

Paul Spears

pkspears@ncsu.edu

EDUCATION

North Carolina State University

Doctor of Philosophy in Mathematics

Raleigh, NC

May 2027 (Expected)

Virginia Polytechnic Institute and State University

B.S. in Mathematics

Blacksburg, VA

May 2022

- GPA: 3.978
- Minors in Spanish and Cello Performance

EXPERIENCE

Graduate Teaching Assistant

Department of Mathematics, NC State University

Aug 2022 - Present

Raleigh, NC

- Recitation leader for Calculus I, II, and III
- Prepared and delivered weekly problem sessions, assisted instructor and students, graded, and tutored.

Graduate Student Advisor

Directed Research for Undergraduates in Math and Statistics (DRUMS)

Summer 2023

Raleigh, NC

- Supervised and provided mentorship for undergraduate students during NC State's Research Experience for Undergraduates program.

Undergraduate Research Assistant

Hume Center for National Security and Technology

Sep 2021 - May 2022

Blacksburg, VA

- Investigated the efficacy of quantum computers for cryptography in cybersecurity; Identified techniques to use quantum computers for encryption.

Mathematics Grader

Department of Mathematics, Virginia Tech

Sep 2021 - May 2022

Blacksburg, VA

- Graded homework assignments and quizzes for Math 1225 and 1226 (Differential and Integral Calculus).

Undergraduate Research Assistant

REU at Virginia Commonwealth University

Jun 2020 - Jul 2020

Richmond, VA

- Investigated and modeled the spread of Guinea Worm Disease in Chad.
- Performed sensitivity analysis using MATLAB.

PRESENTATIONS

VCU Richmond Area Mathematical Sciences (RAMS) Conference

May 2021

PUBLICATIONS

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1. C.A.G. Engelhard, A.P. Hodgkins, E.E. Pearl, P. K. Spears, J. Rychtar, D. Taylor (2021). [A mathematical model of guinea worm disease in chad with fish as intermediate transport hosts](#). Journal of Theoretical Biology, 521, 110683. doi:10.1016/j.jtbi.2021.110683.
 2. C.A.G. Engelhard, A.P. Hodgkins, E.E. Pearl, P. K. Spears, J. Rychtar, D. Taylor (2023). Mathematical models of guinea worm disease: A review. UMAP.

SERVICE AND OUTREACH

SIAM NC State Student Chapter, *Treasurer*

2023-Present

TECHNICAL SKILLS

Languages: MATLAB, LaTeX, Python

HONORS AND AWARDS

University Graduate Fellowship, *NC State University*

2022

Diversity Enhancement Recruitment Fellowship, *NC State University*

2022

Hatcher Scholarship in Mathematics, *Virginia Tech*

2019