

# YUYA YAMAMOTO

Last update: May 30th, 2023.

## PERSONAL DATA

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NAME: Yuya Yamamoto  
STATUS: Ph.D student at University of Tsukuba  
GENDER: Male  
PLACE: Ibaraki, Japan  
LANGUAGE: Japanese (Native), English (Fluent), Korean (Basic)  
EMAIL: [s2130507@s.tsukuba.ac.jp](mailto:s2130507@s.tsukuba.ac.jp)  
GITHUB: <https://github.com/yamathcy>  
LINKEDIN: <https://www.linkedin.com/in/yuya-yamamoto-263602151/>

## RESEARCH INTEREST

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Current research topic is **Computational modeling of singing techniques and establishment of its technical foundation.**

My research area/interests lies on,

- Music Information Retrieval (MIR)
- Audio processing
- Computational Musicology
- Machine Learning and Deep Learning
- Statistics

## WORK & INTERNSHIP EXPERIENCE

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08-12 2022	KAIST visiting researcher, Daejeon, Korea
02/2022-03/2022, 07/2022	Internship, sigboost inc., Online
08/2019-09/2019	Internship, AIST, Ibaraki, Japan
10/2017-09/2021	Part-time teacher of Unity for STEM education, CA Techkids, Tokyo, Japan
02/2018-09/2021	Unity Engineer, CA Techkids, Tokyo, Japan

## SCIENTIFIC EDUCATION

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04/2021 - Present	PH.D STUDENT IN INFORMATICS University of Tsukuba
04/2019 - 03/2021	M.S. IN INFORMATICS University of Tsukuba
04/2017 - 03/2019	B.S. IN MEDIA SCIENCE AND TECHNOLOGY University of Tsukuba
04/2013 - 03/2017	PRECISION MECHANICS Chuo University (Retired)

## TECHNICAL SKILLS

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Languages	Python, C/C++, C# (Also in Unity), Shell, LaTeX, SQL, HTML/CSS, R, JavaScript
Developer Tools	Git, Docker, Amazon Web Service, VS Code
Libraries	NumPy, pandas, PyTorch, Tensorflow, Librosa, React.js, Stan
Making Datasets	Sonic Visualiser, Audacity, ELAN, Praat, Audino

## RESEARCH COLLABORATION

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08-09/2019, 04/2021-Present Mentor	<b>AIST Media Interaction Group Research internship</b> Tomoyasu Nakano and Masataka Goto
08/2020 - Present Mentor	<b>KAIST</b> Juhan Nam

## PUBLICATIONS

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### Peer-reviewed

Yuya Yamamoto, Juhan Nam, Hiroko Terasawa.

**PrimaDNN': A Characteristics-aware DNN customization for singing technique detection.**

*In Proc. of EUSIPCO 2023 (To Appear).*

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

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

*In Proc. of APSIPA ASC 2022.*

Yuya Yamamoto, Juhan Nam, Hiroko Terasawa.

**Analysis and Detection of Singing Techniques in Repertoires of J-POP Solo Singers.**

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

Yuya Yamamoto, Juhan Nam, Hiroko Terasawa.

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

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

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

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

*In Proc. of APSIPA ASC 2021.*

### Non peer-reviewed

Tsugumasa Yutani, Yuya Yamamoto, Shuyo Nakatani, Hiroko Terasawa.

**Semantic Timbre Control of Wavetable Synthesis based on CVAE**

*The 137th meeting of the Special Interest Group Technical Report of IPSJ (MUS), (in Japanese), 2023.*

Yuya Yamamoto

**Exploring Pretrained Self-supervised Frontends for Singing Voice Identification Tasks**

*The 137th meeting of the Special Interest Group Technical Report of IPSJ (MUS), (in Japanese), 2023.*

Yuya Yamamoto, Daichi Moriyama, Juhan Nam, Hiroko Terasawa.

