Francis S. Adams, Ph.D.

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EDUCATION

Ph.D. in Mathematics   April 2017
University of Florida (UF), Gainesville, FL
Advisor: Dr. Jindřich Zapletal

M.S. in Mathematics   May 2013
University of Florida, Gainesville, FL

B.A. in Mathematics   June 2010
Carleton College, Northfield, MN
Magna Cum Laude, Distinction in the Mathematics Major

PROFESSIONAL EMPLOYMENT

Visiting Assistant Prof of Quant Theory and Methods   August 2022 - December 2024
Oxford College of Emory University, Oxford, GA
Courses Taught: Advanced Calculus for Data Science (combined second and third semesters of standard calculus sequence including probability and approximation), Introduction to Scientific Methods (introduction to data science, causal inference, epidemiology, and study design), Introduction to Statistical Computing (introduction to R statistical software for data visualization, cleaning, and analysis), Probability and Statistics (calculus-based probability and statistics including the use of R for probability calculations and statistical tests).

Assistant Professor of Mathematics   August 2019 - May 2022
Piedmont University, Demorest, GA
Courses Taught: Instructor for Mathematics for the Liberal Arts, Elementary Statistics, College Algebra, Calculus I, Calculus II, Calculus III, Linear Algebra, Discrete Mathematics, Elementary Number Theory, Real Analysis, Advanced Topics: Models of Computation, .

Lecturer of Mathematics   August 2017 - July 2019
Georgia State University (GSU), Atlanta, GA
Courses Taught: Instructor for Introduction to Mathematical Modeling, Calculus I, Calculus for Life Sciences I, Calculus II, Discrete Mathematics.

SOFTWARE AND LANGUAGE SKILLS

Proficient with Mathematica Computational Software for symbolic computations, graphically representing mathematical objects, and machine learning including LLMs and deep learning.
Proficient with R Statistical Software for data exploration and visualization, data cleaning and transformation, analysis using standard statistical tests and methods.
Proficient with LaTex Typesetting Software for research articles, material summaries for study, and slideshow presentations.
Experience with Python Programming Language, SQL Database Management System, Tableau Visualization Platform, and Matlab Computational Software
Conversant in written and spoken Spanish and French. Experience with written and spoken Dutch.

PUBLICATIONS

F. Adams, D. Cenzer, and S. Ng, *Computability and Categoricity of Weakly Homogeneous Boolean Algebras and Abelian p-Groups*, Aspects of Computation and Automata Theory with Applications , World Scientific Press (2023), 141-158.

F. Adams and J. Zapletal, *Cardinal Invariants of Closed Graphs*, Israel Journal of Mathematics 227, no. 2 (2018), 861-888.

F. Adams and D. Cenzer, *Computability and Categoricity of Weakly Ultrahomogeneous Structures*, Computability 6, no. 4 (2017), 365-389.

F. Adams and D. Cenzer, *Computability and Categoricity of Ultrahomogeneous Structures*, Language, Life, Limits (Proceedings of Computability in Europe), Springer Lecture Notes in Computer Science 8493 (2014), 1-10.

SEMINARS AND TALKS

Loose Number and Other Invariants of Graphs on Topological Spaces   March 2023
AMS Southeast Sectional Meeting, Atlanta, GA.

Descriptive Set Theory in Undergraduate Analysis   March 2021
MAA Southeastern Section Conference, Virtual.

Injection Structures and the Ershov Hierarchy   January 2019
AMS/MAA Joint Mathematics Meetings. Baltimore, MD.

Loose Number of Graphs on Topological Spaces   January 2018
AMS/MAA Joint Mathematics Meetings. San Diego, CA.

Computable Ultrahomogeneous Structures   March 2017
SEALS, Gainesville, FL.

SERVICE, DEVELOPMENT, AND AWARDS

Wolfram Mathematica Daily Study Group: What is ChatGPT and Why Does It Work?
March 2025
Wolfram Mathematica Daily Study Group: Introduction to Neural Networks May 2024
American Inst of Math Workshop on Descriptive Graph Theory Participant   June 2022
MAA Workshop Series on Selecting and Using Statistical Software in Introductory Classes Participant   March 2022
MAA StatPrep RStudio Workshop Participant   July 2021
MAA Workshop Series on Analysis and Differential Equations at Undergraduate Institutions Participant   June-July 2021
Archive for Mathematical Logic Referee   2017 - 2018
UF Mathematics Graduate Student Teaching Award   April 2017
ASL Travel Grant ($1200)   March 2017
UF Center for Applied Math (CAM) Summer Fellowship ($3500)   May 2016
UF University-Wide LaTex Workshop for Graduate Students Organizer   2013 - 2014

REFERENCES

Dr. Zachary Binney, Oxford College at Emory University   zbinney@emory.edu
Dr. Michael Berglund, University of Georgia   berglund@uga.edu
Dr. Jindrich Zapletal, University of Florida   zapletal@ufl.edu

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