing's conjecture*, Mathematical Association of America (August 2016)

Teaching Talks

- *Supporting Students with Math Anxiety*, Department of Mathematics Teaching Seminar, Cornell University (November 2022)
- *On Professionalism as a Teaching Assistant*, Department of Mathematics Teaching Assistant Training , Cornell University (August 2021)

CONFERENCES/ WORKSHOPS

- Communicating Mathematics Conference, Cornell University (2022)
- STEM Communication Workshop, Alan Alda Center for Communicating Science (2021)

REVIEWER WORK

- IEEE Conference on Decision and Control (2022)

SERVICE

- **Mentor**, Center for Applied Mathematics Mentoring Program, Cornell University (2021-2022)
- **Selected Panelist**, Center for Applied Mathematics Student Panel for Incoming Students, Cornell University (2021)
- **Professional Development Co-Chair**, Association for Women in Mathematics, Cornell University (2018,2021)
- **Participant**, Center for Applied Mathematics Ant-racist Group, Cornell University (2020)
- **Mentor**, Undergraduate Mathematics Research Course, Cornell University (2020)
- **Member**, Association for Women in Mathematics, Cornell University (2018-present)
- **Founder and Co-president**, Association for Women in Mathematics, Trinity College (2016)

COMPUTER LANGUAGES

Python (Numpy, Scipy), LaTeX