

Sihan Tan

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EDUCATION

Institute of Science Tokyo(formerly Tokyo Tech), Tokyo, Japan

Ph.D. Student in Systems and Control Engineering

04/2024 - Present

Advisor: [Kazuhiro Nakadai](#)

Activity: Tokyo Tech Academy for Super Smart Society ([WISE-SSS](#))

Tokyo Institute of Technology, Tokyo, Japan

Master in Systems and Control Engineering

04/2022 - 03/2024

Advisor: [Kazuhiro Nakadai](#), [Katsutoshi Itoyama](#)

Activity: Tokyo Tech Academy for Super Smart Society ([WISE-SSS](#))

**Best Graduate of Systems and Control Engineering Course*

Dalian University of Technology, Dalian, China

B.E. in Digital Media Technology

09/2017 - 07/2021

Advisor: [Xin Fan](#)

**Outstanding Bachelor's Graduate*

EXPERIENCE

Visiting Researcher

Sign language translation

08/2024 - Present

Work with Sign Language Technology Team,

Science and Technology Research Laboratories, Japan Broadcasting Corporation (NHK).

Research Assistant

Sign language recognition, translation and human-robot interaction

04/2022 - Present

Work with Kazuhiro Nakadai,

Nakadai Laboratory, Tokyo Institute of Technology.

Internship

Sign language translation

08/2023 - 03/2024

Supervised by Taro Miyazaki,

Science and Technology Research Laboratories, Japan Broadcasting Corporation (NHK).

**Boosted the laboratory-level collaboration (starts at 08/2024)*

Research Assistant

Unsupervised WiFi-based Human Activity Recognition via Cross-modal Transfer

12/2019 - 07/2021

Work with Xin Fan and Lei Wang,

Wilna Laboratory, Dalian University of Technology.

PUBLICATIONS

Selected Publications

[Improvement in Sign Language Translation Using Text CTC Alignment](#)

Sihan Tan, Taro Miyazaki, Nabeela Khan, Kazuhiro Nakadai.

In *Proceedings of the 31st International Conference on Computational Linguistics (COLING)*, 2025.

[A Review of Deep Learning-based Approaches to Sign Language Processing.](#)

Sihan Tan, Nabeela Khan, Zhaoyi An, Yoshitaka Ando, Rei Kawakami, and Kazuhiro Nakadai.

Advanced Robotics, 2024, December, 1–19.

[SEDA: Simple and Effective Data Augmentation for Sign Language Understanding](#)

Sihan Tan, Taro Miyazaki, Katsutoshi Itoyama, Kazuhiro Nakadai.

In *Proceedings of the LREC-COLING 11th Workshop on the Representation and Processing of Sign Languages: Evaluation of Sign Language Resources(sign-lang)*, 2024.

Sign Language Translation with Gloss Pair Encoding

Taro Miyazaki, **Sihan Tan**, Tsubasa Uchida, and Hiroyuki Kaneko.

In *Proceedings of the LREC-COLING 11th Workshop on the Representation and Processing of Sign Languages: Evaluation of Sign Language Resources*(sign-lang), 2024.

Improving Sign Language Understanding Introducing Label Smoothing

Sihan Tan, Khanum Khan Nabeela, Katsutoshi Itoyama, Kazuhiro Nakadai.

In *Proceedings of the 32nd IEEE International Conference on Robot and Human Interactive Communication* (RO-MAN), 2023.

AWARDS AND HONORS

Miura Award

2024

The award for outstanding graduates in the master's or doctoral programs, funded by Miura Corporation.

Given annually to one nominee from each department.

Issued by: The Japan Society of Mechanical Engineers.

Outstanding Paper Presentation

2024

Awarded for master's thesis: *Sign Language Recognition and Translation Using Deep Learning*.

Issued by: Tokyo Institute of Technology

Super Smart Society Leadership Scholarship

2023 - Present

Super Smart Society Leadership Scholarship for excellent and promising master's and doctoral students.

Issued by: Tokyo Institute of Technology

INVITED TALKS

Current status of sign language datasets

08/2023

Half day workshop, Speech-based communication for robots and systems,

32nd IEEE International Conference on Robot and Human Interactive Communication, Busan, South Korea.

Introduction of sign language processing

03/2023

Pohang University of Science and Technology, Pohang, South Korea.

SKILLS

Software: Python, PyTorch, TensorFlow, Linux, Matlab, C, C++

Languages: Mandarin (Native), English (Fluent, CEFR: C1), Japanese (Fluent, JLPT: N2), Japanese Sign Language (Basic), German (Basic)

REFERENCES

Kazuhiro Nakadai

Professor (IEEE Fellow)

Department of Systems and Control Engineering, School of Engineering,

Tokyo Institute of Technology

Email: nakadai@ra.sc.e.titech.ac.jp

Xin Fan

Professor, Dean

School of Software Technology and International School of Information Science and Engineering,

Dalian University of Technology

Email: xin.fan@dlut.edu.cn

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