

# TAKEO HAMADA, Ph.D

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## RESEARCH INTERESTS

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Human Augmentation, Augmented Reality, Virtual Embodiment, Self Modeling, Social Facilitation.

## EDUCATION

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| 2015 | PH.D IN ENGINEERING<br>Tokyo Institute of Technology |
| 2011 | MA IN ENGINEERING<br>Tokyo Institute of Technology   |
| 2009 | BA IN ENGINEERING<br>Chiba University                |

## PROFESSIONAL EXPERIENCE

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|--------------|--|
| 2020–present | Project Lecturer at Interfaculty Initiative in Information Studies, The University of Tokyo, Collaboration with Dr. Noboru Koshizuka   |
| 2017–2020    | Assistant Professor at Interfaculty Initiative in Information Studies, The University of Tokyo, Collaboration with Dr. Noboru Koshizuka  |
| 2017–2019    | Research Advisor at H2L Inc., Collaboration with Dr. Emi Tamaki  |
| 2017–2019    | Part-time Lecturer at Faculty of International Liberal Arts, Juntendo University   |
| 2016–2017    | Post-Doc at Department of Computer Science and Engineering, Toyohashi University of Technology, Collaboration with Dr. Michiteru Kitazaki and Dr. Michio Okada   |
| 2011–2015    | PhD student at Department of Information Processing, Tokyo Institute of Technology, Collaboration with Dr. Makoto Sato and Dr. Shoichi Hasegawa  |
| 2009–2011    | Research Assistant at Group of Programming Home Robots, Japan Science and Technology Agency, ERATO IGARASHI Design Interface Project, Collaboration with Dr. Takeo Igarashi, Dr. Masahiko Inami, and Dr. Daisuke Sakamoto, |

## TEACHING EXPERIENCE

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|--------------|--|
| 2017–present | Human Computer Interaction, Undergraduate Students, The University of Tokyo                    |
| 2017–2019    | Information and Communication Technology Literacy, Undergraduate Students, Juntendo University |

## ACADEMIC SERVICES

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### Reviewer

ICAT-EGVE 2022  
CHI 2022  
ISS (PACM-HCI) 2021  
IEEE ACCESS 2019  
VRST 2018  
IPSJ Journal 2018, 2019  
VRSJ Transaction 2019  
HIS Transaction 2018  
TRON Symposium (TRONSHOW) 2018

### Organizer

IPSJ SIG-EC (Entertainment Computing): Steering Committee 2019-2022  
IPSJ Interaction: Local Arrangement 2019-2022  
VRSJ Annual Conference: Program Committee Chairs 2019  
IEEE VR: Student Volunteers 2011

## HONORS AND AWARDS

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2020	BEST PRESENTATION, AUDIENCE AWARD NOMINATIONS The ACM international joint conference on pervasive and ubiquitous computing (UbiComp 2020)
2018	BEST PAPER AWARD Technical Group on Media Experience and Virtual Environment, The Institute of Electronics, Information and Communication Engineers, JAPAN
2017	BEST DEMO AWARD The 8th Augmented Human International Conference (AH'17)
2010	EXCELLENCE AWARD FOR GAMES, APPS, AND GADGETS The 8th Exhibition of The Society for Art and Science, JAPAN

## RESEARCH SUPPORT

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- 2019–2020 | GRANT-IN-AID FOR VIRTUAL REALITY EDUCATIONAL RESEARCH  
Funding Agency: Virtual Reality Educational Research Center, The University of Tokyo, JAPAN  
Title: Exploring the Affordances of VR for Undergraduate Interaction Design Education  
Role: CI  
Amount: 400,000 JPY
- 2018–2022 | GRANT-IN-AID FOR YOUNG SCIENTISTS  
Funding Agency: Japan Society for the Promotion of Science  
Project number: 18K18137  
Title: Impact of Virtual Companions Presented by Augmented Reality on Walking/Jogging Behavior  
Role: PI  
Amount: 3,200,000 JPY
- 2017–2018 | THE INNO-VATION PROGRAM FOR DISRUPTIVE CHALLENGE  
Funding Agency: Ministry of Internal Affairs and Communications, JAPAN  
Title: Development of User Interface for Controlling a Bottom Wiper  
Role: PI  
Amount: 3,000,000 JPY

## LANGUAGE SKILL

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JAPANESE: Native  
ENGLISH: Intermediate

