

Dillon Hanson - Curriculum Vitae

UNIVERSITY OF NORTH TEXAS
Denton, Texas

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Education

Ph.D. Mathematics, University of North Texas, Denton, TX, estimated graduation May 2023

Advisor: Dr. Anne V. Shepler

Research Areas: Algebra, Combinatorics, Invariant Theory, Reflection Groups, Positive Characteristic

Thesis Title: Invariant differential derivations for modular reflection groups

B.S. Mathematics, B.S. Chemical Engineering, University of Notre Dame, Notre Dame, IN, 2014

Professional Experience

Teaching Fellow, University of North Texas, Denton, TX, 2017 – Present

- Instructor of Record: (13 – 99 Students)
 - Calculus I: Fall 2021, Spring 2022 (Honors Section), Fall 2022
 - Multivariable Calculus: Fall 2019, Spring 2020, Fall 2020, Spring 2021, Summer 2021
 - Precalculus for Business Majors: Summer 2019
 - Elementary Probability and Statistics: Fall 2018, Spring 2019
- Recitation Instructor: (13 – 38 Students)
 - Calculus I: Spring 2022 (Honors Section)
 - Elementary Probability and Statistics: Fall 2018
 - Precalculus for Business Majors: Summer 2018
 - Calculus II: Spring 2018
 - Precalculus: Fall 2017
- Course Development: Multivariable Calculus, Elementary Probability and Statistics
- Grader: Ordinary Differential Equations, Vector Calculus

High School Math and Science Teacher, Maharishi School, Fairfield, IA, 2016 – 2017

- Instructor of Record: Precalculus (Traditional and Honors), Physics (Traditional and Honors)
- Elective Project Mentor: Entrepreneurship, Communications, Ballroom Dancing

Software Developer, Epic Systems, Verona, WI, 2014 – 2016

- Medical Records Software: Nursing Documentation Team, Dermatology Team

Awards and Honors (UNT)

- Dean's Doctoral Fellows Fund for College of Science (\$5000), 2022
- Travel Awards for Department of Mathematics and College of Science (\$1500), 2022
- Outstanding Teaching Fellow Award for Department of Mathematics, 2022
- Altermann Bradford Scholarship (\$1000), 2021 – 2022
- Outstanding Graduate Student for Department of Mathematics, 2021

Publications

1. Invariant differential derivations for reflection groups in positive characteristic, with Anne V. Shepler, submitted 2022. <https://arxiv.org/abs/2209.08145>

Presentations

EXTERNAL SEMINARS AND CONFERENCE TALKS

- Algebra and Combinatorics Seminar: Univ. of Texas at Dallas, October 2022
- RANDINAG: Seattle Conference in Noncomm. Alg. & Geometry, Univ. of Washington, June 2022
- GradMOCCA: Graduate Meeting on Combinatorial Comm. Alg., Univ. of Minnesota, May 2022
- TORA: TX-OK Rep. Theory and Automorphic Forms, Oklahoma State Univ., April 2022
- GAS: Graduate Algebra Symposium, Univ. of Oklahoma, Online, April 2021

SEMINARS AT THE UNIVERSITY OF NORTH TEXAS

- Graduate Algebra Group, nine talks from September 2018 – March 2022
- Algebra Seminar, four talks from March 2019 – November 2021
- Graduate Talks Group (Online), September 2020

Academic Service and Leadership Activities (UNT)

- Faculty Graduate Affairs Committee Member, 2019 – 2020
Selected by department faculty to serve as the first graduate student representative. Developed Grad Track program (5-year undergraduate and masters).
- Inclusive Curriculum Panelist, 2021
Selected by department chair to serve as the graduate student panelist to discuss diversity and creating a welcoming classroom environment.
- Organizer for Graduate Algebra Group, 2019 – 2022
Organized weekly presentations by graduate students for graduate students about topics in algebra.
- Honors College STEM Graduate Panelist, 2020
Shared my experience and answered questions to encourage undergraduates in the Honors College to pursue graduate school in STEM.
- Graduate Student Mentor, 2018 – Present
Mentored new graduate students throughout their first year.
- Department Hiring, 2020 – Present
Assisted hiring committees by attending candidate job talks, taking the candidate to lunch, and providing feedback to the committee.
- Department Recruitment, 2020 – Present
Assisted the graduate advisor by picking up prospective students, showing them around campus, taking them to classes, and integrating them with other graduate students.

Technical Skills and Relevant Training

- ISACS New Teacher Institute (Indep. School Assoc. of the Central States), Chicago, IL, July 2016
- Software Expertise: Adobe Premiere Pro, Open Broadcaster Software, WebAssign, Knewton, MyLabStats, Canvas
- Programming Languages: LaTeX, Sage, Python, HTML, CSS, Java, TI-Basic, Matlab, Javascript, C++, M, Visual Basic