

# Sihan Tan

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## EDUCATION

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**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

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**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

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### Selected Publications

#### [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

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### 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

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### 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

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

Languages: Mandarin Chinese (Native), English (CEFR: C1), Japanese (JLPT: N2), Japanese Sign Language (Learning)

## REFERENCES

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### 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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