

Michael Morrow

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Education

University of Kentucky, Kentucky, USA
Ph.D. Candidate 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
submitted, 2023. Available at [arXiv:2310.04891](https://arxiv.org/abs/2310.04891).

Software

OIGroebnerBases.m2
a Macaulay2 package, 2023. Available at <https://github.com/morrowmh/OIGroebnerBases>.

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

Szygy Computations in OI-Modules

- (Invited) Joint Mathematics Meetings, San Francisco, CA
January 2024
- (Invited) CMS Winter Meeting, Montreal, QC
December 2023

Finite Computation of Gröbner Bases for OI-Modules

- (Invited) Algebra and Geometry Seminar, University of New Mexico
October 2023
- Qualifying Talk, University of Kentucky
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
May 2023
- (Invited) AMS Fall Southeastern Sectional Meeting, University of Tennessee-Chattanooga
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

- Contemporary Math

Spring 2024

- 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

UKY MathLab Undergraduate Research Project Leader

University of Kentucky

Fall 2023

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