

# 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

*Loose Number of Graphs on Topological Spaces* March 2018  
Southeastern Logic Symposium (SEALS), Gainesville, FL.

*Computable Ultrahomogeneous Structures* March 2017  
SEALS, Gainesville, FL.

*Small Sets of Reals: Measure and Category* August 2016  
UF Graduate Mathematics Association Colloquium, Gainesville, FL.

*Computability and Categoricity of Ultrahomogeneous Structures* January 2014  
AMS/MAA Joint Mathematics Meetings, Baltimore, MD.

## OTHER SELECTED 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.

*Combinatorics of Borel Graphs on Polish Spaces* March 2017  
Association of Symbolic Logic (ASL) North American Meeting.  
Boise State University, Boise, ID.

*Ideals of Compact Anticliques in Borel Graphs* January 2017  
AMS/MAA Joint Mathematics Meetings. Atlanta, GA.

*Weak Borel Chromatic Number and Dominating Reals* May 2016  
ASL North American Meeting. University of Connecticut, Storrs, CT.

## 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

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

## ADDITIONAL SERVICE AND DEVELOPMENT

<i>American Inst of Math Workshop on Descriptive Graph Theory Participant</i>	June 2022
<i>MAA Workshop Series on Selecting and Using Statistical Software in Introductory Classes Participant</i>	March 2022
<i>MAA StatPrep RStudio Workshop Participant</i>	July 2021
<i>MAA Workshop Series on Analysis and Differential Equations at Undergraduate Institutions Participant</i>	June-July 2021
<i>GSU Undergraduate Math Club Advisory Board Member</i>	2018
<i>Archive for Mathematical Logic Referee</i>	2017 - 2018
<i>UF Math Department Logic Seminar Organizer</i>	2013 - 2016
<i>7th Young Set Theory Workshop Participant at Mathematical Research and Conference Center in Bedlewo, Poland</i>	May 2014
<i>UF University-Wide LaTeX Workshop for Graduate Students Organizer</i>	2013 - 2014
<i>UF Mathematics Department Faculty Graduate Committee Member</i>	2013
<i>UF Graduate Student Council Department Representative</i>	2013
<i>UF Graduate Student Council Grants Committee Member</i>	2013 - 2014

## REFERENCES

<i>Dr. Zachary Binney, Oxford College at Emory University</i>	<a href="mailto:zbinney@emory.edu">zbinney@emory.edu</a>
<i>Dr. Michael Berglund, University of Georgia</i>	<a href="mailto:berglund@uga.edu">berglund@uga.edu</a>
<i>Dr. Jindrich Zapletal, University of Florida</i>	<a href="mailto:zapletal@ufl.edu">zapletal@ufl.edu</a>

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