

Junichiro Niimi

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RESEARCH INTERESTS

Deep learning and large language models (LLMs) for marketing applications; energy-based world models and language generation; LLM ensemble methods and inference stability; multimodal learning for consumer behavior prediction; statistical modeling for business analytics.

EDUCATION

Ph.D. in Economics	2015 – 2018
Nagoya University, Graduate School of Economics	

M.A. in Economics	2013 – 2015
Nagoya University, Graduate School of Economics	

B.A. in Economics	2009 – 2013
Nagoya University, School of Economics	

PhD Professional Program	2013 – 2018
Nagoya University Leading Graduate School Program	

International Programs
Malaysia (English), Mongolia, Cambodia, Kyrgyzstan, USA (Illinois, North Carolina)

PROFESSIONAL EXPERIENCE

Associate Professor	2022 – Present
Faculty of Business Management, Meijo University	

Visiting Researcher	2020 – Present
RIKEN Center for Advanced Intelligence Project (AIP)	

Joint Researcher	Current
International Policy & Economics Research Center, Nagoya University Graduate School of Economics	

Assistant Professor	2019 – 2022
Faculty of Business Management, Meijo University	

Special Postdoctoral Researcher	2018 – 2019
RIKEN Center for Advanced Intelligence Project (AIP)	

Trainee & Visiting Researcher	2017 – 2018
Economic & Management Information Fusion Analysis Team, RIKEN	

Technical Advisor	Current
TSE Prime-listed manufacturer (undisclosed)	

Advisor	Current
TSE Prime-listed market research firm (undisclosed)	

Intern

Microsoft Japan; IBM T.J. Watson Research Center & IBM New York

PEER-REVIEWED PUBLICATIONS

- [1] **J. Niimi** (2026). “Energy-Based Attribute Models for Controllable Review Generation with Frozen LLMs.” *Transactions on Machine Learning Research*. OpenReview
- [2] **J. Niimi** (2026). “When to Trust Your Rollouts? A Boundary Map for Long-Horizon Action-Conditional World Models.” *The Fortieth Annual Conference on Neural Information Processing Systems (NeurIPS 2026) Workshop: Foundation Models for Temporal Systems From Forecasting to World Modeling*. OpenReview
- [3] **J. Niimi** (2026). “Whose Hand is on the Vinyl? Transcribing a DJ’s Scratch Gestures from Video into a Playable Instrument.” *The Fortieth Annual Conference on Neural Information Processing Systems Creative AI Track: Agency (NeurIPS 2026 Creative AI, Artwork Track)*. OpenReview
- [4] **J. Niimi** (2026). “Three-in-One World Model: Energy-Based Consistency, Prediction, and Counterfactual Inference for Marketing Intervention.” *Proceedings of the 33rd International Conference on Neural Information Processing (ICONIP 2026)*. doi:10.48550/arXiv.2605.07199
- [5] **J. Niimi** (2026). “Revisiting Energy-based Tabular Anomaly Detection: Energy and Reconstruction are Complementary.” *Proceedings of the 33rd International Conference on Neural Information Processing (ICONIP 2026)*. doi:10.48550/arXiv.2608.14186
- [6] **J. Niimi** (2026). “The Mouth is Not the Brain: Bridging Energy-Based World Models and Language Generation.” *The 2nd Workshop on World Models: Understanding, Modelling, and Scaling, International Conference on Learning Representations (ICLR 2026)*. doi:10.48550/arXiv.2601.17094
- [7] **J. Niimi** (2026). “Hierarchical Memorization in Large Language Models: Evidence from Citation Generation.” *Agents and Artificial Intelligence: Revised Selected Papers of ICAART 2026*. Lecture Notes in Artificial Intelligence. Springer. doi:10.48550/arXiv.2511.08877
- [8] **J. Niimi** (2026). “Hallucinate or Memorize? The Two Sides of Probabilistic Learning in Large Language Models.” *Proceedings of the 18th International Conference on Agents and Artificial Intelligence (ICAART 2026)*, Vol. 4, pp. 3117–3126. (ICORE Rank B) doi:10.5220/0014393300004052
- [9] **J. Niimi**, T. Tsukamoto, M. Takeuchi, A. Shibata (2026). “Deep Multi-Task Learning for Energy Consumption Forecasting of Household Water Heater Usage.” *Proceedings of the 2026 International Conference on Artificial Intelligence in Information and Communication (ICAIIIC)*, pp. 1–6. IEEE. doi:10.1109/ICAIIIC68212.2026.11454253
- [10] **J. Niimi** (2025). “Stable LLM Ensemble: Interaction Between Example Representativeness and Diversity.” *Advances in Natural Language Processing and Information Retrieval (NLPIR 2025)*, pp. 642–658. Springer Nature Switzerland. doi:10.1007/978-3-032-20897-2_46
- [11] **J. Niimi** (2025). “Reference Points in LLM Sentiment Analysis: The Role of Structured Context.” *Proceedings of the 39th Pacific Asia Conference on Language, Information and Computation (PACLIC 39)*, pp. 565–575, Hanoi, Vietnam. Association for Computational Linguistics. doi:10.48550/arXiv.2508.11454
- [12] **J. Niimi** (2025). “A Simple Ensemble Strategy for LLM Inference: Towards More Stable Text Classification.” *Proceedings of the 30th International Conference on Applications of Natural Language to Information Systems (NLDB 2025)*, Lecture Notes in Computer Science, 15837, 189–199. Springer. doi:10.1007/978-3-031-97144-0_17

