

Masanari Oi

PH.D. STUDENT IN COMPUTER SCIENCE

Tokyo, Japan

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Summary

Ph.D. student in Computer Science at Institute of Science Tokyo. My research interests span natural language processing and computer vision. Recently, I have been particularly interested in embodied AI, especially spatial reasoning in vision-language models and vision-language navigation for robotics. My work has been published in top-tier international venues including ACL, ICLR, AAAI, COLM, and ICML, with multiple awards including a Best Paper Award (top 0.4%) in a domestic conference.

Education

Institute of Science Tokyo (formerly Tokyo Institute of Technology)

PH.D. STUDENT IN COMPUTER SCIENCE

Tokyo, Japan

Apr. 2026 - Present

- Advisor: Prof. Naoaki Okazaki

Institute of Science Tokyo

M.E. IN COMPUTER SCIENCE

Tokyo, Japan

Apr. 2024 - Mar. 2026

- Advisor: Prof. Nakamasa Inoue

Tokyo Institute of Technology

B.E. IN COMPUTER SCIENCE

Tokyo, Japan

Apr. 2020 - Mar. 2024

- Advisor: Prof. Naoaki Okazaki

Selected Publications

Note: Some earlier publications appear under the name Masanari Ohi, a previous romanization of Masanari Oi. Both refer to Masanari Oi.

From Correspondence to Actions: Human-Like Multi-Image Spatial Reasoning in Multi-modal Large Language Models

ICML

Masanari Oi, Koki Maeda, Ryuto Koike, Daisuke Oba, Nakamasa Inoue, Naoaki Okazaki.

2026

Proposed a training framework for vision-language models to improve multi-image spatial reasoning.

Autoregressive Direct Preference Optimization

ICML

Masanari Oi, Mahiro Ukai, Masahiro Kaneko, Naoaki Okazaki, Nakamasa Inoue. Best Paper Award (top 0.4%) in NLP2026.

2026

Identified a theoretical issue in DPO and proposed a new method, ADPO.

Rewriting Pre-Training Data Boosts LLM Performance in Math and Code

ICLR

Kazuki Fujii, Yukito Tajima, Sakae Mizuki, Masaki Kawamura, Hinari Shimada, Taihei Shiotani, Koshiro Saito,

Masanari Oi, Taishi Nakamura, Takumi Okamoto, Shigeki Ishida, Kakeru Hattori, Youmi Ma, Hiroya

2026

Takamura, Rio Yokota, Jun Sakuma, Naoaki Okazaki.

Proposed a rewriting-based pipeline for synthesizing mathematics and coding data for LLMs.

HALL-E: Hierarchical Neural Codec Language Model for Minute-Long Zero-Shot Text-to-Speech Synthesis

ICLR

Yuto Nishimura, Takumi Hirose, **Masanari Ohi**, Hideki Nakayama, Nakamasa Inoue.

2025

Proposed an LLM-based text-to-speech model for minute-long zero-shot synthesis.

Likelihood-based Mitigation of Evaluation Bias in Large Language Models

ACL Findings

Masanari Ohi, Masahiro Kaneko, Ryuto Koike, Mengsay Loem, Naoaki Okazaki. Young Researcher Award (top 4.2%) in NLP2024.

2024

Detected and mitigated self-preference bias in LLM-as-a-judge evaluation.

Skills

Programming	Python (PyTorch, Transformers), Shell scripting
Tools	Git, HuggingFace, wandb, Docker
Languages	Japanese (native), English (business, TOEIC L&R: 890)

Experience

Institute of Science Tokyo

RESEARCH ASSISTANT

Tokyo, Japan

Apr. 2026 - Present

- Working on spatial reasoning in AI.

The National Institute of Advanced Industrial Science and Technology (AIST)

RESEARCH ASSISTANT

Tokyo, Japan

Aug. 2024 - Mar. 2026

- Contributed to LLM development and evaluation as a core member of the Swallow project.
- Implemented and maintained evaluation frameworks.
- Improved controllability of LLMs through reinforcement learning.

3keigo, Inc.

CO-FOUNDER AND AI ENGINEER

Tokyo, Japan

Apr. 2023 - Present

- Led development of an AI-powered Japanese language style transfer system for converting Japanese sentences into polite form (keigo).
- Designed and implemented neural architectures for natural style conversion.
- Maintained and optimized production-level NLP services.

CoeFont, Inc.

RESEARCH ENGINEER

Tokyo, Japan

Oct. 2021 - Present

- Researched and developed deep learning-based text-to-speech systems.
- Designed and implemented data collection and filtering pipelines.
- Developed neural architectures for voice synthesis.
- Established evaluation frameworks and feedback loops for model improvement.
- Contributed to end-to-end development of production-level voice synthesis technology.

Awards & Honors

2026	Science Tokyo BOOST , Institute of Science Tokyo. Scholarship: 3,600,000 JPY per year; research funds: 300,000 JPY per year.
2026	Full Repayment Exemption for Outstanding Academic Achievement , Japan Student Services Organization (JASSO). Full exemption from repayment of a JASSO student loan.
2026	Best Paper Award , NLP2026 (Annual Meeting of the Association for Natural Language Processing), Top 3 / 789, 0.4%
2026	Best Paper Award , Journal of Natural Language Processing, Top 2 / 33, 6.1%
2025	Annual Conference Award , JSAI Annual Conference, Top 35 / 1178, 3.0%
2025	Committee Special Award , NLP2025, Top 63 / 726, 8.7%
2025	Language Resource Award , NLP2025, Top 1 / 42, 2.4%
2024	Best Research Award , NL Research Presentation, Top 1 / 15, 6.7%
2024	Young Researcher Award , NLP2024, Top 18 / 427, 4.2%
2024	Outstanding Paper Award ×2, NLP2024, Top 13 / 599, 2.1%
2021	Scholarship , Takenaka Scholarship Foundation