## PEER-REVIEWED PUBLICATIONS

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### Journal articles

- [J.1] Ge Hangli, **Takeo Hamada**, Takahiro Sumitomo, and Noboru Koshizuka. Intellevator: An Intelligent Elevator System Proactive In Traffic Control for Time-efficiency Improvement, In *IEEE Access*, vol. 8, 35535-35545, 2020.  
DOI: [10.1109/ACCESS.2020.2975020](https://doi.org/10.1109/ACCESS.2020.2975020)
- [J.2] Ari Hautasaari, **Takeo Hamada**, Kuntaro Ishiyama, and Shogo Fukushima. VocaBura: A Method for Supporting Second Language Vocabulary Learning While Walking, In *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)*, vol.3 (4), article 135, 23 pages, 2019.  
DOI: [10.1145/3369824](https://doi.org/10.1145/3369824)
- [J.3] Michiteru Kitazaki, **Takeo Hamada**, Katsuya Yoshiho, Ryota Kondo, Tomohiro Amemiya, Koichi Hirota, and Yasushi Ikei. Virtual walking sensation by pre-recorded oscillating optic flow and synchronous foot vibration, *I-Perception*, 14 pages, 2019.  
DOI: [10.1177/2041669519882448](https://doi.org/10.1177/2041669519882448)
- [J.4] Satoshi Fujisawa, **Takeo Hamada**, Yasushi Ikei, and Michiteru Kitazaki: A Body Odyssey: Crawling into human digestive organs by visual, tactile and auditory sensations, In *Transactions of the Virtual Reality Society of Japan*, Vol.24, No.4, 337-340, 2019. (in Japanese)  
DOI: [10.18974/tvrsj.24.4\\_337](https://doi.org/10.18974/tvrsj.24.4_337)

- [J.5] **Takeo Hamada**, Shohei Taniguchi, Sachiko Ikejima, Keisuke Shimizu, Daisuke Sakamoto, Shoichi Hasegawa, Masahiko Inami, Takeo Igarashi: Avatouch: A Puppet-based User Interface for Controlling A Robotic Massage Chair, In *Transactions of the Virtual Reality Society of Japan*, Vol.20, No.3, 229-238, 2015. (in Japanese)  
DOI: [10.18974/tvrsj.20.3\\_229](https://doi.org/10.18974/tvrsj.20.3_229)

## Refereed conference and workshop

- [C.1] Shunya Taniguchi, Ge Hangli, **Takeo Hamada**, Takashi Michikata, and Noboru Koshizuka. Detecting Door Operations Using Wearable Devices. In *Proceedings of IEEE Global Conference on Consumer Electronics 2022 (GCCE 2022)*, Japan, 172-176, October 2022.  
DOI: [10.1109/GCCE56475.2022.10014368](https://doi.org/10.1109/GCCE56475.2022.10014368)
- [C.2] **Takeo Hamada**, Ari Hautasaari, Michiteru Kitazaki, and Noboru Koshizuka. Solitary Jogging with A Virtual Runner using Smartglasses. *IEEE VR 2022 Papers*, Virtual, 644-654, March 2022.  
DOI: [10.1109/VR51125.2022.00085](https://doi.org/10.1109/VR51125.2022.00085)
- [C.3] **Takeo Hamada**, Yasuhira Chiba, JongMoon Choi, and Noboru Koshizuka. Finding Four-leaf Clovers while Supported by AI. *ACM SIGGRAPH ASIA 2020 Posters*, Korea, Article 6, 1-2, November 2020.  
DOI: [10.1145/3415264.3425449](https://doi.org/10.1145/3415264.3425449)
- [C.4] Shogo Fukushima, **Takeo Hamada**, and Ari Hautasaari. Comparing World and Screen Coordinate Systems in Optical See-Through Head-Mounted Displays for Text Readability while Walking. In *Proceedings of IEEE International Symposium on Mixed and Augmented Reality 2020 (ISMAR 2020)*, Brazil, 649-658, November 2020.  
DOI: [10.1109/ISMAR50242.2020.00093](https://doi.org/10.1109/ISMAR50242.2020.00093)
- [C.5] Slamet Kristanto Tirto Utomo, **Takeo Hamada**, and Noboru Koshizuka. Blockchain-Based Incentive System for Public Trash Bin. In *Proceedings of IEEE Global Conference on Consumer Electronics 2020 (GCCE 2020)*, Japan, 168-172, October 2020.  
DOI: [10.1109/GCCE50665.2020.9291925](https://doi.org/10.1109/GCCE50665.2020.9291925)
- [C.6] **Takeo Hamada**, Ari Hautasaari, Michiteru Kitazaki, and Noboru Koshizuka. Exploring the Effects of a Virtual Companion on Solitary Jogging Experience. In *Proceedings of 2020 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, Atlanta, 639-640, GA, USA, March 2020.  
DOI: [10.1109/VRW50115.2020.00170](https://doi.org/10.1109/VRW50115.2020.00170)
- [C.7] Yasuhira Chiba, JongMoon Choi, **Takeo Hamada**, and Noboru Koshizuka. Finding Four-leaf Clovers with AR and AI. *Demonstrations of the IEEE International Symposium on Mixed and Augmented Reality 2019 (ISMAR2019)*, China, October 2019.
- [C.8] Hangli Ge, **Takeo Hamada**, Takahiro Sumitomo, and Noboru Koshizuka. Intellevator: Enhancing Elevator System Efficiency by Proactive Computing on The Traffic Flow. In *Proceedings of the 2019 IEEE 1st Global Conference on Life Sciences and Technologies (LifeTech 2019)*, Japan, 80-84, March 2019.  
DOI: [10.1109/LifeTech.2019.8884070](https://doi.org/10.1109/LifeTech.2019.8884070)
- [C.9] Shogo Fukushima, Ari Hautasaari, and **Takeo Hamada**. Second Language Vocabulary Learning While Walking. In *Proceedings of the 10th Augmented Human International Conference 2019 (AH2019)*, Article 44, 2 pages, France, March 2019.  
DOI: [10.1145/3311823.3311866](https://doi.org/10.1145/3311823.3311866)
- [C.10] **Takeo Hamada**, Michiteru Kitazaki, and Noboru Koshizuka. Social Facilitation with Virtual Jogging Companion on Smartglasses. *ACM SIGGRAPH ASIA 2018 Posters*, 52, Japan,

