

Yuki Saito

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🌐 <http://sython.org/> (updated: Apr. 2024)

Research interests

Statistical machine learning, speech synthesis, voice conversion, and human computation.

Education and research experience

Education

- **Ph.D. degree in Information Science and Technology**
Graduate School of Information Science and Technology, The University of Tokyo, Japan. 2021
- **M.S. degree in Information Science and Technology**
Graduate School of Information Science and Technology, The University of Tokyo, Japan. 2018
- **B.S. degree in Engineering**
National Institution for Academic Degrees and Quality Enhancement of Higher Education, Japan 2016

Research experience

- **Lecturer**
Graduate School of Information Science and Technology, The University of Tokyo, Japan. 2024–**current**
I work on research and development on universal spoken language processing technologies.
- **Assistant Professor**
Graduate School of Information Science and Technology, The University of Tokyo, Japan. 2023–2024
I work on research and development on human-in-the-loop speech synthesis technologies.
- **Project Research Associate**
Graduate School of Information Science and Technology, The University of Tokyo, Japan. 2021–2023
I work on research and development on acoustic information processing and voice conversion.
- **Research Assistant**
The University of Tokyo, Japan. 2019–2021
I worked on research and development on stress-free, real-time, and full-band voice conversion based on perceptual models.
- **Part-time Researcher**
DeNA Co., Ltd., Japan. 2019–2021
I worked on research and development on many-to-one voice conversion technology.
- **Research Fellow (DC1)**
Japan Society of the Promotion of Science (JSPS), Japan. 2018–2021
I worked on research and development on speech synthesis based on statistical modeling of human perception.

Languages

Japanese (native) and English (conversant)

Competitive funds

- **Human-in-The-Loop Adaptive Text-To-Speech based on Interactive Reinforcement Learning**
ACT-X, JST (research representative), 4,500,000 JPY. 2023–2026
- **Research and Development on Automatic Audio Commentary Generation on Gameplay Videos**
Grant-in-Aid for Young Scientists, JSPS (research representative), 3,600,000 JPY. 2022–2025
- **Research and Development on Sustainable Speech Synthesis Technology based on Continual Learning**
Grant-in-Aid for Research Activity Start-up, JSPS (research representative), 2,400,000 JPY. 2021–2023
- + 7 fund since 2018

Teaching experience

- **Digital Signal Processing and Acoustic Systems (Instructor)**
Department of Mathematical engineering and information physics, The University of Tokyo, Japan. 2023
I lectured basic signal processing techniques for audio and speech signals (in Japanese)
- **Advanced Signal Processing (Invited Guest Presenter)**
Graduate School of Information Science and Technology, The University of Tokyo, Japan. 2022
I lectured recent development of deep-learning-based speech synthesis technologies. (in Japanese)

○ Applied Gaussian Process and Machine Learning (Invited Guest Presenter)

Graduate School of Information Science and Technology, The University of Tokyo, Japan.

2021

I lectured fundamentals of generative adversarial network-based statistical speech synthesis technologies. (in Japanese)

- + 1 lecture since 2016

Publications

Journal papers

1. Yuki Saito, Shinnosuke Takamichi, and Hiroshi Saruwatari, "Perceptual-similarity-aware deep speaker representation learning for multi-speaker generative modeling," IEEE/ACM Transactions on Audio, Speech, and Language Processing, Vol. 29, pp. 1033–1048, Feb. 2021.
2. Yuki Saito, Shinnosuke Takamichi, and Hiroshi Saruwatari, "Vocoder-free text-to-speech synthesis incorporating generative adversarial networks using low-/multi-frequency STFT amplitude spectra," Computer Speech and Language, Vol. 58, pp. 347–363, Nov. 2019. **[Selected as “Most popular articles” of the Journal]**
3. Yuki Saito, Shinnosuke Takamichi, and Hiroshi Saruwatari, "Statistical parametric speech synthesis incorporating generative adversarial Networks," IEEE/ACM Transactions on Audio, Speech, and Language Processing, Vol. 26, No. 1, pp. 84–96, Jan. 2018. **[2020 IEEE SPS Young Author Best Paper Award, IEEE SPS Japan Student Journal Paper Award, 34th TELECOM System Technology Award for Students from TAF]**
4. + 11 papers since 2017

International conferences

1. Yuki Saito, Shinnosuke Takamichi, Eiji Iimori, Kentaro Tachibana, and Hiroshi Saruwatari, "ChatGPT-EDSS: empathetic dialogue speech synthesis trained from ChatGPT-derived context word embeddings," Proc. INTERSPEECH, pp. 3048–3052, Dublin, Ireland, Aug. 2023.
2. Yuki Saito, Yusuke Ijima, Kyosuke Nishida, and Shinnosuke Takamichi, "Non-parallel voice conversion using variational autoencoders conditioned by phonetic posteriorgrams and d-vectors," Proc. ICASSP, pp. 5274–5278, Calgary, Canada, Apr. 2018. **[Grants from NEC C&C Foundation, Outstanding Paper Award for Young C&C Researchers]**
3. Yuki Saito, Shinnosuke Takamichi, and Hiroshi Saruwatari, "Training algorithm to deceive anti-spoofing verification for DNN-based speech synthesis," Proc. ICASSP, pp. 4900–4904, New Orleans, U.S.A., Mar. 2017. **[Spoken Language Processing Student Grant of ICASSP 2017]**
4. + 31 papers since 2014

Corpora

1. Yuki Saito, Shinnosuke Takamichi, and Hiroshi Saruwatari, "SMASH corpus: a spontaneous speech corpus recording third-person audio commentaries on gameplay," available in <https://ss-takashi.sakura.ne.jp/corpus/smash>, May 2020.
2. Shinnosuke Takamichi, Kentaro Mitsui, Yuki Saito, Tomoki Koriyama, Naoko Tanji, and Hiroshi Saruwatari, "JVS: Japanese multi-speaker and multi-style voice corpus," available in https://sites.google.com/site/shinnosuketakamichi/research-topics/jvs_corpus, Aug. 2019.
3. + 3 corpora since 2017

Awards

1. IEEE Signal Processing Society Young Author Best Paper Award, Jun. 2021.
2. Travel Grant Award for INTERSPEECH2023, Aug. 2023.
3. The 12th IEEE Signal Processing Society Japan Student Journal Paper Award, Nov. 2018.
4. Spoken Language Processing Student Grant of ICASSP, Mar. 2017.
5. + 15 awards since 2014 (and 9 awards received by my collaborators)

Patents

1. Kentaro Tachibana, Yuki Saito, Kei Akuzawa, "SPEECH PROCESSING APPARATUS AND SPEECH PROCESSING PROGRAM," JP2020190605, Filled in May 21.
2. Shinnosuke Takamichi, Yuki Saito, Takaaki Saeki, and Hiroshi Saruwatari, "VOICE CONVERSION DEVICE, VOICE CONVERSION METHOD, AND VOICE CONVERSION PROGRAM," JP2021032940, Filled in Aug. 19, 2019.
3. + 2 patents

Misc.

1. I gave a research talk about our recent work of human-in-the-loop speech synthesis technologies, hosted by Prof. Haizhou Li at NUS, in Aug. 2022.
2. I was invited to Google Speech Technology Summit 2018 at Google London, UK, in May 2018.
3. A figure taken from our paper was used on the cover of IEEE/ACM Transactions on Audio, Speech, and Language Processing, Vol. 26, No. 1, Jan. 2018.