

# HYOJEONG SON

hjson@uw.edu

## EDUCATION

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**University of Washington, Seattle**

*Sep. 2021 - Present*

Ph.D. in Mathematics

*Advisor: Christopher Hoffman*

**Washington University in St. Louis**

*Sep. 2019 - May 2021*

A.M. in Mathematics

**Stony Brook University**

*Feb. 2015 - Dec. 2018*

B.S. in Mathematics, Applied Mathematics and Statistics, Minor in Computer Science

## RESEARCH INTERESTS

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Discrete Probability

## PUBLICATIONS

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- [1] Brown, M., Hoffman, C., and Son, H., *Activated Random Walks on  $\mathbb{Z}$  with Critical Particle Density* (2024+)
- [2] Hough, R., and Son, H., *Cut-off for Sandpiles on Tiling Graphs*, *Annals of Probability*, 49 (2), pp. 671–731. [[arXiv:1902.04174](#)] (2021)
- [3] Hough, R., and Son, H., *The Spectrum of the Abelian Sandpile Model*, *Mathematics of Computation*, 90(327), pp. 441–469. [[arXiv:1905.07015](#)] (2020)

## AWARDS AND HONORS

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- **Finalist for the Departmental Teaching Award** **2022**  
Selected as a finalist for the Departmental Teaching Award at the University of Washington.
- **Birnbaum Fellowship** **2022**  
Awarded a \$2,000 fellowship by the University of Washington Mathematics Department.
- **Summer Math Scholarship** **2018**  
Received a scholarship covering two semesters, given annually to one student in the Mathematics Department at Stony Brook University.
- **Undergraduate Recognition Award for Academic Excellence** **2018**  
Campus-wide award recognizing academic accomplishments that extend beyond classroom experience at Stony Brook.
- **Director of the IT Promotion Center Award** **2017**  
Awarded to the top three students who presented work at the World IT Show in COEX, South Korea.
- **Academic Excellence Scholarships** **2015–2017**  
Awarded a merit-based scholarship covering three years of tuition at Stony Brook University.

## TEACHING EXPERIENCE

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### University of Washington, Seattle (Teaching Assistant)

- Math 111 (Algebra): Fall 2022
- Math 125 (Calculus II): Fall 2021, Winter 2022, Fall 2023
- Math 126 (Calculus III): Spring 2022, Summer 2022
- Math 207 (Differential Equations): Winter 2023, Spring 2023
- Math 394 (Probability I): Winter 2024, Fall 2024
- Math 395 (Probability II): Spring 2024

### Mentorship and Project Involvement

- **Washington Experimental Mathematics Lab (WXML)** *Spring 2024*  
Mentored undergraduates on projects related to voting data, map analysis, and ecological inference in the Yakima Valley Area.
- **Graduate Student-Led Reading Program, WashU** *Spring 2020*  
Co-organized and led a reading group for math undergraduates, including a focused reading on sandpiles.