Aryaman Maithani | Curriculum Vitae

✉ maithani@math.utah.edu ● 🌐 aryanmaithani.github.io/math

Education

University of Utah	**Salt Lake City, UT**
Ph.D. student in Mathematics	*2022–present*
Advisor: Anurag K. Singh	
Indian Institute of Technology Bombay	**Mumbai, India**
B.S. in Mathematics with Honors	*2018–2022*

Awards/Fellowships

Pure Mathematics Fellowship	**University of Utah**
	2024
Early Career Professional Development Program Award	**University of Utah**
	2023
Institute Gold Medal	**IIT Bombay**
	2022
Institute Academic Prize	**IIT Bombay**
	2020, 2021

Research Interests

Commutative Algebra.

Papers

- *Splitting the difference: Computations of the Reynolds Operator in classical invariant theory*
  arXiv:2412.18841 (2024)

- *Monomial ideals with minimal generalized Barile-Macchia resolutions*, with Trung Chau and Tài Huy Hà
  arXiv:2412.11843 (2024)

- *Minimal cellular resolutions of powers of graphs*, with Trung Chau and Tài Huy Hà
  arXiv:2404.04380 (2024)

- *Linear quotients of connected ideals of graphs*, with H. Ananthnarayan and Omkar Javadekar
  arXiv:2401.01046 (2024)

Talks

Seminars

Commutative Algebra Seminar	**IIT Bombay**
Invariant Theory of Commutative Rings	*August 2024*
Commutative Algebra Seminar	**University of Utah**
Linear Quotients of Connected Ideals of Graphs	*March 2024*
Dualities in Topology and Algebra	**ICTS, India**
Gorenstein Rings	*May 2023*

Graduate Student Seminars

BIKES, Commutative Algebra Graduate Student Seminar	**University of Utah**
Examples of Badly-Behaved Rings	*August 2024*
BIKES, Commutative Algebra Graduate Student Seminar	**University of Utah**
Linear Quotients of Connected Ideals of Graphs	*February 2024*

Commutative Algebra Graduate Student Seminar **University of Michigan**
Invariant Theory of Commutative Rings *October 2023*

BIKES, Commutative Algebra Graduate Student Seminar **University of Utah**
Invariant Theory of Commutative Rings *September 2023*

General Math Talks

Graduate Student Colloquium **University of Utah**
Shut your π hole! *March 2024*

Math Circle **University of Utah**
Fun with Graphs *March 2023*

Graduate Student Colloquium **University of Utah**
Chaos Theory *February 2023*

Teaching Experience

Instructor of Record

MATH 1220: Calculus II
University of Utah *Spring 2025, Summer 2024*

MATH 1090: Business Algebra
University of Utah *Spring 2024*

MATH 1060: Trigonometry
University of Utah *Fall 2023*

MATH 1010: Intermediate Algebra
University of Utah *Summer 2023*

Graduate Teaching Assistant

MATH 2250: Differential Equations and Linear Algebra
University of Utah *Spring 2023, Fall 2022*

Grader for Graduate Courses

MATH 6520: Algebraic Topology
University of Utah *Spring 2024*

MATH 6310: Modern Algebra 1
University of Utah *Fall 2023*

MATH 6320: Modern Algebra 2
University of Utah *Spring 2023*

Service/Outreach

○ **University of Utah** **Salt Lake City, Utah, USA**
Graduate Student Advisory Committee
- 2024–2025: **GSAC Co-chair.**
  Liaison between graduate students and department.
- 2023–2025: **Recruitment committee.**
  Welcome prospective graduate students and organize meetings with faculty for them.

Professional Memberships

○ American Mathematical Society

Technical skills

Python, SageMath, Macaulay2, Magma, LaTeX