

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

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

The University of Tokyo

Bachelor's Degree in Aerospace Engineering

Tokyo, Japan

Apr. 2015 – Mar. 2019

- Supervisor: Prof. Kimiya Komurasaki

WORK EXPERIENCE

The University of Tokyo

Research Assistant

Tokyo, Japan

May 2020 – Present

- Researching on text-to-speech synthesis and voice conversion.
- Advisor: S. Takamichi & H. Saruwatari

LINE Corporation

Part-Time Researcher

Tokyo, Japan

Mar. 2021 – Present

- Designing research proposals and implementing new text-to-speech synthesis methods.
- Advisor: K. Tahchibana & R. Yamamoto

Preferred Networks, Inc.

Research Intern

Tokyo, Japan

Aug. 2021 – Sep. 2021

- Researched on application of machine learning to music creation
- Advisor: D. Higurashi, B. Vogel, and J. Naradowsky

NEC Data Science Research Laboratories

Research Intern

Kanagawa, Japan

Aug. 2019 – Sep. 2019

- Worked on speech enhancement.
- Advisor: O. Hoshuyama

The University of Tokyo

Teaching Assistant

Tokyo, Japan

Apr. 2019 – July 2019

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

Recruit Holdings Co., Ltd.

Data Engineering Intern & Part-Time Engineer

Tokyo, Japan

Feb. 2019 – June 2019

- Worked on data analysis and developed recommendation engine.
- Lectured a training course of data analysis for newcomers.
- Advisor: N. 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, 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)

HONORS AND AWARDS

Best Student Presentation Award <i>Acoustical Society of Japan</i>	Oct. 2021
Research Fellowship for Young Scientists (DC2) (2,400,000 JPY/year)	Apr. 2022 – Mar. 2024
Tobitate Study Abroad Initiatives (160,000 JPY/month)	July 2021
TOYOTA/Dwango AI Scholarship (1,200,000 JPY/year)	Apr. 2021 – Mar. 2022
IEICE ISS Best Student Poster Award <i>IEICE Speech Committee 2021</i>	Mar. 2021
Award for Excellence (2nd place) <i>Natural Language Processing Hackathon at Recruit Co., Ltd.</i>	Feb. 2019

PUBLICATIONS (PEER-REVIEWED PAPER)

1. **Takaaki Saeki**, Shinnosuke Takamichi, and Hiroshi Saruwatari,
“Low-latency Incremental Text-to-Speech Synthesis with Distilled Context Prediction Network,”
in *Proc. ASRU*, Dec. 2021. (Accepted)
2. **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, pp. 1002–1016, Jul. 2021.
3. **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, Apr. 2021.
4. **Takaaki Saeki**, Yuki Saito, Shinnosuke Takamichi, and Hiroshi Saruwatari,
“Real-Time, Full-Band, Online DNN-Based Voice Conversion System Using a Single CPU,”
in *Proc. INTERSPEECH*, pp. 1021–1022, Shanghai, China, Oct. 2020.
5. Naoki Kimura, Zixiong Su, and **Takaaki Saeki**,
“End-to-End Deep Learning Speech Recognition Model for Silent Speech Challenge,”
in *Proc. INTERSPEECH*, pp. 1025–1026, Shanghai, China, Oct. 2020..
6. **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 *Proc. ICASSP*, pp. 7784–7788, Barcelona, Spain, May 2020.

EXHIBITIONS

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

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)

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