



Noah CORBETT

Boca Raton, FL | 561.297.3340

ncorbett2014@fau.edu

[Homepage](#) | [linkedin](#)

SUMMARY

I am a fourth year doctoral candidate in the Department of Mathematics and Statistics at Florida Atlantic University studying computational dynamical systems and differential equations. In my current research, I am developing methods that employ functional-analytic techniques and computer-assisted proofs to calculate connecting orbits in chaotic systems of ordinary differential equations and state-dependent delay differential equations, as well as travelling wave solutions of partial differential equations. In general, I view the computer as an invaluable tool in mathematics research and I enjoy learning and developing computational techniques to study open problems in mathematics.

EDUCATION

DOCTOR OF PHILOSOPHY, Mathematics

Fall 2024 (Expected)

FLORIDA ATLANTIC UNIVERSITY

- 3.98/4.00 GPA

MASTER OF SCIENCE, Mathematics

2020

FLORIDA ATLANTIC UNIVERSITY

- MS Presentation: *The Stable Manifold Theorem*
- 4.00/4.00 GPA

BACHELOR OF SCIENCE, Mathematics

2018

FLORIDA ATLANTIC UNIVERSITY

- Minor in Statistics
- 3.84/4.00 GPA

PROFESSIONAL EXPERIENCE

GRADUATE TEACHING ASSISTANT

2018-Current

FLORIDA ATLANTIC UNIVERSITY

- Duties include tutoring, grading, and teaching for undergraduate courses in mathematics and statistics

GRADUATE RESEARCH ASSISTANT

2020-2021, 2022-2024

FLORIDA ATLANTIC UNIVERSITY

- Partially supported to perform data analysis on an NSF-funded project in collaboration with FAU's College of Education

NSF MATHEMATICAL SCIENCES GRADUATE RESEARCH INTERN

2023

U.S. ARMY CORPS OF ENGINEERS' RESEARCH AND DEVELOPMENT CENTER

- Intensive summer-long applied mathematics research program, funded by the NSF and administered by ORISE

TEACHING EXPERIENCE

AS COURSE INSTRUCTOR

- MAS 2103 Matrix Theory (Spring 2024)
- MAC 2312 Calculus with Analytic Geometry 2 (Fall 2023, Spring 2023)
- MAP 3305 Engineering Mathematics 1 (Fall 2022, Spring 2022)
- MAC 1105 College Algebra (Fall 2021)
- STA 2023 Introductory Statistics (Spring 2020)
- MAC 2233B Methods of Calculus (Fall 2019)

AS TEACHING ASSISTANT/EMBEDDED TUTOR

- MAS 2103 Matrix Theory (Summer 2024)
- MAD 3400 Numerical Methods (Fall 2023)
- MAD 2104 Discrete Mathematics (Summer 2022)
- STA 3100 Computational Statistics (Spring 2021)

PUBLICATIONS

- | | | |
|-----|---|-----------------------------|
| [1] | "PREDICTING STATE SWITCHES IN CHAOTIC DYNAMICAL SYSTEMS"
WITH K. PILKIEWICZ AND M. MAYO | <i>Submitted July 2024</i> |
| [2] | "PERIODIC ORBITS FOR STATE-DEPENDENT DELAY DIFFERENTIAL EQUATIONS"
WITH V. NAUDOT | <i>Submitted April 2024</i> |
| [3] | "STABILITY OF TRAVELLING WAVES: A COMPUTER-ASSISTED APPROACH"
WITH J. D. MIRELES-JAMES | <i>In preparation</i> |
| [4] | "PERIODIC ORBITS IN THE STATE-DEPENDENT VAN DER POL SYSTEM"
WITH V. NAUDOT | <i>In preparation</i> |
| [5] | "RECRUITMENT AND RETENTION OF STEM TEACHERS IN HIGH NEED SCHOOLS:
AN ALUMNI SURVEY ANALYSIS OF SELECTED NSF ROBERT NOYCE PROGRAMS"
WITH D. KUMAR AND S. MOFFITT | <i>In preparation</i> |
| [6] | "A MIXED METHOD STUDY OF STEM TEACHER SUPPLY TO HIGH NEED SCHOOLS
IN FLORIDA AND TEXAS"
WITH D. KUMAR, S. MOFFITT, AND C. RESTREPO-WIDNEY | <i>In preparation</i> |

