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TAKERU HASHIMOTO

Education

2020–present

PhD student

The University of Tokyo, Japan, with Prof.Takuji Narumi

2018–2020

Master in Information science and technology

The University of Tokyo, Japan, with Prof.Michitaka Hirose

Thesis Theme: "Rendering various shapes of virtual objects using torque feedback proxy"

2014–2018

B.Sc in Mechano-informatics

The University of Tokyo, Japan, with Prof.Michitaka Hirose

Thesis Theme: "Effect of pseudo-Haptic feedback on touch-screens on attention and memory during image browsing"

Work Experiences

2022 Jan – present

Research Assistant, Sony Computer Science Laboratories.

Research about human machine integration at Superception Lab

2020 – present

Research Assistant, The University of Tokyo.

As a research assistant in my lab, I not only conduct my own research, but also mentor about master's and undergraduate students in their research.

2019 Mar –2020 Mar

Prototype Design Engineer, mplusplus.Co.,Ltd.

Prototyping of glowing props for live performance

2018 Oct-Dec

VR Engineer Intern, GREE, Inc.

Developing the VR app that lets you experience moon skiing and the AR app to learn how to perform server maintenance.

2018 Mar-Oct

Android App Engineer, Sony Music Communications Inc.

Developing the AR app that enables you to take photos with anime characters where they have been set

Grants

Oct 2022 - Mar 2025	JST ACT-X \$ 50k for 2.5 year
Apr 2021 - Mar 2023	JSPS Research Fellow DC2 \$ 50k for 2 years
Apr 2021 - Mar 2023	UTokyo Competitive Research Assistant (IST-RA) \$ 12k for 1 year
Apr 2021 - Mar 2022	The University of Tokyo Toyota-Dwango Scholarship for Advanced AI Talent 2021 \$ 10k for 1 year
Apr 2020 - Mar 2021	The University of Tokyo Toyota-Dwango Scholarship for Advanced AI Talent 2020 \$ 10k for 1 year

Honors

Mar 2020	Young Researcher's Award the Virtual Reality Society of Japan
May 2019	Honorable Mentions Award ACM SIGCHI 2019

Software Skills

Basic	SmartPhone app (Swift, Android Java)
Intermediate	Web Frontend(HTML, CSS), Statistics, Data science(python), Adobe Illustrator / Photoshop / Premiere / After Effects
Advanced	ROS, Gazebo, Fusion360, Unity3D, C++, C#, python

Hardware Skills

Basic	Sheet metal working
Intermediate	PCB design, Machining
Advanced	CAD, Prototyping (Laser-cut, 3D print)

Languages

Japanese	Mothertongue
English	Intermediate

Research Interests

Human Computer Interaction
Human Robot Interaction
Augmented Human with Robotics
Rendering Haptics (especially kinesthesia) in Virtual Environment

Publications

Journals / Papers (Peer Reviewed)

- 2022 **Full Paper**, Takeru Hashimoto, Shigeo Yoshida, Takuji Narumi, MetamorphX: An Un-grounded 3-DoF Moment Display that Changes its Physical Properties through Rotational Impedance Control. In The 35th Annual ACM Symposium on User Interface Software and Technology (UIST '22), October 29–November 2, 2022, Bend, OR, USA. ACM, New York, NY, USA, 14 pages
- 2021 **Full Paper**, Shuntaro Shimizu, **Takeru Hashimoto**, Shigeo Yoshida, Reo Matsumura, Takuji Narumi, Hideaki Kuzuoka, Unident: Providing Impact Sensations on Handheld Objects via High-Speed Change of the Rotational Inertia, in Proc. of IEEE VR 2021, 2021.
- 2019 **Full Paper**, Jotaro Shigeyama*, **Takeru Hashimoto***, Shigeo Yoshida, Takuji Narumi, Tomohiro Tanikawa, Michitaka Hirose . Transcalibur: A Weight Shifting Virtual Reality Controller for 2D Shape Rendering based on Computational Perception Model. CHI Conference on Human Factors in Computing Systems Proceedings. *The first two authors contributed equally to this work.
- 2018 **Journal Paper**, Takeru Hashimoto, Takuji Narumi, Ryohei Nagao, Tomohiro Tanikawa, Michitaka Hirose. Content-aware Browsing by Pseudo-haptic Feedback on Touch Screens, Transactions of the Virtual Reality Society of Japan, 2018, Volume 23, Issue 3, Pages 139-148 (in Japanese)
- 2018 **Full Paper**, Takeru Hashimoto, Takuji Narumi, Ryohei Nagao, Tomohiro Tanikawa, Michitaka Hirose . Effect of Pseudo-Haptic Feedback on Touchscreens on Visual Memory During Image Browsing, Eurohaptics 2018.

Posters / Demos (Peer Reviewed)

- 2019 **Demo**, Yuhu Liu, **Takeru Hashimoto**, Shigeo Yoshida, Takuji Narumi, Tomohiro Tanikawa, Michitaka Hirose . ShapeSense: a 2D shape rendering VR device with moving surfaces that controls mass properties and air resistance. ACM SIGGRAPH 2019 Emerging Technologies.
- 2019 **Demo**, Jotaro Shigeyama, **Takeru Hashimoto**, Shigeo Yoshida, Takuji Narumi, Tomohiro Tanikawa, and Michitaka Hirose. Demonstration of Transcalibur: A VR Controller that Presents Various Shapes of Handheld Objects. Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems.
- 2019 **Poster**, Jotaro Shigeyama, **Takeru Hashimoto**, Shigeo Yoshida, Taiju Aoki, Takuji Narumi, Tomohiro Tanikawa, and Michitaka Hirose. 2018. Transcalibur: dynamic 2D haptic shape illusion of virtual object by weight moving VR controller. ACM SIGGRAPH 2018 Posters.
- 2018 **Demo**, Jotaro Shigeyama, **Takeru Hashimoto**, Shigeo Yoshida, Taiju Aoki, Takuji Narumi, Tomohiro Tanikawa, Michitaka Hirose . Transcalibur: weight moving VR controller for dynamic rendering of 2D shape using haptic shape illusion. ACM SIGGRAPH 2018 Emerging Technologies.
- 2017 **Demo**, Keigo Matsumoto, **Takeru Hashimoto**, Junya Mizutani, Hibiki Yonahara, Ryohei Nagao, Takuji Narumi, Tomohiro Tanikawa, and Michitaka Hirose. 2017. Magic table: deformable props using visuo haptic redirection. SIGGRAPH Asia 2017 Emerging Technologies.