

# Takaaki Saeki

[saefrospace@gmail.com](mailto:saefrospace@gmail.com) | [takaaki-saeki.github.io](https://takaaki-saeki.github.io) | [linkedin.com/in/takaaki-saeki](https://linkedin.com/in/takaaki-saeki)

## 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: Shinnosuke Takamichi & Hiroshi Saruwatari

### LINE Corporation

*Part-Time Researcher*

Tokyo, Japan

*Mar. 2021 – Present*

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

### NEC Data Science Research Laboratories

*Research Intern*

Kanagawa, Japan

*Aug. 2019 – Sep. 2019*

- Worked on speech enhancement.
- Advisor: Osamu 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: 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, 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

---

<b>TOYOTA/Dwango AI Scholarship</b> (1,200,000 JPY/year)	<i>June 2021</i>
<b>IEICE ISS Student Poster Award</b>   <i>IEICE Speech Committee 2021</i>	<i>Mar. 2021</i>
<b>Award for Excellence (2nd place)</b>   <i>Natural Language Processing Hackathon at Recruit Co., Ltd.</i>	<i>Feb. 2019</i>

## PUBLICATIONS (JOURNAL PAPER)

---

1. **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.-, Jul. 2021.
2. **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.

## PUBLICATIONS (PEER-REVIEWED CONFERENCE PAPER)

---

1. **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.
2. 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..
3. **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

---

<b>Sainokuni Business Arena 2021</b>	ONLINE
“Research on Stress-Free, Real-Time, and Full-Band Voice Conversion Based on Perceptual Model”	<i>Jan. 2021</i>
<b>CEATEC 2020</b>	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: 2021/06/25)