

VINIT RANJAN

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RESEARCH INTERESTS

- Operations research
- Graph/network algorithms
- Randomized algorithms + stochastic processes
- Machine learning
- Optimization

EDUCATION

Princeton University *Princeton, NJ* *August 2020 - present*
Ph.D. in Operations Research & Financial Engineering

Duke University *Durham, NC* *August 2016 - December 2019*
B.S. in Computer Science, Mathematics *Graduation Honors: Magna Cum Laude*
Minor in Financial Economics **Cumulative GPA: 3.929/4.00**

PUBLICATIONS

- **V. Ranjan**, J. Ryang, and A. Xue. “Time to Leave the Louvre: A Computational Network Analysis.” *The Journal of Undergraduate Mathematics and Its Applications*, 40.2-3 (2019), pp. 135-160.
- I. Cristali, **V. Ranjan**, J. Steinberg, E. Beckman, R. Durrett, M. Junge, and J. Nolen. “Block size in Geometric(p)-biased permutations.” *Electronic Communications in Probability*, 23 (2018), paper no. 80, pp. 10. doi:10.1214/18-ECP182.
- **V. Ranjan**, J. Ryang, and K. Zhang. “An Analysis of the Impact of Self-Driving Cars on Traffic Conditions.” *SIAM Undergraduate Research Online*, 11 (2018). doi:10.1137/17S015768

RESEARCH EXPERIENCE

Undergraduate Research

Point Clouds and Geometric Algorithms *May 2018 - August 2018*
Mentors: Elliott Wolf and Chris Eckman at Lineage Logistics

Online Admission Control Algorithms *Jan 2018 - May 2018*
Professor: Debmalya Panigrahi

Machine Learning Applications *August 2017 - May 2018*
Professor: Lawrence Carin

Probability and Stochastic Processes *May 2017 - August 2017*
Professors: Rick Durrett, Matt Junge, and James Nolen

Talks

- A. Ghadiyaram, **V. Ranjan**, S. Silwal, and R. Shah. “Pace and Space: An Alternative Measure of NBA Shooting Prowess.” *Carnegie Mellon Sports Analytics Conference*, (2018).

Poster Presentations

- A. Ghadiyaram, **V. Ranjan**, S. Silwal, and R. Shah. “Pace and Space: An Alternative Measure of NBA Shooting Prowess.” *MIT Sloan Sports Analytics Conference*, (2019).

TEACHING EXPERIENCE

Undergraduate Teaching Assistant

Discrete Mathematics for Computer Science *Fall 2017, 2018, 2019*
Professor: Bruce Donald

- Note: appointed as Head Undergraduate Teaching Assistant during the Fall 2019 term.

Discrete Mathematics for Computer Science *Spring 2019*
Professor: Debmalya Panigrahi

Intro to Operating Systems *Spring 2019*
Professor: Alvin Lebeck

Intro to Design/Analysis of Algorithms *Spring 2018*
Professor: Debmalya Panigrahi

AWARDS

Mathematical Modeling Awards

- 2019 Consortium for Mathematics and Its Applications (COMAP), Mathematical Contest in Modeling/Interdisciplinary Contest in Modeling (MCM/ICM), **Outstanding solution** (top 7 of 5000+ for chosen problem). Earned the **Leonard Euler Award** for excellence in modeling and \$10000 **COMAP scholarship**.
- 2018 COMAP MCM/ICM, **Meritorious Solution** (top 15%).
- 2017 COMAP MCM/ICM, **Finalist Solution** (top 11 of 1500+ for chosen problem).

Other Research Awards

- Carnegie Mellon Sports Analytics Conference, Reproducible Research Competition, **2nd place**.

Duke Awards

- **Karl Menger Award** for excellence in mathematical competitions. May 2017, 2019.
- **Dean's List** for earning a top GPA during the respective semester. Earned in Fall 2017, Spring 2018, and with distinction for Fall 2016, Spring 2017, Spring 2019.

PROFESSIONAL EXPERIENCE

Software Engineering Intern *May 2019 - August 2019*
Google Health Research Team, Google, Palo Alto, CA

Data Science Intern *May 2018 - August 2018*
Lineage Logistics, San Francisco, CA