

# SOSUKE ICHIHASHI

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## EDUCATION

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### **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

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### **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

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### **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 how interactive thermal feedback can augment interpersonal communications and visual media experiences. I developed and evaluated a non-contact rapid thermal feedback method using infrared rays and a shutter mechanism, examined its applications, and presented at several conferences including MIMSVAI 2021, where I received Best Paper Award. Also, I investigated the characteristics of the aforementioned method quantitatively and psychophysically, and I submitted the paper to CHI 2022.

## TECHNICAL STRENGTHS

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### **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

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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

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<b>Best Paper Award</b>	2021
Best paper presented at MIMSVAI 2021 (only one paper is awarded).	
<b>Kyoto University Civil Engineering Society Funds</b>	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).	
<b>JASSO Overseas Study Support Program</b>	2018-2019
Scholarship for outstanding Japanese students to study abroad (\$75,000 for 10 months)	
<b>University Honors (Fall 2018)</b>	2018
Completion of a full course load with outstanding grades.	

## EXTRACURRICULAR ACTIVITIES

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<b>Instructor</b>	2017
<i>Kyoto University Disaster Prevention School in Indonesia</i>	
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

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**Masahiko Inami**

*Professor*

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

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**Takahiro Sayama**

*Associate Professor*

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