SOSUKE ICHIHASHI

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EDUCATION

Kyoto University *2016-2020*
Bachelor of Engineering (Global Engineering)
Innovative Disaster Prevention Technology and Policy Research Lab (Supervisor: Dr. Takahiro Sayama)
GPA: 2.98/4.00

The University of Texas at Austin *2018-2019*
Exchange Student (Electrical and Computer Engineering)
University Honor (Fall 2018)

The University of Tokyo *2020-2022*
Master of Interdisciplinary Information Studies (Candidate)
Information Somatics Lab (Supervisor: Dr. Masahiko Inami)
GPA: 3.95/4.00

TEACHING & ADVISING

Teaching Assistant November 2020 - March 2021
Information Somatics Lab, The University of Tokyo

I and an undergraduate student explored pleasantness of haptic stimuli on the forearm. We developed a haptic device consisting of servo motors surrounding the forearm which provide rotational skin stretch distribution. We investigated how different temporal and spatial patterns of rotational skin stretch lead to pleasantness and unpleasantness of the users.

RESEARCH EXPERIENCE

Graduation Research April 2019 - March 2020
Disaster Prevention Technology and Policy Research Lab, Kyoto University

I sub-optimized parameters of the rainfall-runoff-inundation model for 120 river basins in Japan using combinatorial optimization. Then, I categorized the basins based on their runoff characteristics.

Master Student April 2020 - Present
Information Somatics Lab, The University of Tokyo

I have been studying human perceptions and emotions using interactive thermal feedback. I first explored how directional thermal feedback modulates our orientation perceptions in the context of redirection and presented it at a conference. After that, I have been studying how interactive thermal feedback can augment interpersonal communications and visual media experiences. I developed a non-contact rapid thermal display using infrared rays and a shutter mechanism, examined its applications, presented at several domestic conferences, and the paper was accepted by an international conference. In addition, I further explored how gaze representation with thermal feedback could improve remote communications. This work was accepted and will be presented at an international symposium. Also, I investigated the characteristics of aforementioned thermal display from both physical and perceptual points of view, and I submitted the paper to CHI 2022.

TECHNICAL STRENGTHS

Hardware Prototyping	Arduino, Raspberry Pi, Fusion360, 3D printing, Laser cutting
Software Prototyping	Unity, TouchDesigner
Programming Language	Python, Fortran, Matlab, C, C++, Java, C#
Other Software	ArcGIS, AutoCAD, Gurobi, Revit, SketchUp, Tiled

CONFERENCE PRESENTATIONS

1. **The effect of temperature presentation according to the gaze of others on remote communications.**
   Sosuke Ichihashi, Arata Horie, Zendai Kashino, Shigeo Yoshida, and Masahiko Inami.
   International Symposium on Measurement and Control in Robotics 2021 (ISMCR 2021). 2021. **To be presented**.

2. **High-Speed Non-Contact Thermal Display Using Infrared Rays and Shutter Mechanism.**
   Sosuke Ichihashi, Arata Horie, Masaharu Hirose, Zendai Kashino, Shigeo Yoshida, and Masahiko Inami.
   The First Workshop on Multiple Input Modalities and Sensations for VR/AR Interactions (MIMSVAI 2021). In Adjunct Proceedings of UbiComp-ISWC '21 Adjunct. 2021.
   ● **Best Paper Award (best paper presented at MIMSVAI 2021)**.

3. **The effect of temperature presentation according to the gaze of others on remote communications.**
   Sosuke Ichihashi, Arata Horie, Zendai Kashino, Shigeo Yoshida, and Masahiko Inami.
   The 26th Annual Conference of Virtual Reality Society of Japan (VRSJ 2021). 2021. in Japanese.

4. **Rapid Thermal Presentation by Controlling Infrared Irradiance using a Shutter Mechanism.**
   Sosuke Ichihashi, Arata Horie, Zendai Kashino, Shigeo Yoshida, and Masahiko Inami.
   Information Processing Society of Japan Entertainment Computing 2021 (IPSJ EC 2021). 2021. in Japanese.

5. **Preliminary Study on Orientation Perception with Far Infrared Stimulus.**
   Sosuke Ichihashi, Arata Horie, Hiroto Saito, Zendai Kashino, and Masahiko Inami.
   The Society of Instrument and Control Engineering System Integration Division Conference (SICE SI 2020). 2020. in Japanese.

AWARDS, SCHOLARSHIPS & FUNDS

Kyoto University Civil Engineering Society Funds 2017, 2019

2017: Disaster prevention lectures at elementary schools in Indonesia ($2,000 for 2 weeks).
2019: International internship at Toyo Construction Co, Ltd. Philippine Branch ($2,000 for 2 weeks).

JASSO Overseas Study Support Program 2018-2019

Scholarship for outstanding Japanese students to study abroad ($75,000 for 10 months)

University Honors (Fall 2018) 2018

Completion of a full course load with outstanding grades.

EXTRACURRICULAR ACTIVITIES

Instructor 2017

Kyoto University Disaster Prevention School in Indonesia

We held disaster prevention schools at eight elementary schools in Indonesia. I also acted in a play to deliver disaster prevention knowledge in Indonesian language.

Vice President 2018-2020
Kyoto University Muslim Student Association

I co-founded the association to help Muslim students with their lives in Kyoto and to promote non-Muslim's understandings on Muslim customs.

REFERENCES

Masahiko Inami
Professor

Research Center for Advanced Science and Technology, The University of Tokyo
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Zendai Kashino
Assistant Professor

Research Center for Advanced Science and Technology, The University of Tokyo
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Takahiro Sayama
Associate Professor

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