SOSUKE ICHIHASHI

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PERSONAL STATEMENT

A dedicated, detailed and capable researcher with two years of experience in graduate-level HCI (human computer interaction) research. Presented in several HCI conferences, with related expertise in Interactions through thermal Sensations. A confident presenter at conferences and teacher in classrooms, able to explain complex information to audience of different backgrounds.

EDUCATION

Kyoto University *2016-2020*
Bachelor of Engineering
Global Engineering
Innovative Disaster Prevention Technology and Policy Research Lab (Adviser: Dr. Takahiro Sayama)
Overall GPA: 3.0/4.0

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 (Planned)
Interdisciplinary Information Studies
Information Somatics Lab (Advisor: Dr. Masahiko Inami)
Overall GPA: 3.9/4.0

TEACHING & ADVISING

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

I was helping an undergraduate student with his graduation research focusing on pleasantness and unpleasantness of haptic stimuli. We developed the haptic device, designed the psychophysical experiments, and discussed the results together. The device consists of a number of servo motors which provide rotational skin stretch distribution around the forearm. We explored 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, Disaster Prevention Research Institute, Kyoto University

I was working on a parameter optimization of rainfall-runoff-inundation model for 250 river basins in Japan. I introduced combinatorial optimization, which was rarely used in this field of research, to get a limited number of parameter sets for all. In doing so, I categorized river basins based on their best parameter sets. I further confirmed the relation between soil properties and runoff characteristics from that categorization.

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

I have been studying human perceptions and emotions using interactive thermal feedback. In the first year, I explored how directional thermal feedback modulates our orientation perceptions in the context of redirection and presented it at a conference. Recently, I have been studying how interactive thermal feedback can augment interpersonal communications and visual contents. Specifically, I developed a non-contact rapid thermal display using infrared rays and a shutter mechanism, examined its applications, presented at several domestic conferences, and am presenting at MIMSVAI 2021 (a workshop of UbiComp 2021). In addition, I further explored how gaze representation with thermal feedback could improve remote communications and am presenting at ISMCR 2021. Also, I investigated the characteristics of aforementioned thermal display from both physical and perceptual points of view and 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

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

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

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

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

Sosuke Ichihashi, Arata Horie, Hiroto Saito, Zendai Kashino, and Masahiko Inami.
Preliminary Study on Orientation Perception with Far Infrared Stimulus.
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
Kyoto University

Our team (Kyoto University Disaster Prevention School in Indonesia) got the fund for the activity in Indonesia ($2,000 for 2 weeks).

JASSO Overseas Study Support Program 2018-2019
The University of Texas at Austin

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

University Honors (Fall 2018) 2018
The University of Texas at Austin

Completion of a full course load with outstanding grades.

Kyoto University Civil Engineering Society Funds 2019
Kyoto University

Fund to attend an international internship at Toyo Construction Co, Ltd. Philippine Branch ($2,000 for 2 weeks).

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 promote non-Muslim's understandings on Muslim customs.

Assistant 2019
JSPS Science Dialogue Program

I helped a JSPS researcher of climate change with his presentation to high school students. I have a deep understanding of the field, and translation and presentation skills.

REFERENCES

Masahiko Inami
Professor

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Takahiro Sayama
Associate Professor

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Giancarlo Flores
Professor & Department Chair

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