

Takaaki Saeki

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EDUCATION

The University of Tokyo

Ph.D. Degree in Graduate School of Information Science and Technology

Tokyo, Japan

Apr. 2021 – Present

- Supervisor: Prof. Hiroshi Saruwatari and Prof. Shinnosuke Takamichi

The University of Tokyo

Master's Degree in Graduate School of Information Science and Technology

Tokyo, Japan

Apr. 2019 – Mar. 2021

- Thesis Title: "Real-Time, Full-Band, High-Quality Neural Voice Conversion with Sub-Band Modeling and Data-Driven Phase Estimation"
- Supervisor: Prof. Hiroshi Saruwatari and Prof. Shinnosuke Takamichi

The University of Tokyo

Bachelor's Degree in Aerospace Engineering

Tokyo, Japan

Apr. 2015 – Mar. 2019

- Supervisor: Prof. Kimiya Komurasaki

EXPERIENCE

The University of Tokyo

Research Assistant

Tokyo, Japan

May 2020 – Present

- Researching on text-to-speech synthesis and voice conversion.
- Commissioned Research of MIC SCOPE 182103104
- Representative: Shinnosuke Takamichi

LINE Corp.

Part-Time Researcher

Tokyo, Japan

Mar. 2021 – Present

- Designing research proposals and implementing new text-to-speech synthesis methods.
- Mentor: Kentaro Tahchibana and Ryuichi Yamamoto

NEC Data Science Research Laboratories

Research Intern

Kanagawa, Japan

Aug. 2019 – Sep. 2019

- Worked on speech enhancement.
- Mentor: Osamu Hoshuyama

The University of Tokyo

Research Assistant

Tokyo, Japan

Apr. 2019 – July 2019

- Lectured how to develop audio-based interaction system in "Project Practice" course.

Recruit Co., Ltd.

Part-Time Engineer

Tokyo, Japan

Apr. 2019 – June 2019

- Worked on data analysis and developed recommendation engine.
- Lectured a training course of data analysis for newcomers.
- Mentor: Naoya Osugi

Recruit Co., Ltd.

Data Engineering Intern

Tokyo, Japan

Feb. 2019 – Mar. 2019

- Worked on data analysis and developed recommendation engine.
- Achieved award for excellence (2nd place) in Natural Language Processing Hackathon.
- Mentor: Naoya Osugi

Delight Inc.

Part-Time Engineer

Tokyo, Japan

May 2017 – Apr. 2019

- Developed simulation software of fluid dynamics.
- Read research papers and implemented algorithms of thermo-fluid dynamics.

TECHNICAL SKILLS

Languages: Python, C/C++, Shell Script, LaTeX, SQL (BigQuery), HTML/CSS
Developer Tools: Git, Docker, Amazon Web Service, Google Cloud Platform, VS Code
Libraries: NumPy, pandas, PyTorch, Tensorflow, Chainer

LANGUAGE SKILLS

Japanese (native) and English (conversant)

AWARDS

IEICE ISS Student Poster Award <i>IEICE Speech Committee 2021</i>	<i>Mar. 2021</i>
Award for Excellence <i>Natural Language Processing Hackathon in Recruit Co., Ltd.</i>	<i>Feb. 2019</i>

PUBLICATIONS (JOURNAL PAPER)

Takaaki Saeki, Yuki Saito, Shinnosuke Takamichi, and Hiroshi Saruwatari,
“Real-time Full-Band Voice Conversion with Sub-Band Modeling and Data-Driven Phase Estimation of Spectral Differentials,”
IEICE Transactions on Information and Systems, vol. E104-D, no.7, 2021. (ACCEPTED)

Takaaki Saeki, Shinnosuke Takamichi, and Hiroshi Saruwatari,
“Incremental Text-to-Speech Synthesis Using Pseudo Lookahead with Large Pretrained Language Model,”
IEEE Signal Processing Letters, vol. 28, pp. 857–861, 2021.

PUBLICATIONS (PEER-REVIEWED CONFERENCE PAPER)

Takaaki Saeki, Yuki Saito, Shinnosuke Takamichi, and Hiroshi Saruwatari,
“Real-Time, Full-Band, Online DNN-Based Voice Conversion System Using a Single CPU,”
in *Proceedings of Conference of the International Speech Communication Association (INTERSPEECH)*, pp. 1021–1022, Shanghai, China, Oct. 2020.

Naoki Kimura, Zixiong Su, and **Takaaki Saeki**,
“End-to-End Deep Learning Speech Recognition Model for Silent Speech Challenge,”
in *Proceedings of Conference of the International Speech Communication Association (INTERSPEECH)*, pp. 1025–1026, Shanghai, China, Oct. 2020..

Takaaki Saeki, Yuki Saito, Shinnosuke Takamichi, and Hiroshi Saruwatari,
“Lifter Training and Sub-Band Modeling for Computationally Efficient and High-Quality Voice Conversion Using Spectral Differentials,”
in *Proceedings of IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pp. 7784–7788, Barcelona, Spain, May 2020.

EVENTS

Sainokuni Buisiness Arena 2021	ONLINE
“Research on Stress-Free, Real-Time, and Full-Band Voice Conversion Based on Perceptual Model”	<i>Jan. 2021</i>
CEATEC 2020	ONLINE
“Research on Stress-Free, Real-Time, and Full-Band Voice Conversion Based on Perceptual Model”	<i>Oct. 2020</i>

PATENTS (SELECTED)

Shinnosuke Takamichi, Yuki Saito, **Takaaki Saeki**, and Hiroshi Saruwatari,
“Voice Conversion System, Method, and Program,”
International Patent Application No. PCT/JP2021/4367. (Submitted)

Shinnosuke Takamichi, Yuki Saito, **Takaaki Saeki**, and Hiroshi Saruwatari,
“Voice Conversion System, Method, and Program,”
International Patent Application No. PCT/JP2020/031122. (Submitted)

(Last update: 28/05/2021)