

# Jingbo Liu (She/her/hers)

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<https://apps.tamusa.edu/course-information/my-profile/faculty-Profile.php?ID=366>

## Education

- Ph.D. in Mathematics, Wesleyan University, Middletown, CT, US May 2016  
Adviser: Wai Kiu Chan  
Thesis Title: Representations of integral Hermitian forms by sums of norms.
- Master in Mathematics, Shandong University, Jinan, Shandong, P.R. China July 2010  
Advisers: Xiumin Ren and Jianya Liu  
Thesis Title: On sums of a prime and six cubes of primes in short intervals. (In Chinese)
- Bachelor in Mathematics, Hebei Normal University, Shijiazhuang, Hebei, P.R. China June 2007  
Project Title: On the similar canonical form of general matrices. (In Chinese)

## Academic Positions

- Texas A&M University-San Antonio, San Antonio, TX, US  
Assistant Professor of Mathematics August 2021-present  
Lecturer of Mathematics September 2018-August 2021
- University of Hong Kong, Pokfulam, Hong Kong  
Post-Doctoral Scholar of Mathematics September 2016-August 2018  
Mentor: Ben Kane
- Wesleyan University, Middletown, CT, US  
Instructor/Teaching Assistant September 2010-May 2016
- Shandong University, Jinan, Shandong, P.R. China  
Instructor/Teaching Assistant September 2008-June 2010

## Publications List (All my work follow the international tradition in mathematical research using alphabetical authorship order; please see the [American Mathematical Society \(AMS\) Statement](#).)

### • Under Review/Accepted/Published (Selected)

- Qi Han, Jingbo Liu, and Nadeem Malik. *Borel lemma: geometric progression vs. Riemann zeta-function*. (Under review)
- Jingbo Liu. *An algorithm for  $g$ -invariant on unary Hermitian lattices over imaginary quadratic fields*. (Under review)
- Andrew Mendelsohn, Jingbo Liu, and Cong Ling. *On the spinor genus and the distinguishing lattice isomorphism problem*. (Accepted). To be published in *Advances in Cryptology—ASIACRYPT 2024*, Springer.
- Jingbo Liu.  *$g$ -invariant on unary Hermitian lattices over imaginary quadratic fields with class number 2 or 3*. *Journal of Algebra*, 622 (2023), 636-675. (Plus 5 supplemental pages)

- Jingbo Liu. *On a Waring's problem for Hermitian lattices*.  
Bulletin des Sciences Mathématiques, 174 (2022), Paper No. 102970, 25 pp.
- Qi Han and Jingbo Liu. *Algebraic differential independence regarding the Riemann  $\zeta$ -function and the Euler  $\Gamma$ -function*. Journal of Number Theory, 221 (2021), 109-121.
- Ben Kane and Jingbo Liu. *Universal sums of  $m$ -gonal numbers*.  
International Mathematics Research Notices IMRN, Volume 2020, Issue 20 (2020), 6999-7036.
- Wei Chen, Qi Han, and Jingbo Liu. *On Fermat Diophantine functional equations, little Picard theorem, and beyond*.  
Aequationes Mathematicae, 93 (2019), 425-432.
- Constantin Nicolae Beli, Wai Kiu Chan, María Inés Icaza, and Jingbo Liu. *On a Waring's problem for quadratic and Hermitian forms*. Transactions of the American Mathematical Society, 371 (2019), 5505-5527.
- Jingbo Liu and Alicia Marino. *Strictly regular ternary Hermitian forms*.  
Journal of Number Theory, 168 (2016), 374-385.
- Amy Feaver, Anna Haensch, Jingbo Liu, and Gabriele Nebe. *Kneser-Hecke-operators for codes over finite chain rings*. Research Directions in Number Theory, 245-270; Proceedings of the 2014 WIN3 Workshop "Women In Numbers 3." Association for Women in Mathematics Series. Springer, Switzerland, 2016.

## Teaching Experience

### • Texas A&M University-San Antonio, San Antonio, TX, US

#### 2024~2025

1. MATH 2312: Pre-Calculus & MATH 2012: Pre-Calculus Recitation. Section 002.
2. MATH 2312: Pre-Calculus & MATH 2012: Pre-Calculus Recitation. Section 005.
3. MATH 3340: Linear Algebra with Applications. Section 002.
4. MATH 4390: Advanced Topics in Mathematics—Number Theory. Section 002.

#### 2023~2024

1. MATH 2313: Calculus I. Section 001.
2. MATH 2313: Calculus I & MATH 2113: Calculus I Lab. Section 002
3. MATH 4340: Modern Algebra. Section 001.
4. MATH 1314: College Algebra & MATH 1014: College Algebra Recitation. Section 001.
5. MATH 2312: Pre-Calculus. Section 002
6. MATH 3325: Introduction to Mathematical Proofs. Section 001.

#### 2022~2023

1. MATH 3325: Introduction to Mathematical Proofs. Section 001.
2. MATH 3340: Linear Algebra with Applications. Section 002.
3. MATH 4340: Modern Algebra. Section 001.
4. MATH 2312: Pre-Calculus. Section 001.
5. MATH 2312: Pre-Calculus. Section 002.
6. MATH 3325: Introduction to Mathematical Proofs. Section 001.

#### 2021~2022

1. MATH 1314: College Algebra & MATH 1014: College Algebra Recitation. Section 001.
2. MATH 3340: Linear Algebra with Applications. Section 001.
3. MATH 3370: Discrete Mathematics. Section 001.
4. MATH 2312: Pre-Calculus. Section 002.

5. MATH 3340: Linear Algebra with Applications. Section 600.

### **2020~2021**

1. MATH 2312: Pre-Calculus. Section 600.
2. MATH 2312: Pre-Calculus. Section 600.
3. MATH 2312: Pre-Calculus. Section 601.
4. MATH 3340: Linear Algebra with Applications. Section 600.
5. MATH 3340: Linear Algebra with Applications. Section 601.
6. MATH 1314: College Algebra. Section 606.
7. MATH 2312: Pre-Calculus. Section 601.
8. MATH 2312: Pre-Calculus. Section 602.
9. MATH 3340: Linear Algebra with Applications. Section 600.

### **2019~2020**

1. MATH 1314: College Algebra & MATH 1014: College Algebra Recitation. Section 601.
2. MATH 1314: College Algebra. Section 004.
3. MATH 2312: Pre-Calculus. Section 001.
4. MATH 2312: Pre-Calculus. Section 002.
5. MATH 3340: Linear Algebra with Applications. Section 001.
6. MATH 1314: College Algebra. Section 002.
7. MATH 1314: College Algebra. Section 003.
8. MATH 3340: Linear Algebra with Applications. Section 001.
9. MATH 4350: Probability. Section 001.
10. MATH 4380: Undergraduate Research in Mathematics. Section 001.

### **2018~2019**

1. MATH 1314: College Algebra & MATH 1014: College Algebra Recitation. Section 001.
2. MATH 1314: College Algebra. Section 004.
3. MATH 2312: Pre-Calculus. Section 001.
4. MATH 2312: Pre-Calculus. Section 002.
5. MATH 3340: Linear Algebra with Applications. Section 001.
6. MATH 1314: College Algebra. Section 003.
7. MATH 1314: College Algebra. Section 004.
8. MATH 3340: Linear Algebra with Applications. Section 001.

## **Membership**

- American Mathematical Society
- Association for Women in Mathematics
- Mathematical Association of America