

# Tan Sihan

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## EDUCATION

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### Tokyo Institute of Technology, Tokyo, Japan

**Ph.D.** in Systems and Control Engineering

04/2024 - Present

Advisor: Nakadai Kazuhiro

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: Nakadai Kazuhiro, Itoyama Katsutoshi

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

*Sole Best Graduate of Systems and Control Engineering*

### Dalian University of Technology, Dalian, China

**B.E.** in Digital Media Technology

09/2017 - 07/2021

Advisor: Fan Xin

*Outstanding Bachelor's Graduate*

## WORK EXPERIENCE

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### Research Collaborator

*Sign language translation*

08/2024 - Present

Work with Sign Language Technology Team,

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

### Research Assistant

*Sign language recognition, translation and human-robot interaction*

04/2022 - Present

Work with Nakadai Kazuhiro,

Nakadai Laboratory, Tokyo Institute of Technology.

### Internship

*Sign language translation*

08/2023 - 03/2024

Supervised by Miyazaki Taro,

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

### Research Assistant

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

12/2019 - 07/2021

Work with Fan Xin 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.

Give annually to one nominee from each department.

Issued by: The Japan Society of Mechanical Engineers.

### Outstanding Paper Presentation

2024

The award for my master's thesis is *Sign Language Recognition and Translation Using Deep Learning*.

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 (C1), Japanese (N2), Japanese Sign Language (Learning).