

Michael Morrow

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Education

University of Kentucky, Kentucky, USA

Ph.D. Mathematics

Advisor: Uwe Nagel

August 2019 - Present

University of Kentucky, Kentucky, USA

M.S. Mathematics

April 2021

Central Washington University, Washington, USA

B.S. Mathematics

June 2019

Research Interests

Computational and combinatorial commutative algebra, asymptotic algebra

Publications and Preprints

Computing Gröbner Bases and Free Resolutions of OI -Modules

with U. Nagel, submitted, 2023. Available at [arXiv:2303.06725](https://arxiv.org/abs/2303.06725).

The OIGroebnerBases Package for Macaulay2

To appear on the arXiv.

Awards and Fellowships

Summer Research Fellowship

University of Kentucky

Summer 2023

Eaves Fellowship

University of Kentucky

Summer 2022

Dale and Mary Jo Comstock Scholarship

Central Washington University

Spring 2019

Talks and Presentations

Syzygy Computations in OI -Modules

- (Invited) Joint Mathematics Meetings, San Francisco, CA

January 2024

Finite Computation of Gröbner Bases for OI -Modules

- (Invited) Algebra and Geometry Seminar, University of New Mexico
- Qualifying Talk, University of Kentucky

October 2023
December 2021

Computing Gröbner Bases and Free Resolutions of OI -Modules

- (Poster) BrianFest, University of Nebraska-Lincoln

August 2023

Gröbner Bases and Syzygies of Sequences of Related Ideals

- Spectra Survey of Mathematics Conference, University of Kentucky
- (Invited) AMS Fall Southeastern Sectional Meeting, University of Tennessee-Chattanooga

May 2023
October 2022

Computing Free Resolutions of OI -Modules

- Algebra Seminar, University of Kentucky

November 2022

Equivariant Gröbner Bases

- Master's Talk, University of Kentucky

April 2021

Conferences and Workshops

Joint Mathematics Meetings

San Francisco, CA

January 2024

BrianFest University of Nebraska-Lincoln	August 2023
Summer CAMP Professional development workshop University of Nebraska-Lincoln	August 2023
Commutative Algebra and its Interaction with Algebraic Geometry SLMath summer school University of Notre Dame	May 2023
Spectra Survey of Mathematics Conference University of Kentucky	May 2023
AMS Fall Southeastern Sectional Meeting University of Tennessee-Chattanooga	October 2022
WARTHOG Infinite-dimensional methods in commutative algebra University of Oregon	June 2022
Macaulay2 Conference Cleveland State University	May 2022

Teaching Experience

Instructor of Record , University of Kentucky	
• Matrix Algebra	Spring 2023
• College Algebra	Summer 2021, Summer 2020
Recitation Leader , University of Kentucky	
• Elementary Calculus	Fall 2023 (Lead TA*), Spring 2020
• Calculus II	Fall 2022
• Calculus III	Spring 2022
• Calc for Life Sciences	Fall 2021
• Finite Math	Spring 2021
• Algebra and Trig for Calculus	Fall 2020, Fall 2019
Algebra Prelim Peer Coach** , University of Kentucky	May 2023, December 2022

*: mentors other TAs and provides peer observations and feedback

** : organizes several 3-hour long group problem sessions and coaches peers on test-taking strategies

Service and Outreach

Algebra Seminar Co-organizer University of Kentucky	Fall 2023
Graduate Student Peer Mentor Program University of Kentucky	Fall 2020 - Fall 2022
Panel for Incoming First-Year Students University of Kentucky	August 2021
Julia Robinson Math Festival University of Kentucky	November 2019
Kittitas Valley Math Circle Central Washington University	September 2017 - June 2019