Keita Nakamura

Department of Information Sciences, Graduate School of Science and Technology,
Tokyo University of Science
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1. Education

Tokyo University of Science (Chiba, Japan) *Apr 2024 – Present*
Doctoral Program in Information Sciences, Graduate School of Science and Technology.

Yokohama City University (Yokohama, Japan) *Jun 2023 – Mar 2024*
Research Student in Medical Science, Graduate School of Medicine.

Tokyo University of Science (Chiba, Japan) *Apr 2021 – Mar 2023*
Master of Science in Information Sciences, Graduate School of Science and Technology.

Tokyo University of Science (Chiba, Japan) *Apr 2017 – Mar 2021*
Bachelor of Science in Information Sciences, Faculty of Science and Technology.

Tokyo Metropolitan Kunitachi Senior High School (Tokyo, Japan) *Graduated Mar 2017*

2. Teaching Experience

Teaching Assistant, Tokyo University of Science *Apr 2025 – Present*
Probability Theory 1 and its Exercises, Mathematics for Information Sciences 2B and its Exercises

Teaching Assistant, Tokyo University of Science *Oct 2024 – Mar 2025*
Statistics 1 and its Exercises, Mathematics for Information Sciences 2A and its Exercises

Teaching Assistant, Tokyo University of Science *Apr 2024 – Sep 2024*
Probability Theory 1 and its Exercises, Mathematics for Information Sciences 2B and its Exercises

Learning Support Center, Tokyo University of Science *Apr 2022 – Mar 2023*
Academic support and tutoring for undergraduate students in mathematics.

3. Research

Tokyo University of Science (Chiba, Japan) *Apr 2024 – Present*
Doctoral Research, under Prof. Kouji Tahata
Graduate School of Science and Technology, Department of Information Sciences

Yokohama City University (Yokohama, Japan) *Jun 2023 – Mar 2024*
Research Student, Graduate School of Medicine

Tokyo University of Science (Chiba, Japan) *Apr 2021 – Mar 2023*
Master's Thesis Research, under Prof. Kouji Tahata
Graduate School of Science and Technology, Department of Information Sciences

4. Awards and Honors

Best Presentation Award, Japanese Society of Applied Statistics *May 2024*
Awarded for the presentation "Symmetry and skew-symmetry of square contingency tables based on Aitchison geometry" at the Japanese Society of Applied Statistics Annual Conference, Kyushu University.

5. Publications and Presentations

5.1 Publications

K. Nakamura, T. Nakagawa, K. Tahata: "Quasi-Symmetry and Geometric Marginal Homogeneity: A Simplicial Approach to Square Contingency Tables", *Information Geometry*, 2025. DOI: 10.1007/s41884-025-00176-1

K. Nakamura, T. Nakagawa, K. Tahata: "Symmetry of Square Contingency Tables Using Simplicial Geometry", *Austrian Journal of Statistics*, Vol. 53, No. 4, pp. 85-98, 2024. DOI: 10.17713/ajs.v53i4.1845

5.2 Conference Presentations

5.2.1 International Conferences

[1] K. Nakamura, T. Nakagawa, K. Tahata: "Geometric Marginal Homogeneity in Compositional Tables Based on Simplicial Geometry", *Further Developments of Information Geometry*, The University of Tokyo, Tokyo, Japan, 2025 (Poster session).

[2] K. Nakamura, T. Nakagawa, K. Tahata: "Orthogonal decomposition of probability tables with Aitchison geometry for symmetry assessment", *CFE-CMStatistics*, King's College London, London, UK, 2024.

5.2.2 Domestic Conferences

[1] 中村慶太, 中川智之, 田畑耕治: 「Aitchison 幾何に基づく分割表の対称性について」, *RIMS* 共同研究（グループ型 *A*）統計モデルとその有効性, 京都大学数理解析研究所, 2025 年 3 月.

[2] 中村慶太, 中川智之, 田畑耕治: 「Aitchison 幾何による交差分類表の準対称性解析」, 日本分類学会, 名古屋工業大学, 2024 年 11 月.

[3] 中村慶太, 中川智之, 田畑耕治: 「Aitchison 幾何学に基づく正方分割表の対称性と歪対称性」, 応用統計学会, 九州大学, 2024 年 5 月. (**Best Presentation Award**)

[4] 中村慶太, 中川智之, 田畑耕治: 「Aitchison 幾何を用いた正方分割表の準対称性と幾何周辺同等性」, 日本数学会, 東北大学, 2023 年 9 月.

[5] 中村慶太, 中川智之, 田畑耕治: 「Aitchison 幾何を用いた正方分割表の対称性」, 日本数学会, 中央大学, 2023 年 3 月.

5.3 Publications without Peer Review

[1] 中村慶太, 中川智之, 田畑耕治: 「Aitchison 幾何に基づく分割表の対称性について」, *RIMS* 講究録, Vol. 2318, pp. 1-12, 2025. [PDF]

6. Research Grants and Funding

[1] **Support for Pioneering Research Initiated by the Next Generation (SPRING)** by Japan Science and Technology Agency (JST) *2024 – Present*

7. References

Prof. Kouji Tahata, Tokyo University of Science, tahata@rs.tus.ac.jp