

Daniel Flores

PHD STUDENT · PURDUE UNIVERSITY

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Education

Purdue University

West Lafayette, Indiana

PHD, MATHEMATICS: ANALYTIC NUMBER THEORY, ARITHMETIC STATISTICS.

2019 - present

- **Advisor:** Dr. Trevor Wooley

University of Houston

Houston, Texas

BS, MATHEMATICS

2016 - 2019

- **Undergraduate Advisor:** Dr. Alan Haynes
- Graduated Summa Cum Laude

Lone Star College

Houston, Texas

AS

2013 - 2016

Papers

D. Flores, *A quantitative Hasse principle for Weighted Quartic forms*, Mathematika. 2024, 70: e12236. <https://doi.org/10.1112/mtk.12236>

Presentations

INVITED TALKS

Spring 2024. *A quantitative Hasse principle for Weighted Quartic forms*, AMS Central Sectional meeting, University of Wisconsin-Milwaukee, Milwaukee, WI.

Fall 2023. *A Gentle Introduction to the Circle Method*, Purdue Graduate Student Analysis Seminar, Purdue University, West Lafayette, Indiana.

Fall 2018. *Classification of noisy images with a coupled inversion-classification neural network*. LA-TX Undergraduate Mathematics Conference, Baton Rouge, Louisiana.

SUBMITTED TALKS

Spring 2024. *A quantitative Hasse principle for Weighted Quartic forms*. Southern Regional Number Theory Conference, Baton Rouge, Louisiana.

Awards, Fellowships, & Grants

2019-2023 **Ross Fellowship**, Purdue University

2019 **Charles P. Benner Scholarship**, University of Houston

2018-2019 **Provost's Undergraduate Research Scholarship**, University of Houston

2017 **Charles P. Benner Scholarship**, University of Houston

Employment

- Grader**, Mathematics., Purdue University
- 2022-
Present
- MA 55300 - Introduction To Abstract Algebra Grader assignment, Fall 2022.
 - MA 55700 - Abstract Algebra I Grader assignment, Fall 2022.
 - MA 34100 - Foundations of Analysis Grader dual assignment, Fall 2023.
- Recitation Instructor, Grader, Graduate Mentor**, Mathematics., Purdue University
- 2019-
Present
- MA 16600 - Analytic Geometry And Calculus II TA assignment, Fall 2019.
 - MA 26100 - Multivariate Calculus TA assignment, Fall 2020.
- Undergraduate Grader**, University of Houston
- 2018-2019
- MATH 3331 - Ordinary Differential Equations, Fall 2018.
 - MATH 4366 - Numerical Linear Algebra, Spring 2019.
- Undergraduate Researcher**, Emory University
- 2018
- Supervised by Lars Ruthotto
 - Funded by NSF, DMS-1751636
- 2013-2019 **Mathematics Tutor**, Lone Star College

Outreach & Professional Development

SERVICE AND OUTREACH

- Fall 2022 **Purdue Mathematics Mentoring Program**, Graduate Mentor to undergraduate mathematics students *Purdue University*
- Summer
2022 **Summer Research Opportunities Program**, Graduate Mentor to incoming graduate students *Purdue University*
- 2017-2019 **Pi Mu Epsilon**, Meeting Organizer *University of Houston*
- 2014-2016 **Mathematics Club**, Pi Day Organizer *Lone Star College*

DEVELOPMENT

- 2023 **RHB70**, Conference on analytic number theory and its interfaces to honour the 70th birthday of Roger Heath-Brown in Oxford, UK.
- 2022 **Journées Arithmétiques**, Conference on number theory in Nancy, France.
- 2022 **MAGNTS**, Midwest Arithmetic Geometry and Number Theory Series in Chicago, Illinois.
- 2022 **ELAZ 2022**, Conference on elementary and analytic number theory in Poznań, Poland.
- 2019-present **Purdue Analytic Number theory and Harmonic Analysis**, weekly talks about recent research topics in analytic number theory and harmonic analysis.
- 2018 **UH Summer School on Dynamical Systems**, a workshop designed to introduce graduate students to the basics of dynamical systems and ergodic theory.
- 2017 **Deep learning using Tensorflow**, weekly talks covering the basics of deep learning to convolutional neural networks, and an introduction to the deep learning package, Tensorflow.
- 2016-2019 **University of Houston Undergraduate Mathematics Colloquium**, weekly talks about topics in research mathematics aimed towards an undergraduate audience .
- 2016-2019 **University of Houston Analysis Seminar**, weekly talks about recent research topics in analysis.

LANGUAGES

Spoken: English, Spanish. **Code:** C#, C++, Matlab, Python 3, \LaTeX .