POSTERS, PRESENTATIONS, & LECTURES

PERIODIC ORBITS FOR STATE-DEPENDENT DELAY DIFFERENTIAL EQUATIONS

PAPER PRESENTED AT:

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|---|-----------------------|
| • 2024 Florida Women in Math Day, Florida Atlantic University, Boca Raton, FL. | <i>April 21, 2024</i> |
| • <i>Special Session on Recent Developments in Nonlinear and Computational Dynamics</i> ,
Spring 2024 AMS Eastern Sectional Meeting, Howard University, Washington, D.C. | <i>April 7, 2024</i> |
| • Graduate Student Seminar, Florida Atlantic University, Boca Raton, FL. | <i>March 29, 2024</i> |

PREDICTING STATE SWITCHES IN CHAOTIC DYNAMICAL SYSTEMS

PAPER PRESENTED AT:

- | | |
|---|--------------------------|
| • 13 th Annual FAU Broward Research Symposium, Florida Atlantic University, Davie, FL. | <i>November 17, 2023</i> |
| • Graduate Student Seminar, Florida Atlantic University, Boca Raton, FL. | <i>November 2, 2023</i> |
| • Analysis & Applications Seminar, Florida Atlantic University, Boca Raton, FL. | <i>October 19, 2023</i> |
| • 2023 NSF MSGI Summer Research Symposium (<i>Virtual Event</i>) | <i>August 22, 2023</i> |
| • Environmental Processes Branch Seminar, USACE ERDC, Vicksburg, MS. | <i>August 10, 2023</i> |

THE STABLE MANIFOLD THEOREM

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| • M.S. Presentation, Florida Atlantic University | <i>April 17, 2020</i> |
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THE DYNAMICS OF CIRCLE MAPS AND DENJOY'S THEOREM

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| • Multi-class lecture for graduate course in Dynamical Systems at Florida Atlantic University | <i>February 2020</i> |
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THE FOURIER TRANSFORM, REGULARITY, AND SOBOLEV EMBEDDING

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| • Lecture for graduate course in Partial Differential Equations at Florida Atlantic University | <i>November 2019</i> |
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PROGRAMMING EXPERIENCE

LANGUAGES: MATLAB | R | Python | \LaTeX

FELLOWSHIPS & SCHOLARSHIPS

ISAAC SCHUR GRADUATE SCHOLARSHIP

2021

- Awarded to graduate students in mathematics who have successfully passed two qualifying exams, maintained a high GPA in graduate studies, and received distinguished letters of recommendation from two professors
- Award of \$1,000

FAU PRESIDENTIAL FELLOWSHIP

2018-2020

- Two-year fellowship awarded to doctoral students who have exhibited an excellent academic record and excellent letters of recommendation as determined by faculty at the time of admission
- Award of \$5,000 per year for the first two years of graduate studies

FLORIDA BRIGHT FUTURES SCHOLARSHIP

2018-2019

- Undergraduate scholarship awarded to Florida public university attendees with distinguished GPAs and SAT scores

ACTIVITIES

GRADUATE STUDENT SEMINAR, Organizer

2022-Current

- Organized and co-hosted weekly seminars, with presentations by graduate students and faculty within FAU's Department of Mathematical Sciences

AMS STUDENT CHAPTER

President

2023-Current

- Organized and lead chapter meetings, aided in organizing chapter events, and recruited officers and members for AMS student chapter.

Treasurer

2022-2023

- Managed funds and purchases for AMS-related events and activities at Florida Atlantic University

FLORIDA ATLANTIC JAZZ ORCHESTRA, Lead Trombone

2016-2017, 2024-Current

- Attended biweekly rehearsals and performed at various venues for concerts and events as the first-chair trombone player

CERTIFICATES & HONORS

- ACS Disaster Response Certificate (2024)
- CITI Responsible Conduct of Research Certificate (2023)
- CITI Social & Behavioral Research Investigators Certificate (2022)
- CRLA Level 3 Certified Tutor (2018)
- FAU Honors Program (2015-2018)