

# YUYA YAMAMOTO

yamathcy.github.io

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## RESEARCH INTERESTS

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### **Music information retrieval**

- Singing voice processing/transcription
- Musical audio identification
- Musical audio synthesis

### **Audio analysis**

- Low-resource audio/speech identification
- Environmental sound analysis/identification

## EDUCATION

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### **Ph.D (Informatics)**

Graduate School of Comprehensive Human Science, University of Tsukuba  
Supervisor: Hiroko Terasawa

Apr 2021 - Present

### **Master (Informatics)**

Graduate School of Library, Information and Media Studies, University of Tsukuba  
Supervisor: Yuzuru Hiraga

Apr 2019 - Mar 2021

### **Bachelor (Media science)**

The College of Media Arts, Science and Technology, University of Tsukuba  
Supervisor: Yuzuru Hiraga

Apr 2017 - Mar 2019

### **Bachelor (Mechanics) (retired)**

Chuo University

Apr 2013 - Mar 2017

## LANGUAGE & TECHNOLOGY SKILLS

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Language	Japanese (native), English (fluent), Korean (entry)
Programming	Python, R, JavaScript, C#, C, C++
Software & Tools	AWS, Unity, Docker, LaTeX
Frameworks	PyTorch, Tensorflow, SpeechBrain, React.JS

## WORK EXPERIENCE

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### **Korea Advanced Institute of Science and Technology (KAIST)**

Visiting student researcher (4 months)

Mentor: Juhan Nam

Worked on deep learning based singing technique analysis from real-world tracks

Aug 2022 - Dec 2022

### **Sigboost, Inc**

Intern (2 weeks)

Worked on music annotation user interface using React.js

Feb 2022 - Mar 2022

### **National Institute of Advanced Industrial Science and Technology (AIST)**

Aug 2019 - Sep 2019

Intern (4 weeks)

Mentor: Masataka Goto, Tomoyasu Nakano  
Worked on Singing style analysis and conversion.

## CA Techkids

Oct 2017 - Oct 2021

Intern (4 years)

Worked as a tutor of programming, Unity engineering, and textbook maker (Unity course).

## PUBLICATIONS (PEER-REVIEWED)

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(<sup>+</sup> referred as selected publication)

### **Singing Technique Analysis with Correspondence to Musical Score on Imitative Singing of Popular Music<sup>+</sup>**

Yuya Yamamoto, Tomoyasu Nakano, Masataka Goto, Hiroko Terasawa.

IPSJ Journal Vol. 64 No. 10, in Japanese (**IPSJ Specially Selected Paper**).

### **Toward Leveraging Pre-Trained Self-Supervised Frontends for Automatic Singing Voice Understanding Tasks: Three Case Studies.**

Yuya Yamamoto.

In Proc. of APSIPA ASC 2023 (Accepted).

### **PrimaDNN': A Characteristics-aware DNN Customization for Singing Technique Detection.**

Yuya Yamamoto, Juhan Nam, Hiroko Terasawa.

In Proc. of EUSIPCO 2023.

### **Human-in-the-loop Chord Progression Generator with Generative Adversarial Network.**

Yoshiteru Matsumoto, Hiroyoshi Ito, Hiroko Terasawa, Yuya Yamamoto, Yuzuru Hiraga, Masaki Matsubara.

In Proc. of APSIPA ASC 2022.

### **Analysis and Detection of Singing Techniques in Repertoires of J-POP Solo Singers.<sup>+</sup>**

Yuya Yamamoto, Juhan Nam, Hiroko Terasawa.

In Proc. of ISMIR 2022 (Overall acceptance rate: 43%, Special call session acceptance rate: 34%).

### **Deformable CNN and Imbalance-Aware Feature Learning for Singing Technique Classification.**

Yuya Yamamoto, Juhan Nam, Hiroko Terasawa.

In Proc. of INTERSPEECH 2022 (Oral presentation, Acceptance rate: 50%).

### **Investigating Time-Frequency Representations for Audio Feature Extraction in Singing Technique Classification**

Yuya Yamamoto, Juhan Nam, Hiroko Terasawa, Yuzuru Hiraga.

In Proc. of APSIPA ASC 2021.

## AWARDS

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- **IPSJ Journal Specially Selected Paper**, from IPSJ, 2023
- **Sound Symposium Student Excellence Presentation Award**, from IPSJ SIGMUS and SIGSLP, 2023, as a co-author
- **IPSJ Yamashita SIG Research Award**, from IPSJ, 2023  
paper title: Analysis of frequency, acoustic characteristics, and occurrence location of singing techniques using imitated j-pop singing voice (at SIGMUS 132, 2021.)
- **Best presentation award (Best research)**, from IPSJ SIGMUS, 2021
- **Dean's award of University of Tsukuba**, 2021
- **Student award**, from IPSJ SIGMUS, 2019

## ACTIVITY

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**Reviewing**

- *IEEE/ACM Transactions on Audio, Speech, and Language Processing*: 2023

**Organizing**

- *ISMIR 2022 paper reading meetup*: Jan 2023

- *ISMIR 2023 paper reading meetup*: Nov 2023

**Talk**

- *ISMIR 2022 report*, at *SIGMUS 136*. 2023

- *Lightning talk on Music Analysis Meetup (MUANA)* 2021, 2022, 2023

- *Guest lecturer for Junior high school student (career development)* 2021

- *Guest lecturer at University of Tsukuba (course: Music and Acoustic Information Processing)* 2021

**RESEARCH GRANT**

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**Support for Pioneering Research Initiated by the Next Generation; SPRING** *Oct. 2021 - Mar 2024*

- *Top 25%, JPY 500,000 per year*

**Travel Grant of The Telecommunications Advancement Foundation**

- *JPY 190,000 : 2022*

**ISMIR student author grant**

- *100 % wavier: 2022*

Last update: 2023.10.15