

Yamato Miyatake

Portfolio: <https://www.miyatakeyama.to>

Email: yamato.miyatake@gmail.com, yamato.miyatake@fip.ics.saitama-u.ac.jp

Introduction

I am currently pursuing a Ph.D. at Saitama University under the supervision of **Parinya Punpongsanon**, focusing on the intersection of **human-food interaction**, **digital fabrication**, and **Human-centered AI**. My goal is to **pioneer innovations in digital culinary experiences**.

Before this, I worked on **automated driving systems** at **Bosch**, where I honed my skills in **AI-based environment recognition**. In **2022**, I earned my **Master of Engineering degree** from **Osaka University**, specializing in **Computer Vision**, **Robotics**, **Machine Learning**, **Signal Processing**, and **Human-Computer Interaction**.

Additionally, my research has explored **haptic presentation** in **Augmented Reality (AR)** and **embedding information using 3D food printing**. These works have been presented at premier conferences, including **IEEE VR** and **UIST**.

Publications

JOURNAL ARTICLES

1. Parinya Punpongsanon, Yamato Miyatake, Daisuke Iwai, and Kosuke Sato, Food DX Through Unobtrusive Edible Tags using Food 3D Printing, *Journal of the Imaging Society of Japan*, 2023.
2. Yamato Miyatake, Takefumi Hiraki, Daisuke Iwai, and Kosuke Sato, HaptoMapping: Visuo-Haptic Augmented Reality by Embedding User-Imperceptible Haptic Display Control Signals in a Projected Image, *IEEE Transaction on Visualization and Computer Graphics*, 2022.

CONFERENCE PAPERS (full papers)

3. Yamato Miyatake, Parinya Punpongsanon, Daisuke Iwai, and Kosuke Sato, interiqr: Unobtrusive Edible Tags using Food 3D Printing, *The ACM Symposium on User Interface Software and Technology (UIST)*, 2022.
4. Yamato Miyatake, Takefumi Hiraki, Daisuke Iwai, and Kosuke Sato, HaptoMapping: Visuo-Haptic Augmented Reality by Embedding User-Imperceptible Haptic Display Control Signals in a Projected Image, *IEEE Conference on Virtual Reality and 3D User Interfaces (VR)*, 2022.
5. Yamato Miyatake, Takefumi Hiraki, Tomosuke Maeda, Daisuke Iwai, and Kosuke Sato, Visuo-Haptic Display by Embedding Imperceptible Spatial Haptic Information into Projected Images, *In Proceedings of EuroHaptics 2020*, 2020.

CONFERENCE PAPERS (short papers, demos, and posters)

6. Yamato Miyatake, Parinya Punpongsanon, An Exploratory Study on Fabricating of Unobtrusive Edible Tags, *In ACM SIGGRAPH Asia 2024 Posters*, 2024.
7. Yamato Miyatake, Parinya Punpongsanon, Daisuke Iwai, and Kosuke Sato, Demonstration of interiqr: Unobtrusive Edible Tags using Food 3D Printing, *The ACM Symposium on User Interface Software and Technology (UIST)*, 2022.
8. Yamato Miyatake, Takefumi Hiraki, Tomosuke Maeda, Daisuke Iwai, and Kosuke Sato, HaptoMapping: Visuo-Haptic AR system using projection-based wearable haptic devices, *In ACM SIGGRAPH Asia 2020 Emerging Technologies*, 2020.

Education

Ph.D. Student, Saitama University, Japan

October 2024 -- Present

Division of Mathematics, Electronics and Informatics, Graduate School of Science and Engineering,
Under advisory of Assoc. Prof. Parinya Punpongsanon

Master of Engineering, <i>Osaka University, Japan</i> Division of Systems Science and Applied Informatics, Graduate School of Engineering Science, Under advisory of <i>Prof. Kosuke Sato</i> , <i>Assoc. Prof. Daisuke Iwai</i> , and <i>Asst. Prof. Parinya Punpongsanon</i>	March 2022
Bachelor of Engineering, <i>Osaka University, Japan</i> Division of Systems Science and Applied Informatics, School of Engineering Science, Under advisory of <i>Prof. Kosuke Sato</i> and <i>Prof. Daisuke Iwai</i>	March 2020
Associate Degree of Engeneering, <i>National Institute of Technology, Japan</i> Department of Electrical and Computer Engineering, Under advisory of <i>Prof. Yasushi Kami</i>	March 2018

Employment

Individual researcher, <i>JST, Japan</i>	Oct. 2024 - Mar. 2027
Software Development Engineer, <i>Bosch, Germany</i>	Apr. 2022 - Dec. 2024
Research Engineer(Internship), <i>SONY, Japan</i>	Feb. 2021 - Mar. 2021
Teaching Assistant, <i>Osaka University, Japan</i>	Oct. 2020 - Mar. 2020
Software Engineer(Internship), <i>JAXA, Japan</i>	Aug. 2017 - Aug. 2017
Software Engineer(Internship), <i>APCAS, Sri Lanka</i>	Mar. 2016 - Apr. 2016

Grants

ACT-X [NextAI-Math-Info], JST, Japan, 45,000 USD + stipend	Oct. 2024 - Mar. 2027
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Skills

Software	Python (Pytorch), C++ , Matlab, OpenCV, Unity, React, Fusion360
Hardware	Micro controller, Sensors(Radar, video), 3D Printers