**Towards computational analysis of singing technique for music information retrieval : A progress report of building dataset and statistical analysis**

*In Proc. of the auditory research meeting.*

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

**Analysis of frequency, acoustic characteristics, and occurrence location of singing techniques using imitated j-pop singing voice**

*The 132nd meeting of the Special Interest Group Technical Report of IPSJ (MUS), (in Japanese), 2021.*

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

**A comparison of hand-crafted feature and deep-extracted feature on singing technique classification**

*The 130th meeting of the Special Interest Group Technical Report of IPSJ (MUS), (in Japanese), 2021.*

Hiroko Terasawa, Mayumi Mizuno, Yuya Yamamoto, Haruki Oonaka, Yoshihide Ishikawa, Toshie Matsui, Keiichi Yasu.

**Changes in the impressions of Japanese popular songs due to age-related hearing loss**

*In Proc. of ASJ autumn meeting 2020, (in Japanese), 2020.*

Yuya Yamamoto and Yuzuru Hiraga.

**Towards calculations of singing difficulty in J-POP**

*The 124th meeting of the Special Interest Group Technical Report of IPSJ (MUS), (in Japanese).*

Yuya Yamamoto and Yuzuru Hiraga.

**Singing Difficulty of Japanese Popular Songs: Subjective Evaluation and their Relation to Musical Features**

*In Proc. of JSMPC spring meeting 2019 (in Japanese).*

## SCHOLARSHIPS AND CERTIFICATES

2022.10	<b>Travel Grant: The Telecommunications Advancement Foundation</b> 190,000 yen. for participation of ISMIR 2022.
2022.08 - 12	<b>University of Tsukuba Study Abroad Support Programs (Habatake! scholarship)</b> 60,000 yen per month.
2022.07	<b>ISMIR 2022 Student Author Grant</b> 100% waiver of the conference registration fee
2021.10-2024.03	<b>Support for Pioneering Research Initiated by the Next Generation (SPRING)</b> Class 1; top 25 percentile, 500, 000 yen per year.

## AWARDS

03/2023	<b>IPSJ Yamashita SIG Research Award (Equals to Annual Best Research Award of SIGMUS)</b> IPSJ, Japan
09/2021	<b>Best Presentation Award (Best Research)</b> IPSJ special interest group on music and computer (SIGMUS) Summer Symposium
03/2021	<b>Dean's Award (4/44)</b> Graduate School of Library, Information and Media Studies, University of Tsukuba.
08/2019	<b>Student Research Encouragement Award</b> IPSJ special interest group on music and computer (SIGMUS) Summer Symposium

## TALKS

06/2022	<b>Music x Analytics Meetup Vol.8</b> Title: Do it yourself:Music data handling with Sonic Visualiser Online
12/2021	<b>Music and Acoustic Information Processing</b> Course for undergraduates, University of Tsukuba Guest Lecturer
02/2021	<b>Music x Analytics Meetup Vol.4</b> Title: Let's analyze the difficulty of melody by cognitive music theory Online

## TEACHING ASSISTANT

2021 Autumn	<b>Music and Acoustic Information Processing</b>
2020 Autumn	<b>Information Media Experiment B (Music computing)</b>
2019 Spring	<b>Fundamentals of Acoustics and Speech Communication</b>

## REVIEWER

IEEE Trans. ASLP

## MISCELLANEOUS

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| 01/2023 | <b>Organizing ISMIR2022 paper-reading workshop in Japan</b><br>Organizer<br><a href="https://jamir.connpass.com/event/259459/">https://jamir.connpass.com/event/259459/</a>   |
| 2022    | <b>Mentoring of master-student</b><br>Lecturer of deep-learning for music and audio processing in lab.<br>Consulting their own research.<br>Mentees: Yoshiteru Matsumoto, Sayori Takayama, Tsugumasa Yutani, Shiho Akaki and Yan Han. |
| 07/2022 | <b>Awesome-music-informatics</b><br>A curation list of music informatics<br><a href="https://github.com/yamathcy/awesome-music-infomatics">https://github.com/yamathcy/awesome-music-infomatics</a>                                   |
| 08/2018 | <b>Maker Faire Tokyo 2018</b><br>Title: Hakoniwa AR<br>Unity AR Engineer  |