

Tony G. Allen

CONTACT INFORMATION Department of Mathematics +# (###) ###-####
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West Lafayette, IN tonyallen.xyz

EDUCATION **Purdue University** **2017-present**
Ph.D. Candidate, Mathematics, GPA: 3.93
Dissertation Topic: Model-Based 3D Surface Reconstruction
Advisors: Dr. Gregory Buzzard, Dr. Charles Bouman

West Virginia University **2013-2017**
B.S. in Mathematics, GPA: 4.00

PUBLICATIONS **T.G. Allen**, E. Gebhardt, A. Kluball, T.N. Kolba. Minimal Noise-Induced Stabilization of One-Dimensional Diffusions. *Minnesota Journal of Undergraduate Mathematics*, Vol 3(1), July 2017.

CONFERENCE TALKS “The Use of Graph Theory in Forensic Footwear Analysis,” NIST SURF Colloquium, August 1-3, 2017

“Noise-Induced Stabilization of Stochastic Differential Equations,” Indiana Undergraduate Math Research Conference, July 23, 2015

OTHER TALKS “Geometric Deep Learning on Graphs and Manifolds Using Mixture Model CNNs,” Purdue Machine Learning reading group, October 30, 2019

“Building Machines That Learn and Think Like People,” Purdue Machine Learning reading group, July 31, 2019

“Introduction to Neural Networks Workshop,” Purdue Machine Learning Workshop, July 1, 2019

“Mastering Chess and Shogi by Self-Play with a General Reinforcement Learning Algorithm,” Purdue Machine Learning reading group, March 27, 2019

“The Size of Edge Chromatic Critical Graphs of Maximum Degree 7,” poster presentation at WVU Capstone Day

“Noise-Induced Stabilization of Stochastic Differential Equations,” poster presentation at Joint Mathematics Meetings, January 6-9, 2016

TEACHING Summer 2019 Undergraduate Research Mentor
Spring 2018 Teaching Assistant, Calculus II
Fall 2017 Teaching Assistant, Calculus II
Spring 2016 Teaching Assistant, General Physics II
Fall 2015 Teaching Assistant, General Physics I

RESEARCH	2019-Present	Model-Based 3D Surface Reconstruction Advisors: Dr. Gregory Buzzard ¹ , Dr. Charles Bouman ¹ , Dr. David Rabb ² ¹ Purdue University, ² Air Force Research Lab
	2017	Graph Theory in Forensic Footwear Analysis Advisors: Dr. Martin Herman, Dr. Hariharan Iyer, National Institute of Standards and Technology.
	2015–2017	Structure of Edge-Chromatic-Critical Graphs. Advisor: Dr. Rong Luo, West Virginia University.
	2015	Noise Induced Stability of Stochastic Differential Equations. Advisor: Dr. Tiffany Kolba, Valparaiso University.

OTHER WORK	2016	Model Production Intern Voya Financial
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HONORS AND AWARDS	2017	NSF Graduate Research Fellowship Honorable Mention
	2017	Eberly School of Arts and Sciences Outstanding Senior
	2017	Department of Mathematics Outstanding Senior
	2016, 2017	Eberly Scholar
	2015-2017	Pi Mu Epsilon Member

GRADUATE COURSEWORK	<input type="checkbox"/> Real Analysis <input type="checkbox"/> Measure Theory <input type="checkbox"/> Complex Analysis <input type="checkbox"/> Abstract Algebra <input type="checkbox"/> Commutative Algebra <input type="checkbox"/> Linear Algebra <input type="checkbox"/> Image Processing <input type="checkbox"/> Model-Based Image Processing <input type="checkbox"/> RADAR Engineering	<input type="checkbox"/> Probability <input type="checkbox"/> Differential Geometry <input type="checkbox"/> Numerical Analysis <input type="checkbox"/> Numerical Linear Algebra <input type="checkbox"/> Computational Optimization <input type="checkbox"/> Neural Networks <input type="checkbox"/> Graph Theory <input type="checkbox"/> Randomized Algorithms <input type="checkbox"/> Deep Learning
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