

ABIGAIL D'OVIDIO LONG

along19@huskers.unl.edu ♦ 715-214-5771

Department of Mathematics ♦ University of Nebraska - Lincoln

203 Avery Hall ♦ Lincoln, NE 68588

RESEARCH INTERESTS

Mathematical Modeling, Math Biology, Applied Math

EDUCATION

Doctor of Philosophy , Mathematics <i>University of Nebraska, Lincoln, NE</i> Advisor: Dr. Huijing Du	Expected May 2025
Master of Science , Mathematics <i>University of Nebraska, Lincoln, NE</i>	May 2021
Bachelor of Arts , Mathematics-Summa Cum Laude <i>Quinnipiac University, Hamden, CT</i> Minor: History	May 2019

POSITIONS HELD

Graduate Teaching Assistant <i>Mathematics Department, University of Nebraska, Lincoln, NE</i>	August 2019 - Present
NSF Mathematical Sciences Graduate Internship <i>USDA Animal and Plant Health Inspection Services, Fort Collins, Colorado</i>	Summer 2022
NSF REU Undergraduate Researcher <i>Bethune-Cookman University, Daytona Beach, Florida</i>	Summer 2018
Mathematics Workshop Instructor <i>Bethune-Cookman University Summer Bridge Program, Daytona Beach, Florida</i> – Managed nightly workshops intended for conditionally accepted college students to improve their math skills before officially being accepted to the university.	Summer 2018
Mathematics and Physics Tutor <i>Learning Commons, Quinnipiac University, Hamden, CT</i>	Fall 2017-Spring 2019

PUBLICATIONS

1. Bennett, A. B., Martinez, R., & **D'Ovidio Long, A.** (2022). Mathematical Modeling as a Way of Expressing the Flexibility of Solution Strategies. In Karunakaran, S. S., & Higgins, A. (Eds.), *Proceedings of the 24th Annual Conference on Research in Undergraduate Mathematics Education* (pp. 927-933). Boston, MA.

PAST & UPCOMING TALKS & POSTER PRESENTATIONS

10. **Dynamical Systems Analysis of A Radiation Therapy Model**
(25 min.)
MAA Wisconsin Section Meeting
April 28th, 2023
9. **Lotka-Volterra Competition Models for Simulating Radiation Therapy**
(15 min.)
Joint Mathematics Meetings, AMS Contributed Paper Session
January 4th, 2023

8. (Invited) **Simulating African Swine Fever Movement with SIR Models**
(15 min.) August 25th, 2022
NSF MSGI Summer Research Symposium
7. (Invited) **SIR models for ASF Spread** (15 min.) July 28th, 2022
USDA Center for Epidemiology and Animal Health Analytical Workshop
6. (Invited) **A Look into Math Modeling and Data** (15 min.) June 24th, 2022
Quinnipiac University Data Science Camp
5. **Math Models of Radiotherapy and an Application to FLASH RT**
(50 min.) April 28th, 2022
University of Nebraska-Lincoln Mathematical Biology Seminar
4. **Katherine Johnson's Remarkable Journey** (50 min.) January 31, 2022
University of Nebraska-Lincoln Graduate Student Seminar
3. (Invited) **Modeling the Spread of Disease** (50 min.) April 10, 2021
University of Nebraska-Lincoln, Women in Science Day
2. **Reproduction Numbers and Sub-Threshold Endemic Equilibria for Compartmental Models of Disease Transmission** (50 min.) September 24, 2020
University of Nebraska-Lincoln Mathematical Biology Seminar
1. (Invited) **Mathematical Modeling in Biological and Environmental Sciences with Application to the Ebola Epidemic** (Poster Session) October 28-29, 2018
CUR Research Experiences for Undergraduates Symposium, Alexandria, VA

CONFERENCES ATTENDED

- | | |
|--|----------------|
| MAA Wisconsin Section Meeting
<i>Menomonie, Wisconsin</i> | April, 2023 |
| Joint Mathematics Meetings
<i>Boston, Massachusetts</i> | January, 2023 |
| Math Alliance Field of Dreams Conference
<i>Minneapolis, Minnesota</i> | November, 2022 |
| NSF MSGI Summer Research Symposium
<i>Virtual</i> | August, 2022 |
| Annual Meeting of the Society for Math Biology
<i>Virtual</i> | June, 2021 |
| CUR Research Experience for Undergraduates Symposium
<i>Alexandria, Virginia</i> | October, 2018 |

TEACHING EXPERIENCE

Associate Convener

- Math 107: *Calculus II*, Fall 2021
 - Assisting with coordinating course activities among all graduate student instructors. Responsibilities include editing exams, assignments, and planning and leading instructor meetings.

