Hung-Chun Tsui

National Tsing Hua University, Taiwan · hctsui@gapp.nthu.edu.tw · https://hctsui.org

Research Interests

Function field arithmetic; t-modules and t-motives; Multiple zeta values and multiple Eisenstein series.

Education

Feb. 2025–Present — **PhD in Mathematics**
National Tsing Hua University
Direct admission

Sep. 2021–Dec. 2024 — **BS in Mathematics**
National Tsing Hua University
Graduated with distinction

Publications and Preprints

Journal Articles

1. **Hung-Chun Tsui**, "On u-Multiple Zeta Values in Positive Characteristic,", *International Mathematics Research Notices (IMRN)* 2026 (2026), no. 20, rnag233. Journal ArXiv PDF

Preprints

1. **Hung-Chun Tsui**, *Graded Structures of v-adic Carlitz Multiple Polylogarithms and v-adic Multiple Zeta Values*, 2026. ArXiv PDF
2. **Hung-Chun Tsui**, *Multiple Zeta Values in Positive Characteristic: A Kaneko-Zagier-Type Conjecture*, 2026. ArXiv PDF
3. **Hung-Chun Tsui**, *Mishiba's Conjecture on the Coaction of ∞-adic Multiple Zeta Values*, 2026. ArXiv PDF
4. Chieh-Yu Chang, Song-Yun Chen, Fei-Jun Huang, and **Hung-Chun Tsui**, *On Multiple Eisenstein Series in Positive Characteristic: Direct Sum Result*, 2026. ArXiv PDF
5. Ting-Wei Chang, Song-Yun Chen, Fei-Jun Huang, and **Hung-Chun Tsui**, *Algebra Structures of Multiple Eisenstein Series in Positive Characteristic*, 2026. ArXiv PDF
6. Ting-Wei Chang, Song-Yun Chen, Fei-Jun Huang, and **Hung-Chun Tsui**, *On q-Shuffle Relations for Multiple Eisenstein Series of Arbitrary Rank in Positive Characteristic*, 2025. ArXiv PDF
7. Ting-Wei Chang and **Hung-Chun Tsui**, *Uniqueness of v-adic Gamma Functions in Gross–Koblitz-Type Formulas over Function Fields*, 2025. ArXiv PDF

Academic Visits

2026/7/2–8/30 — **Tohoku University**
Sendai, Japan · Supported by Japan–Taiwan Exchange Association

Presentations

2026/10/15 — **Graded Structures of v-adic Carlitz Multiple Polylogarithms and Multiple Zeta Values**
NCTS Number Theory Seminar, National Tsing Hua University, Hsinchu, Taiwan

2026/7/6 — **Recent Developments on Multiple Eisenstein Series in Positive Characteristic** Slides
Tohoku University Number Theory Seminar, Tohoku University, Sendai, Japan

2026/6/12 — **Derivations of Multiple Zeta Values in Positive Characteristic**
Workshop on Arithmetic of Function Fields, National Cheng Kung University, Tainan, Taiwan

2026/2/8 — **On Finite Multiple Harmonic u-series over Function Field** Slides
Nagoya-Kansai Zeta Workshop for Young Researchers, Nagoya University, Nagoya, Japan

2025/9/30 — **On u-analogues of Multiple Zeta Values and a Possible Formulation of Kaneko–Zagier Conjecture over Function Field**
Various Aspects of Multiple Zeta Values, Kyoto University, Kyoto, Japan

2025/9/3 — **On q-shuffle Relations for Multiple Eisenstein Series in Positive Characteristic** Slides
Japan-Taiwan Number Theory Conference, Kyukamura Shikanoshima, Fukuoka, Japan

2025/4/17 **On the Uniqueness of v-adic Gamma Functions in the Gross–Koblitz–Thakur Formulas**
NTHU Workshop on Number Theory, National Tsing Hua University, Hsinchu, Taiwan

Honors and Awards

2026 **Taiwan–Japan Young Scientific Talent Exchange Program**
Japan–Taiwan Exchange Association

2025 **NSTC Graduate Research Fellowship**
National Science and Technology Council

2024 **Chow Hung-Ching Scholarship**
Academia Sinica

2024 **TMS Outstanding Students Prize**
Taiwan Mathematical Society

Conferences and Workshops

2026/8/24–8/28 **The 33rd Number Theory Summer School: Arithmetic of Function Fields**
Yataro, Nagasaki, Japan

