

# DANIEL SLONIM

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## EMPLOYMENT (INCLUDING ANTICIPATED)

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<b>University of Virginia</b> Whyburn research associate and lecturer	To begin August 2022
<b>Purdue University</b> Bilsland dissertation fellow	January 2022 - Present
<b>Purdue University</b> Graduate teaching assistant	August 2016 - December 2021

## EDUCATION

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<b>Purdue University</b> PhD in Mathematics Advisor: Jonathon Peterson	Expected May 2022
<b>Hillsale College</b> BS in Mathematics and Philosophy <i>Summa Cum Laude</i> Math Thesis title: "Path sets and interleaving" Honors program thesis title: "Suárez, goods, and motivation: An analysis of John Finnis's critique"	May 2016

## RESEARCH AREAS

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Random walks in random environments  
Symbolic dynamics

## ARTICLES

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1. D. J. Slonim, "A zero-one law for random walks in random environments on  $\mathbb{Z}^2$  with bounded jumps", preprint: <https://arxiv.org/abs/2108.11424>
2. D. J. Slonim, "Random walks in Dirichlet random environments on  $\mathbb{Z}$  with bounded jumps", preprint: <https://arxiv.org/abs/2104.14950>
3. W. C. Abram, J. C. Lagarias, and D. J. Slonim, "Decimation and interleaving in one-sided symbolic dynamics", *Adv. in Appl. Math.* (2021). <https://doi.org/10.1016/j.aam.2020.102160>.
4. W. C. Abram, J. C. Lagarias, and D. J. Slonim, "Interleaving of path sets", preprint: arXiv:2101.02441.

## AWARDS

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Bilsland Dissertation Fellowship (awarded to outstanding PhD candidates in the final year of doctoral degree completion) Spring 2022

## TEACHING

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<b>Purdue University</b>	
Math 16020i Applied Calculus II (flipped classroom)	Fall 2021
Math 15555 Quantitative Reasoning	Spring 2021
Math 59800 Probability (qualifying exam preparation class)	Summer 2018, Summer 2020

Math 26200 Linear Algebra and Differential Equations	Spring 2020
Math 16100i Plane Analytic Geometry and Calculus I (flipped classroom)	Fall 2019
Math 26100 Multivariate Calculus	Summer 2019
Math 16010 Applied Calculus I	Fall 2017, Fall 2018, Spring 2019
Math 26100 Multivariate Calculus (recitation)	Spring 2018
Math 16200 Plane Analytic Geometry and Calculus II (recitation)	Fall 2016, Spring 2017

## PRESENTATIONS AND TALKS

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“Random Walks in Dirichlet Random Environments on $\mathbb{Z}$ with Bounded Jumps,” Northeast Probability Seminar	November 2021
“My Random Walk through the Random Environment of Probability Research,” Purdue Student Colloquium	September 2021
“Random Walks in Dirichlet Random Environments with Bounded Jumps,” Purdue Probability Seminar	March 2021
“Ergodic Sequences and Mixing Conditions,” Purdue Student Probability Seminar	March 2021
“Skorokhod’s Representation Theorem,” Purdue SPS	October 2020
“Random Walks in Dirichlet Random Environments with Bounded Jumps,” Purdue SC	October 2020
“Loop-Erased Random Walks and Spanning Trees on Markov Chains,” Purdue SPS	February 2020
“The Mass-Transport Method,” Purdue SPS	September 2019
“An Introduction to Random Walks in Random Environments,” Purdue SPS	April 2019
“Beta and Dirichlet Distributions, Order Statistics, and Polya Urns,” Purdue SPS	March 2019
“The Prohorov Metric,” Purdue SPS	January 2019
“What is Hausdorff Dimension?” Purdue SC	March 2018
“Path Sets and Interleaving,” CMS Meeting: Fractal Geometry Session	December 2016
“Interleaving of Path Sets,” Purdue SC	November 2016
“Interleaving of Path Sets,” Michigan MAA Meeting	April 2016

## CONFERENCES ATTENDED

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Northeast Probability Seminar (virtual)	November 2021
Spatial stochastic processes (virtual)	March 2021
Stochastic Processes and Applications	July 2019
Midwest Probability Colloquium	October 2018, October 2019
Recent Trends in Continuous and Discrete Probability	June 2018
Canadian Mathematical Society Meeting	December 2016
Michigan MAA Meeting	April 2016

## DEPARTMENT SERVICE

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Purdue University Graduate Representative	Academic Year 2019/2020
Began and Organized the Purdue Student Probability Seminar	Spring 2019 - Spring 2021
Organized the Bridge to Research Seminar	Academic Year 2017/2018

## OUTREACH

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Tutored regularly at McCutcheon High School	Fall 2017
Assisted with Mock Exams for the First Year Engineering Student Advisory Council	Spring 2017
Tutored at Jefferson High School	April 2017
Volunteered for Math Field Day	November 2016
Tutored regularly at Hillsdale High School	Spring 2016
Tutored regularly at Hillsdale Preparatory School	2012 - 2014

## SOA EXAMS PASSED

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Probability	June 2014
Financial Mathematics	April 2015
Models for Financial Economics	July 2015

## PROFESSIONAL MEMBERSHIPS

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American Mathematical Society  
Association of Christians in the Mathematical Sciences  
Association for Mathematical Research