Instructor of Record

- Math 104: *Applied Calculus*, Fall 2022, large lecture section (3 credits)
- Math 203: *Contemporary Mathematics*, Spring 2021 (3 credits)
- Math 100A: *Intermediate Algebra*, Fall 2020 (3 credits)

Teaching Assistant

- Math 802T: *Functions, Algebra and Geometry*, Summer 2020 (online, 3 credits)
 - Held office hours and other homework sessions for a masters-level course for in-service middle grade teachers.

Recitation Instructor

- Math 107: *Calculus II Recitation*, Fall 2019, Spring 2020 and Fall 2021 (5 total sections, 2 credits each)

Graduate Research Assistant

- Center for Science, Mathematics, and Computer Science Education UNL
 - Winter 2020-2021: Performed initial data sort for project investigating mathematical modeling lessons with preservice teachers.
 - Summer 2020: Created learning modules for online instructional tools for in-service middle grades teachers, and assisted with adapting math 802T materials for online instruction.

Grading Assignments

- Math 825 *Math Analysis*, Fall 2022
 - Graded homework for the first graduate level analysis course at UNL.

AWARDS

Amy Bouska GTA Leadership Award 2022-2023

University of Nebraska-Lincoln Department of Mathematics

Award given to a Graduate Teaching Assistant who has exhibit exceptional leadership in service to the department.

James Fickes Mathematics Award 2018-2019

Quinnipiac University Mathematics and Statistics Department

Award given to the senior mathematics major who has shown the greatest achievement and future promise as a mathematician, and who has demonstrated leadership both in and outside of the classroom.

SERVICE

NCUWM Organizational Committee 2022 -2023

University of Nebraska-Lincoln

Assist in planning and organization for the Nebraska Conference for Undergraduate Women in Mathematics, one of the largest gatherings of undergraduate mathematicians in the United States.

UNL Mathematical Biology Seminar Coordinator 2022-2023

University of Nebraska-Lincoln

Schedule speakers and coordinate seminar events for the math biology research group at UNL.

Directed Reading Program Mentor 2022-2023

University of Nebraska-Lincoln

Lead an undergraduate student in reading material to enrich mathematical knowledge outside of course work, which the student presents as a culminating project.

Graduate School Fair Student Representative

November 2022

Field of Dreams Conference

Represented the University of Nebraska-Lincoln at the graduate school fair at the Field of Dreams Conference. This conference is intended for underrepresented groups and first-generation students to interact with members within the math community and learn about career and academic opportunities in the field.

UNL Graduate Student Peer Mentor

2021 - 2023

University of Nebraska - Lincoln

Serve as a mentor for a first year graduate student to provide support in their transition into a Ph.D. program.

AMS Chapter Secretary/Treasurer

2021 - 2022

University of Nebraska - Lincoln

Manage chapter funds, and assist in hosting AMS sponsored events.

NCUWM Volunteer

2021 - 2022

University of Nebraska - Lincoln

Monitored breakout sessions for student talks and invited guest panels at the Nebraska Conference for Undergraduate Women in Mathematics

Getting Ready for Grad School Panel Member

October 2021

UNL Math Club

Served on a panel for undergraduate math majors interested in pursuing graduate level degrees about preparation, the application process, and other facets of life as a graduate student.

Quinnipiac University Talk with Math Alum Panel Member

April 2021

Zoom

Spoke with current math majors about life post graduation and opportunities in the world of mathematics.

UNL Mathematics Graduate Student Seminar (GSS) Coordinator

2020-2021

University of Nebraska - Lincoln

Scheduled speakers to give talks about broad areas of mathematics and organize panels on fellowships, internships, and department affairs.

UNL Math Day Volunteer

2019 - 2022

University of Nebraska - Lincoln

Moderate quiz bowl rounds at an annual event hosted by the UNL mathematics department for roughly 1500 high school math students from across the state of Nebraska.

COMPUTER SKILLS

Software: L^AT_EX, MATLAB, R/R Studio, SAS, Microsoft Office

MEMBERSHIPS

American Mathematical Society, Mathematical Association of America, Society for Math Biology