2026/7/18 **The 72nd Kansai Multiple Zeta Workshop**
Tohoku University, Sendai, Japan

2026/7/7–7/10 **The 25th Sendai–Hiroshima Number Theory Conference**
Tohoku University, Sendai, Japan

2026/6/11–6/12 **Workshop on Arithmetic of Function Fields** (Speaker)
National Cheng Kung University, Tainan, Taiwan

2026/2/8–2/11 **Nagoya-Kansai Zeta Workshop for Young Researchers** (Speaker)
Nagoya University, Nagoya, Japan

2026/1/21–1/22 **The 61st TMS Annual Meeting**
National Chung Cheng University, Chiayi, Taiwan

2025/12/15–12/19 **2025 Taipei Conference on Arithmetic Geometry**
Academia Sinica, Taipei, Taiwan

2025/9/29–10/3 **Various Aspects of Multiple Zeta Values** (Speaker)
Kyoto University, Kyoto, Japan

2025/9/1–9/5 **Japan-Taiwan Number Theory Conference** (Speaker)
Kyukamura Shikanoshima, Fukuoka, Japan

2025/8/25–8/29 **The 11th East Asia Number Theory Conference**
National Taiwan University, Taipei, Taiwan

2025/6/30–7/4 **Iwasawa 2025**
National Taiwan University, Taipei, Taiwan

2025/6/25–6/27 **Iwasawa Theory Taipei Summer School**
National Taiwan University, Taipei, Taiwan

2025/4/17 **NTHU Workshop on Number Theory**
National Tsing Hua University, Hsinchu, Taiwan

2025/2/17–2/22 **The 17th MSJ-SI Developments of Multiple Zeta Values, Week 2**
Kindai University, Osaka, Japan

2025/2/10–2/15 **The 17th MSJ-SI Developments of Multiple Zeta Values, Week 1**
Kyushu University Nishijin Plaza, Fukuoka, Japan

2025/1/14–1/15 **The 60th TMS Annual Meeting**
National Central University, Taoyuan, Taiwan

2025/1/2–1/3 **Introduction to Nevanlinna Theory, Hyperbolicity and Arithmetic Dynamics**
Academia Sinica, Taipei, Taiwan

2024/12/18 **NCTS One-Day Workshop on Number Theory**
National Tsing Hua University, Hsinchu, Taiwan

2024/7/1–7/4 **Summer School on Arithmetic Geometry**
National Tsing Hua University, Hsinchu, Taiwan

2024/1/22–1/23 **The 59th TMS Annual Meeting**
National Chengchi University, Taipei, Taiwan

2023/1/16–1/17 **The 58th TMS Annual Meeting**
National Tsing Hua University, Hsinchu, Taiwan

Teaching Experience

National Tsing Hua University

Fall 2026	**MATH5410 Modern Algebra I** (Teaching Assistant)
Fall 2026	**MATH5640 Algebraic Geometry** (Teaching Assistant)
Fall 2026	**MATH1000 Precalculus** (Teaching Assistant)
Spring 2026	**MATH2870 Discrete Mathematics** (Teaching Assistant)
Spring 2026	**MATH2420 Algebra II** (Teaching Assistant)
Fall 2025	**MATH2410 Algebra I** (Teaching Assistant)
Fall 2025	**MATH3450 Cryptography** (Teaching Assistant)
Spring 2025	**MATH3050 Complex Analysis** (Teaching Assistant)
Spring 2025	**MATH1420 Linear Algebra II** (Teaching Assistant)
Fall 2024	**MATH1410 Linear Algebra I** (Teaching Assistant)
Spring 2024	**MATH2020 Advanced Calculus II** (Teaching Assistant)
Fall 2023	**MATH2010 Advanced Calculus I** (Teaching Assistant)

Personal Information

Languages	Mandarin (Native) | English (CEFR C1) | Japanese (CEFR A1)
Address	No. 101, Sec. 2, Guangfu Rd., East Dist., Hsinchu City 300044, Taiwan (R.O.C.)
Email	hctsui@gapp.nthu.edu.tw | hctsui.math@gmail.com
Website	https://hctsui.org
ORCID	0009-0009-7445-5634