- [13] **J. Niimi** (2024). “Prediction of Behavioral Loyalty Using Different Dimensionality Data: Multimodal Deep Learning with Transformer Encoder and Serial Feature Fusion.” *Journal of the Japanese Society of Applied Statistics*, 53(1), 15–32. (in Japanese) doi:10.5023/jappstat.53.15
- [14] M. Takeuchi, **J. Niimi**, T. Hoshino (2024). “Handling the Inconsistency between Self-Report and the Actual Behavior: Validity of Excluding Survey Participants with Insufficient Effort Responding.” *International Journal of Market Research*, 66(4), 451–472. doi:10.1177/14707853231209933
- [15] R. Fujii, K. Suzuki, **J. Niimi** (2021). “Public Perceptions, Individual Characteristics, and Preventive Behaviors for COVID-19 in Six Countries: A Cross-Sectional Study.” *Environmental Health and Preventive Medicine*, 26, 29. doi:10.1186/s12199-021-00952-2
- [16] **J. Niimi**, T. Hoshino (2020). “Prediction of the Customer Activity with Using the Improved Measure of Clumpiness: Capturing Competitive Usage and Early Churn under Limited Information.” *The Japanese Journal of Behaviormetrics*, 47(1), 27–40. (in Japanese) doi:10.2333/jbhm.47.27
- [17] **J. Niimi**, T. Hoshino (2017). “Predicting Purchases with Using the Variety of Customer Behaviors: Analysis of the Purchase History and the Browsing History by Deep Learning.” *Transactions of the Japanese Society for Artificial Intelligence*, 32(2), B-G63_1. (in Japanese) doi:10.1527/tjsai.B-G63
- [18] **J. Niimi**, T. Hoshino (2015). “Predicting the Consumers Behavior with Using the Variety of User Access Patterns.” *Journal of the Japanese Society of Applied Statistics*, 44(3), 121–143. (in Japanese) doi:10.5023/jappstat.44.121

INVITED TALKS

- [1] **J. Niimi** (2025). “Introduction to Large Language Models and Marketing Applications.” New Trends in Marketing Research 2025 (Faculty of Business and Commerce, Keio University), via Zoom. (in Japanese)

RESEARCH GRANTS

- JSPS KAKENHI 24K16472 (PI)** 2024 – 2027
Grant-in-Aid for Early-Career Scientists: Development of an Integrally Explainable Multimodal Deep Learning Model for Marketing
- JSPS KAKENHI 25K00678 (Co-I)** 2025 – 2029
Grant-in-Aid for Scientific Research (B): Comprehensive Study on the Impact of Careless/Insufficient Effort Responding on Market Research and Marketing Analysis

AWARDS

- FIT Encouragement Award** 2025
24th Forum on Information Technology (FIT2025)

SOFTWARE AND DATASETS

- [1] **J. Niimi** (2026). *Boltzmann-Fly*: Hobby project based on Three-in-One World Model (ICONIP 2026). GitHub
- [2] **J. Niimi** (2026). *Alfred Asks Claude*: Translation, summarization, and explanation in a single action. GitHub
- [3] **J. Niimi** (2024). *clumpi*: A Python package for calculating Clumpiness in RFMC analysis. GitHub, PyPI. doi:10.5281/zenodo.15202294

[4] **J. Niimi** (2024). *7days Weather Forecast in Japan* (Dataset). Hugging Face

[5] **J. Niimi** (2025). *MultiLLMs*: Multi-LLM API chat application. Streamlit. doi:10.5281/zenodo.17010449

MEDIA AND OUTREACH

[1] **J. Niimi** (2026). “How to Use LLMs and Why You Should Learn Them Now.” *Tonari no Academia* (Podcast), INTAGE Inc. Research Innovation Center. Spotify. (in Japanese)

[2] **J. Niimi** (2026). “Incorporating Social Science Theories into LLMs.” *Tonari no Academia* (Podcast), INTAGE Inc. Research Innovation Center. Spotify. (in Japanese)

[3] **J. Niimi** (2019). “Understanding Consumers in the Data Economy: Leveraging Data to Understand Consumers from Multiple Perspectives” (incl. panel discussion with Fujitsu Research Institute). Fujitsu Forum Nagoya 2019. (in Japanese)

[4] “Producing New Global Leaders the World Needs.” *Toyo Keizai* (print & web). (in Japanese)

[5] **J. Niimi**. “Curiosity Opens the Future.” In *Developing Doctoral Talent as Next-Generation Leaders: Nagoya University PhD Professional Gateway Program*. Miyabi Publishing. (in Japanese)

REVIEWING EXPERIENCE

ICLR | ICONIP | ACL Rolling Review | Behaviormetrika

TECHNICAL ENVIRONMENT

Computing: NVIDIA DGX Spark, Mac Studio; Google Cloud Platform

Languages & Frameworks: Python, PyTorch, TensorFlow, JAX, MATLAB, R, SQL

Research Tools: $\text{\LaTeX}$, Git, custom model implementations from scratch (e.g., Deep Boltzmann Machines, energy-based models)

LANGUAGES

Japanese (native) | English (professional working proficiency)