SHU SAKAMOTO

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January 2020

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. Atsuhi 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**
Probspace 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.   Yamagishi Student Project Support Program. 2020. (150,000 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

SKIILS _____

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 Sciences
2017/09 – 2018/07   **Brain Science Training Program**
                    RIKEN Center for Brain Science
2018/02 – 2018/04   **NICO2AI School**
                    Dwango AI Lab.