TEXAS STATE VITA

I. Academic/Professional Background

A. Name: Brian Grove Title: Mathematics Lecturer

B. Educational Background

Degree *Year* *University* *Major* *Thesis/Dissertation*

Bachelor of Science, 2020, University of Toledo, Mathematics Major
Master of Science, 2020, Louisiana State University, Mathematics
Doctor of Philosophy, 2025, Louisiana State University, Mathematics, Explicit Modularity and Moments for Certain Hypergeometric Character Sums

C. University Experience
University of Toledo
Louisiana State University

D. Relevant Professional Experience
Mathematics Tutor at the University of Toledo (2019-2020)

Graduate Teaching Assistant in Mathematics at Louisiana State University (2020 – 2025)

Counselor at the Ross Mathematics Program (2023)

E. Other Professional Credentials (licensure, certification, etc.)
N/A

II. TEACHING

A. Teaching Honors and Awards: Certificate of Teaching Excellence (three times), Louisiana State University, Department of Mathematics

David Oxley Teaching Award (one time), Louisiana State University, Department of Mathematics

B. Courses Taught: College Algebra, Plane Trigonometry, Calculus I, and Calculus II

C. Directed Student Learning (i.e. theses, dissertations, exit committees, etc.):

The LSU Department of Mathematics, Directed Reading Program with undergraduate students, three total students

D. Courses Prepared and Curriculum Development: N/A

E. Teaching Grants and Contracts

1. Funded External Teaching Grants and Contracts: N/A

2. Submitted, but not Funded, External Teaching Grants and Contracts: N/A

3. Funded Internal Teaching Grants and Contracts: N/A

4. Submitted, but not Funded, Internal Teaching Grants and Contracts: N/A

F. Other: N/A

G. Teaching Professional Development Activities Attended: Two semesters of the Communicating Mathematics course at Louisiana State University

III. SCHOLARLY/CREATIVE

A. Works in Print (including works accepted, forthcoming, in press):

1. Books:

a. Scholarly Monographs: N/A

b. Textbooks: N/A

c. Edited Books: N/A

d. Chapters in Books: N/A

e. Creative Books: N/A

2. Articles:

a. Refereed Journal Articles:

The Explicit Hypergeometric Modularity Method I (with Michael Allen, Ling Long, and Fang-Ting Tu). Advances in Mathematics, Volume 478, Number 110411, October 2025.

Hypergeometric Distributions and Joint Families of Elliptic Curves (with Hasan Saad). Research in the Mathematical Sciences, in press.

b. Non-refereed Articles: [These articles have all been submitted]

The Explicit Hypergeometric Modularity Method II (with Michael Allen, Ling Long, and Fang-Ting Tu)

Hypergeometric Moments and Hecke Trace Formulas

On Some Hypergeometric Modularity Conjectures of Dawsey and McCarthy

3. Conference Proceedings:

   a. Refereed Conference Proceedings: N/A

   b. Non-refereed: N/A

4. Abstracts: N/A
5. Reports: N/A

6. Book Reviews: N/A

7. Essays: N/A

8. Poems: N/A

9. Short Stories: N/A

10. Other Works in Print: N/A

B. Works Not in Print:

1. Papers Presented at Professional Meetings:

The Explicit Hypergeometric Modularity Method I (with Michael Allen, Ling Long, and Fang-Ting Tu)

The Explicit Hypergeometric Modularity Method II (with Michael Allen, Ling Long, and Fang-Ting Tu)

Hypergeometric Moments and Hecke Trace Formulas

2. Invited Talks, Lectures, and Presentations:

The Joint Bowling Green State University and University of Toledo Algebra Seminar

The AMS Fall Southeastern Section Meeting, Special Session on Experimental Mathematics in Number Theory and Combinatorics, University of South Alabama

The Algebra and Combinatorics Seminar, Tulane University

The Algebra and Number Theory Seminar, Louisiana State University

The Ramanujan-Serre (Number Theory) Seminar, University of Virginia

The Joint Mathematics Meetings, AMS Special Session on Modular Forms, Hypergeometric Functions, and Related Topics: Seattle, Washington

The Joint Mathematics Meetings, AMS Special Session on Current Directions in Modular Forms: In Twenty Minute Snippets: Seattle Washington

Job Talk, La Salle University

3. Consultancies: N/A

4. Workshops: N/A

5. Other Works not in Print:

a. Works "submitted" or "under review": N/A

b. Works "in progress":

Hypergeometric Functions and Graph Theory

c. Other Works Not in Print: N/A

C. Scholarly / Creative Grants and Contracts:

1. Funded External Grants and Contracts: N/A

2. Submitted, but not Funded, External Grants and Contracts: N/A

3. Funded Internal Grants and Contracts: N/A

4. Submitted, but not Funded, Internal Grants and Contracts: N/A

D. Scholarly / Creative Fellowships, Awards, Honors:

Arthur K. Barton Superior Graduate Student Scholarship, Louisiana State University, Department of Mathematics

A.K. and Shirley Barton Superior Graduate Student Scholarship, Louisiana State University, Department of Mathematics

E. Scholarly / Creative Professional Development Activities Attended:

The Southern Regional Number Theory Conference (2022, 2023, 2024, 2025), Louisiana State University

Bayou Arithmetic Research Day (BARD) I – V, Louisiana State University, Tulane University, and Xavier University

The Automorphic Forms Workshop (2023, 2024), Louisiana State University and Oklahoma State University

AMS Fall Southeastern Sectional Meeting, University of South Alabama (2023)

Palmetto Area Number Theory Series (PANTS) 36 – In Memory of Professor Kevin James, Clemson University (2023)

The Clifford Lectures, Tulane University (2024)

Texas–Oklahoma Representations and Automorphic Forms (TORA) 13, University of North Texas (2024)

The Joint Mathematics Meetings, Seattle Washington (2025)

F. Media Recognition: N/A

IV. SERVICE

A. Institutional

1. University: N/A

2. College: N/A

3. Department/School:

Student Organizer of the Southern Regional Number Theory Conference (2022, 2023, 2024, 2025), Louisiana State University.

Organizer of the Number Theory Working Seminar (Fall 2021 – Spring 2025), Louisiana State University.

Organizer of the Student Number Theory Seminar (2022), Louisiana State University.

Volunteer for the GEAUX orientation program for incoming mathematics graduate students (2021 and 2022), Louisiana State University.

Teaching mentor for mathematics graduate students (2022 – 2024), Louisiana State University.

Mentor for the Directed Reading Program for mathematics undergraduates (2023 – 2024), Louisiana State University.

B. Professional: N/A

C. Community: N/A

D. Organization Memberships: American Mathematical Society and the Mathematical Association of America

E. Service Honors and Awards: N/A

F. Service Grants and Contracts: N/A

1. Funded External Service Grants and Contracts: N/A

2. Submitted, but not Funded, External Service Grants and Contracts: N/A

3. Funded Internal Service Grants and Contracts: N/A

4. Submitted, but not Funded, Internal Service Grants and Contracts: N/A

G. Service Professional Development Activities Attended: N/A