KU-YU FAN

Updated 14 November 2026

ACADEMIC CURRICULUM VITAE

kuyufan.github.io

Nagoya University, Japan

RESEARCH INTERESTS

Multiple zeta values and their algebraic and analytic structures; motivic multiple zeta values and Yamamoto integrals; Schur multiple zeta values; arborified multiple zeta values; p-adic multiple zeta values, multiple polylogarithms and L-functions.

EDUCATION

2024-Present **Ph.D. in Mathematics, Nagoya University**
Graduate School of Mathematics
Advisor: Hidekazu Furusho
Expected September 2027

2021-2024 **M.Sc. in Mathematics, National Taiwan University**
Institute of Mathematics
Advisor: Nobuo Sato

2017-2021 **B.Sc. in Mathematics, National Tsing Hua University**
Department of Mathematics

REFEREED RESEARCH ARTICLES

Oct 2026 **Coaction formula for the motivic version of Yamamoto's integral**
Mathematische Zeitschrift 314 (2026), Article 35. DOI: 10.1007/s00209-026-04138-w

Jun 2026 **A map between arborifications of multiple zeta values**
Journal of Algebra (2026). DOI: 10.1016/j.jalgebra.2026.06.006

PREPRINTS

Nov 2026 **Finite multiple harmonic sums and lower-truncated p-adic multiple zeta-star values**
With Hidekazu Furusho. arXiv:2611.16923

Sep 2026 **Regularised double shuffle relations for planar Arborified Zeta Values**
With Pierre Catoire and Pierre J. Clavier. arXiv:2609.02346

Jul 2026 **p-adic multiple L-functions and twisted multiple Bernoulli numbers**
arXiv:2607.04086

Mar 2026 **p-adic multiple zeta values of integer indices**
arXiv:2603.22923

EXPOSITORY AND OUTREACH PUBLICATIONS

2021 **The number of lattice lines in lattice figures [in Chinese]**
With Feng-Mei Lin. Mathmedia 45(2) (2021), 44-53.

Selected research talks

28 Feb 2027 **TBA**
23rd Mathematics Conference for Young Researchers, Hokkaido University (upcoming).

18 Feb 2027 **TBA**
20th Zeta Young Researchers' Meeting / 74th Kansai Multiple Zeta Seminar, Tohoku University (upcoming).

17 Sep 2026 **Explicit Formulas for Cyclotomic Multiple Bernoulli Numbers**
NCTS Number Theory Seminar, National Tsing Hua University.

3 Sep 2026 **An explicit formula for the special values of the p-adic multiple L-functions**
Mathematical Society of Japan, Autumn Meeting, Kobe University.

30 Jul 2026 **Double shuffle relations for p-adic multiple zeta values of integer indices**
5th International Workshop on Multiple Zeta Values and Related Topics, Central South University.

9 Jul 2026 **Double shuffle relations for integer indices and their application to p-adic multiple zeta values**
25th Sendai-Hiroshima Number Theory Conference, Tohoku University.

19 Jun 2026 **p-adic multiple zeta values and double shuffle relations for integer indices**
Algebraic and Combinatorial Perspectives in the Mathematical Sciences (online).

19 Mar 2026 **p-adic multiple zeta values of integer indices**
Meeting in the Middle, University of Hawaii at Manoa.

17 Feb 2026 **p-adic multiple L-function and twisted multiple Bernoulli numbers**
MATHSCI FRESHMAN SEMINAR 2026, Nagoya University.

30 Sep 2025 **A Map Between Arborifications of Multiple Zeta Values**
RIMS Symposium, Kyoto University.

19 Sep 2025 **A Map Between Arborifications of Multiple Zeta Values**
Mathematical Society of Japan, Autumn Meeting, Nagoya University.

13 Jul 2025 **A Map Between Arborifications of Multiple Zeta Values**
4th International Workshop on Multiple Zeta Values and Related Topics, Tongji University.

24 Mar 2025 **A map between arborifications of multiple zeta values**
Monthly Meeting, Nagoya University (blackboard presentation).

9 Nov 2024 **Coaction Formula for the Motivic Version of Yamamoto's Integral**
2nd Kindai Workshop on Multiple Zeta Values and Modular Forms, Kindai University.

23 May 2024 **Coaction formula for the motivic version of Yamamoto's integral**
Monthly Meeting (online).

Teaching, service and other activities

TEACHING EXPERIENCE

2025-2026

Nagoya University - Teaching Assistant

Special Topics in Foundations (Analysis): Spring 2026.
Calculus: Spring and Fall 2025.

2021-2024

National Taiwan University - Teaching Assistant

Calculus: Fall 2022, Spring 2023, Fall 2023, Spring 2024.
Modern Algebra: Fall 2022, Spring 2023. Linear Algebra: Fall 2021, Spring 2022.

2020-2021

National Tsing Hua University - Teaching Assistant

Elementary Number Theory: Spring 2021. Calculus: Fall 2020, Spring 2021.
Advanced Calculus: Spring 2020.

FELLOWSHIPS AND AWARDS

2024-2027

Japan-Taiwan Exchange Association Scholarship

Graduate Research Students; awarded in 2024, October 2024-September 2027.

2019

Professor Han-Ching Lai Memorial Scholarship

Department of Mathematics, National Tsing Hua University.

ACADEMIC SERVICE

2026

Organizing Committee, Nagoya-Kansai Young Researchers' Zeta Meeting

Joint 19th Zeta Young Researchers' Meeting / 70th Kansai Multiple Zeta Seminar.

Sep 2024-

Organizer and Representative, Monthly Meeting

Mathematics research seminar on multiple zeta values.

SELECTED PATENTS (3 FAMILIES)

2021

Single stacking element structure and single stacking component structure for multi-style combinations

With Wen-Liang Hung. Taiwan patent TWM612210U.

2018

Rhombic dodecahedron puzzle and multiple rhombic dodecahedron puzzle

With Wen-Liang Hung. Taiwan patent TWM566100U; related US patent filings.

2017

Hexagonal prismatic packing puzzle

With Wen-Liang Hung. Taiwan patent TWM548578U; related US patent filing.