

Takuto NAKAYAMA

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Education

- B.A. in Literature 2020 March at Keio University, Tokyo, Japan
- M.A. in Literature 2022 March at Keio University, Tokyo, Japan
- Ph.D. candidate 2025 February at Keio University, Tokyo, Japan
- Ph.D. in Literature expected 2026 March at Keio University, Tokyo, Japan

Research Interests

- Computational Linguistics
- Quantitative Linguistics
- Mathematical Linguistics
- Linguistic Complexity

Languages

Japanese (native), English (fluent), German (beginner)

Skills

Python, L^AT_EX

Publications

Research Articles

- Nakayama, Takuto. (in press.). 言語の複雑さを「測る」ことの正体 – 測度論基盤の目論みと測る対象としての言語 [What “measuring” linguistic complexity is: Measure theoretical foundation and a language as a measurable object]. *Fora*, 8.
- Nakayama, Takuto. (2024). How Skewed is the World for a Language?: A Computational Approach to the Semantic Distribution of Languages, *Kyorin University Journal*, 41, 61 – 72.
- Nakayama, Takuto. (2023). Is a language diachronically equally complex?: An information theory approach to linguistic complexity, *Kyorin University Journal*, 40, 75 – 87.
- Nakayama, Takuto. (2021). How do speakers communicate with different linguistic knowledge?: The internal and external stabilizers of a language, *Colloquia*, 42, 51 – 62.
- Nakayama, Takuto. (2020). Causality and resultantity in language: Language in individuals and groups, *Colloquia*, 41, 83 – 98.

Proceedings

- Nakayama, Takuto. (2025). 言語一般の計測を目指して: サブワードと分散意味論に基づく言語の複雑性計測 [Toward a linguistically general measurement: Measuring linguistic complexity based on subword tokens and distributional semantics]. *The Proceedings of the 31st Annual Conference of the Association for Natural Language Processing*, 1596 – 1599.
- Nakayama, Takuto. (2025). 言語は等しく多義的か? –サブワードと分散意味論に基づく形式–意味対応の分析 [Are languages equally polysemous?: An analysis of form-meaning pairing based on subword and distributional semantics]. *The Proceedings of the 49th Annual Conference of the Japanese Association of Sociolinguistic Sciences*, 80 – 83.
- Nakayama, Takuto. (2024). Linguistic complexity through form-meaning pairings: An information theoretical approach to equi-complexity of language, *The proceedings of the 21st International Congress of Linguists*, 636.
- Nakayama, Takuto. (2024). 言語は等しく複雑か?: 多義語埋め込み表現による形式 – 意味対応の複雑性 [Is languages equally complex?: Complexity of form-meaning pairings through polysemous word embeddings]. *The Proceedings of the 30th Annual Conference of the Association for Natural Language Processing*, 1768 – 1772.
- Nakayama, Takuto. (2023). The equi-complexity vs. typology: Measurement of overall linguistic complexity and typological categories. *International Cognitive Linguistics Conference 16*, 450.
- Nakayama, Takuto. (2023 June 29). Are all languages equally complex?: Information theory-based method to measure the overall complexity of a language. *Quantitative Linguistics Conference 2023*, .

Conference Talks

- Nakayama, Takuto. (2025, June 27). *On Linguistic Complexity: Form-Meaning Pairing Through Subword Token Polysemy* [oral presentation]. The 13th International Quantitative Linguistics Conference, Brno, Czech Republic.
- Nakayama, Takuto. (2024, March 11). 言語一般の計測を目指して: サブワードと分散意味論に基づく言語の複雑性計測 [Toward a linguistically general measurement: Measuring linguistic complexity based on subword tokens and distributional semantics]. [poster] The 31st Annual Conference of the Association for Natural Language Processing, Nagasaki, Japan.
- Nakayama, Takuto. (2024, February 28). 言語は等しく多義的か? –サブワードと分散意味論に基づく形式–意味対応の分析 [Are languages equally polysemous?: An analysis of form-meaning pairing based on subword and distributional semantics]. [oral presentation] The 49th Annual Conference of the Japanese Association of Sociolinguistic Sciences, Tokyo, Japan.
- Nakayama, Takuto. (2024 September, 10). *Linguistic complexity through form-meaning pairings: An information theoretical approach to equi-complexity of language* [oral presentation]. The 21st International Congress of Linguists, Poznań, Poland.
- Nakayama, Takuto. (2024, March). 言語は等しく複雑か?: 多義語埋め込み表現による形式 – 意味対応の複雑性 [Is languages equally complex?: Complexity of form-meaning pairings through polysemous word embeddings]. [poster] The 30th Annual Conference of the Association for Natural Language Processing, Kobe, Japan.
- Nakayama, Takuto. (2023 August 8). *The equi-complexity vs. typology: Measurement of overall linguistic complexity and typological categories* [poster]. International Cognitive Linguistics Conference 16, Düsseldorf, Germany.
- Nakayama, Takuto. (2023 June 29). *Are all languages equally complex?: Information theory-based method to measure the overall complexity of a language* [poster]. Quantitative Linguistics Conference 2023, Lausanne, Switzerland.

- Nakayama, Takuto. (2022 July 16). *Convergence and divergence in language: How do mutual understandings among speakers emerge from iterated interactions?* [panel discussion]. Sociolinguistics Symposium 24, Ghent, Belgium.
- Nakayama, Takuto. (2021, June 28). *A convergence of language between child and mother: Semantic Analysis based on FCA* [panel discussion]. 17th International Pragmatics Association, Winterthur, Switzerland.

Work Experience

- April 2024 – Research Fellow Japan Society for the Promotion of Science
March 2026
- April 2024 – English (part-time lecturer) Kyoritsu Women's University, Tokyo
- April 2024 – TOEFL English (part-time lecturer) Kyoritsu Women's University, Tokyo
- April 2023 – Editor-in-Chief *Colloquia*
March 2024
- April 2022 – English (part-time lecturer) Kyorin University, Tokyo
- April 2022 – Medical English (part-time lecturer) Kyorin University, Tokyo

Grants

- 2024 – 2026 Research Fellow (DC2), Japan Society for the Promotion of Science
- 2022 – 2024 Support for Pioneering Research Initiated by the Next Generation (SPRING), Japan Science and Technology Agency

Memberships

- 2024 – The Association for Natural Language Processing
- 2023 – International Quantitative Linguistics Association
- 2022 – Japan Association of Sociolinguistic Science