Daniel Flores

PhD Student · Purdue University

Department of Mathematics, Purdue University, 150 N. University Street, West Lafayette, IN 47907-2067, USA

✉ flore205@purdue.edu | ⌂ https://danielfloresmath.github.io/

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

2022-Present

Grader, Mathematics., Purdue University
- 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.

2019-Present

Recitation Instructor, Mathematics., Purdue University
- MA 16600 - Analytic Geometry And Calculus II TA assignment, Fall 2019.
- MA 26100 - Multivariate Calculus TA assignment, Fall 2020.

2018-2019

Undergraduate Grader, University of Houston
- MATH 3331 - Ordinary Differential Equations, Fall 2018.
- MATH 4366 - Numerical Linear Algebra, Spring 2019.

2018

Undergraduate Researcher, Emory University
- 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.