

SHU SAKAMOTO

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Research Keywords: Neuroscience & Music (Neuromusic), Auditory System, Music Cognition, Emotion, Predictive Coding, EEG, Neural Oscillation, Brain-Computer Interface

EDUCATION

2017 – Present **Keio University**, Undergraduate
Bachelor's-Master's Four-Year Integrated Education Program
Research Topic: Neuroscience and Music
Research Supervisor: Dr. Shinya Fujii, Dr. Atsuhiko Aoyama
GPA: 3.82

WORK EXPERIENCES

2018/02 – Present **Research Intern**
NTT Communication Science Laboratories. Supervised by Dr. Makio Kashino.
2019/02 – 2019/07 **Engineer**
Prospace Inc.
2018/12 – 2019/04 **Neuro-Engineer**
Sandbox Inc.
2017/07 – 2017/09 **Translator**
Freelance

HONORS AND AWARDS

2019 **Student Paper Award (3rd Prize)**
2019 IEEE 1st Global Conference on Life Sciences and Technologies
2018 **Abe Research Award for Young Researchers (Nominated)**
The 57th Annual Conference of Japanese Society for Medical and Biological Engineering

PUBLICATIONS

Sakamoto, S., Kobayashi, A., Matsushita, K., Shimizu, R., & Aoyama, A, “Decoding Relative Pitch Imagery Using Functional Connectivity: An Electroencephalographic Study”, in *Proceedings of 2019 IEEE 1st Global Conference on Life Sciences and Technologies (LifeTech)*, vol. 1, 2019, pp. 48-49.

CONFERENCE PRESENTATIONS

TALKS

- Sakamoto, S.,** Kobayashi, A., Matsushita, K., Shimizu, R., & Aoyama, A. (2019). Decoding Relative Pitch Imagery Using Functional Connectivity: An Electroencephalographic Study. Talk presented at the *2019 IEEE 1st Global Conference on Life Sciences and Technologies*. Osaka, Japan
- Watanabe, N., **Sakamoto, S.,** & Aoyama, Atsushi. (2018). *Ketsugouon ni Chakumoku Shita Waon ni Kannsuru Noujouhoushori no Kentou* [Investigating Neural Processing of Chords Focusing on Combination Tones]. Talk presented at the 21st Application of Multimodal Neural Information Symposium in Japanese Society of Medical and Biological Engineering. Yokohama, Japan

POSTERS

- Sakamoto, S.,** Kobayashi, A., Matsushita, K., Shimizu, R. and Aoyama, A. (2019). Classification of electroencephalographic oscillations during relative pitch imagery. *Society for Neuroscience, 2019*. Chicago, IL
- Sakamoto, S.,** Kobayashi, A., Matsushita, K., Shimizu, R., & Aoyama, A. (2019). Classification of Electroencephalogram during Pitch Imagery based on Relative Pitch Change. Poster presented at *The 58th Annual Conference of Japanese Society for Medical and Biological Engineering*. Okinawa, Japan.
- Sakamoto, S.,** Matsushita, K., Kobayashi, A., Shimizu, R., & Aoyama, A. (2018). Classification of EEG data during imagery of higher and lower pitched sounds. Poster presented at *The 41st Annual Meeting of the Japan Neuroscience Society*. Kobe, Japan.
- Kobayashi, A., **Sakamoto, S.,** Matsushita, K., Shimizu, R., & Aoyama, A. (2018). Classification of EEG data during imaging higher and lower pitched sounds using machine learning. Poster Presented at *The 57th Annual Conference of Japanese Society for Medical and Biological Engineering*. Sapporo, Japan. (Presenter)

GRANTS

- Full Scholarship.** GAO Scholarship. 2020. (1,460,000 JPY)
- Research Grant.** Incentive to Study and Conduct Research Through SFC Education Promotion Foundation. 2019. (210,000 JPY)
- Research Grant.** Incentive to Study and Conduct Research Through SFC Education Promotion Foundation. 2018. (160,000 JPY)
- Research Grant.** Keio SFC Academic Society. 2018. (14,300 JPY)

TEACHING EXPERIENCE

INSTRUCTOR OF RECORD

Summer 2017- **Private Tutor of High School Math**

TEACHING ASSISTANTSHIPS

All-year 2018-2019 **Calculus**, Keio University

Fall 2019 **Neural Information Science**, Keio University

SKILLS

LANGUAGE

Japanese Native
English Fluent.
TOEFL iBT 105. TOEIC 990, EIKEN Grade1. Graduated from Phillips Academy, a boarding school in Massachusetts

COURSEWORK

Experimental neuroscience, cognitive neuroscience, machine learning, signal processing, musicology

PROGRAMMING

Proficient Python, Matlab, Git/GitHub, LaTeX, UNIX
Basic C, R, Mathematica, Haskell, HTML, Javascript, CSS

TRAINING EXPERIENCE

2019/09 **Free Energy Principle Workshop**
National Institute of Physiological Science
2017/09 – 2018/07 **Brain Science Training Program**
RIKEN Center for Brain Science
2018/02 – 2018/04 **NICO2AI School**
Dwango AI Lab.