

## Francis S. Adams, Ph.D.

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### PROFESSIONAL EMPLOYMENT

*Visiting Assistant Prof of Quant Theory and Methods* August 2022 - December 2024  
Oxford College of Emory University, Oxford, GA

*Assistant Professor of Mathematics* August 2019 - May 2022  
Piedmont University, Demorest, GA

*Lecturer of Mathematics* August 2017 - July 2019  
Georgia State University (GSU), Atlanta, GA

### 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

### COURSES TAUGHT

*Oxford College at Emory University* August 2022 - December 2024

- 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).

*Piedmont University* August 2019 - May 2022

- 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, .

*GSU* August 2017 - July 2019

- Instructor for Introduction to Mathematical Modeling, Calculus I, Calculus for Life Sciences I, Calculus II, Discrete Mathematics.

*STEPUP Engineering Summer Bridge Program Instructor* July 2017 - August 2017

- Calculus Instructor for STEPUP summer bridge program for incoming UF engineering students.

*UF* August 2011 - June 2017

- Adjunct Instructor for Elementary Differential Equations.
- Graduate Student Instructor for Sets and Logic, Calculus I, Calculus II, Survey of Calculus.
- Graduate Student Discussion leader for Precalculus, Calculus I, Calculus II, Calculus III.

*Kirkwood Community College, Cedar Rapids, IA*

August 2010 - May 2011

- Adjunct Instructor for Intermediate Algebra.

## 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.

## INVITED TALKS

<i>Loose Number of Graphs on Topological Spaces</i> Southeastern Logic Symposium (SEALS), Gainesville, FL.	March 2018
<i>Computable Ultrahomogeneous Structures</i> SEALS, Gainesville, FL.	March 2017
<i>Small Sets of Reals: Measure and Category</i> UF Graduate Mathematics Association Colloquium, Gainesville, FL.	August 2016
<i>Computability and Categoricity of Ultrahomogeneous Structures</i> AMS/MAA Joint Mathematics Meetings, Baltimore, MD.	January 2014

## OTHER SELECTED TALKS

<i>Loose Number and Other Invariants of Graphs on Topological Spaces</i> AMS Southeast Sectional Meeting, Atlanta, GA.	March 2023
<i>Descriptive Set Theory in Undergraduate Analysis</i> MAA Southeastern Section Conference, Virtual.	March 2021
<i>Injection Structures and the Ershov Hierarchy</i> AMS/MAA Joint Mathematics Meetings. Baltimore, MD.	January 2019
<i>Loose Number of Graphs on Topological Spaces</i> AMS/MAA Joint Mathematics Meetings. San Diego, CA.	January 2018
<i>Combinatorics of Borel Graphs on Polish Spaces</i> Association of Symbolic Logic (ASL) North American Meeting. Boise State University, Boise, ID.	March 2017
<i>Ideals of Compact Anticliques in Borel Graphs</i> AMS/MAA Joint Mathematics Meetings. Atlanta, GA.	January 2017
<i>Weak Borel Chromatic Number and Dominating Reals</i> ASL North American Meeting. University of Connecticut, Storrs, CT.	May 2016

## SOFTWARE AND LANGUAGE SKILLS

Conversant in Spanish and French

Proficient with *Mathematica* Computational Software for symbolic computations, graphically representing mathematical objects, and machine 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, and *Matlab* Computational Software

## GRANTS AND AWARDS

UF Mathematics Graduate Student Teaching Award	April 2017
ASL Travel Grant (\$1200)	March 2017
AMS Travel Grant (\$500)	January 2017
UF Center for Applied Math (CAM) Summer Fellowship (\$3500)	May 2016
UF CAM Travel Grant (\$600)	January 2014

## ADDITIONAL SERVICE AND DEVELOPMENT

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
GSU Undergraduate Math Club Advisory Board Member	2018
Archive for Mathematical Logic Referee	2017 - 2018
UF Math Department Logic Seminar Organizer	2013 - 2016
7th Young Set Theory Workshop Participant at Mathematical Research and Conference Center in Bedlewo, Poland	May 2014
UF University-Wide LaTeX Workshop for Graduate Students Organizer	2013 - 2014
UF Mathematics Department Faculty Graduate Committee Member	2013
UF Graduate Student Council Department Representative	2013
UF Graduate Student Council Grants Committee Member	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

(Updated January 2025)