Bangzheng (Benjamin) Li

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INTRODUCTION

I am a junior at MIT majoring in math whose current interest is algebra and number theory.

EDUCATION

- **Massachusetts Institute of Technology** *2022 - Present*
  Undergrad Cambridge, MA
  ◦ GPA: 5.0/5.0.

- **Christian Heritage School** *2018 - 2022*
  High School Trumbull, CT

AWARD

- **Hartley Rogers Jr. Prize** *August 2024*
  MIT [🌐]
  ◦ The best paper award in the Summer Program in Undergraduate Research (SPUR).

ACTIVITIES

- **PRIMES-USA (mentor)** *2024*
  MIT [🌐]
- **Summer Program in Undergraduate Research (SPUR)** *June 2024 - August 2024*
  MIT [🌐]
- **Directed Reading Program (DRP)** *Janurary 2024*
  MIT [🌐]
- **PRIMES-USA (mentee)** *2021*
  MIT [🌐]

PAPERS   J=JOURNAL, A=ARXIV

[A.1] Dani, J., Gotti, F., Hong, L., Li, B., Schlessinger, S. (2025). *On finitary power monoids of linearly orderable monoids.* Preprint on arXiv:2501.03407

[A.2] Bu, A., Gotti, F., Li, B., Zhao, A. (2024). *One-dimensional monoid algebras and ascending chains of principal ideals.* Preprint on arXiv:2409.00580

[A.3] Li, B., Ma, N., Wang, Z. (2024). *Rewarded Region Replay (R3) for Policy Learning with Discrete Action Space.* Preprint on arXiv:2405.16383

[A.4] Gotti, F., Li, B. (2024). *Arithmetic properties encoded in undermonoids.* Preprint on arXiv:2412.11199

[J.1] Ajran, K., Bringas, J., Li, B., Singer, E., Tirador, M. (2023). *Factorization in additive monoids of evaluation polynomial semirings.* Communications in Algebra, 51(10), 4347–4362. doi.org/10.1080/00927872.2023.2208672

[J.2] Gotti, F., Li, B. (2023). *Atomic semigroup rings and the ascending chain condition on principal ideals.* Proc. Amer. Math. Soc., 151, 2291-2302. doi.org/10.1090/proc/16295

[J.3] Jiang, N., Li, B., Zhu, S. (2023). *On the primality and elasticity of algebraic valuations of cyclic free semirings.* International Journal of Algebra and Computation, 33:02, 197-210. doi.org/10.1142/S021819672350011X

[A.5] Gotti, F., Li, B. (2022). *Divisibility and a weak ascending chain condition on principal ideals.* Preprint on arXiv:2212.06213

[J.4] Gotti, F., Li, B. (2021). *Divisibility in rings of integer-valued polynomials.* New York J. Math. 28, 117-139.

MATH COURSES TAKEN   F=FALL TERM, S=SPRING TERM

- **2024 F:** 18.745 Lie Groups and Lie Algebras I
- **2024 F:** 18.785 Number Theory I
- **2024 S:** 18.786 Number Theory II
- **2024 S:** 18.906 Algebraic Topology II
- **2023 F:** 18.101 Analysis and Manifold
- **2023 F:** 18.783 Elliptic Curves
- **2023 F:** 18.905 Algebraic Topology I
- **2023 S:** 18.152 Intro: Partial Differential Equations
- **2023 S:** 18.726 Algebraic Geometry II
- **2023 S:** 18.901 Introduction to Topology
- **2022 F:** 18.112 Functions of Complex Variable
- **2022 F:** 18.725 Algebraic Geometry I