December 2018.

DOI: [10.1145/3283289.3283351](https://doi.org/10.1145/3283289.3283351)

- [C.11] Hangli Ge, **Takeo Hamada**, Takahiro Sumitomo, and Noboru Koshizuka. Intellevator: A Context-Aware Elevator System for Assisting Passengers. *IEEE 16th International Conference on Embedded and Ubiquitous Computing (EUC 2018)*, 81–88, Romania, October 2018.  
DOI: [10.1109/EUC.2018.00019](https://doi.org/10.1109/EUC.2018.00019)
- [C.12] Hangli Ge, **Takeo Hamada**, Takahiro Sumitomo, and Noboru Koshizuka. PrecaElevator: Towards Zero-Waiting Time for Calling Elevator in Smart Building. *IEEE 7th Global Conference on Consumer Electronics (GCCE 2018)*, 566–570, Japan, October 2018.  
DOI: [10.1109/GCCE.2018.8574706](https://doi.org/10.1109/GCCE.2018.8574706)
- [C.13] Hirotugu Seike, **Takeo Hamada**, Takahiro Sumitomo, and Noboru Koshizuka. Blockchain-Based Ubiquitous Code Ownership Management System without Hierarchical Structure. *IEEE Smart World Congress (SmartWorld 2018)*, 271–276, China, October 2018.  
DOI: [10.1109/SmartWorld.2018.00081](https://doi.org/10.1109/SmartWorld.2018.00081)
- [C.14] Slamet Kristanto Tirto Utomo, **Takeo Hamada**, and Noboru Koshizuka. Low-Energy Smart Trash Bin Architecture for Dynamic Waste Collection System. *The 2nd International Conference on Future Networks and Distributed Systems (ICCFNDS'18)*, Jordan, June 2018.  
DOI: [10.1145/3231053.3231077](https://doi.org/10.1145/3231053.3231077)
- [C.15] Akira Fujiu, **Takeo Hamada**, Takahiro Sumitomo, and Noboru Koshizuka. CAACS: Context-Aware Access Control System for Physical Space in Smart Building. *2018 Global Internet of Things Summit (GIOTS'18)*, Spain, June 2018.  
DOI: [10.1109/GIOTS.2018.8534535](https://doi.org/10.1109/GIOTS.2018.8534535)
- [C.16] **Takeo Hamada**, Michio Okada, and Michiteru Kitazaki. Jogging with a Virtual Runner using a See-Through HMD. In *Proceedings of 2017 IEEE Virtual Reality (VR)*, 445–446, Los Angeles, CA, USA, March 2017.  
DOI: [10.1109/VR.2017.7892371](https://doi.org/10.1109/VR.2017.7892371)
- [C.17] Satoshi Fujisawa, **Takeo Hamada**, Ryota Kondo, Ryohei Okamoto, and Michiteru Kitazaki. A Body Odyssey: Exploring The Human Body as Digested Food, In *Proceedings of the 8th Augmented Human International Conference (AH'17)*, Silicon Valley, California, 39:1–39:2, March 2017.  
DOI: [10.1145/3041164.3041209](https://doi.org/10.1145/3041164.3041209)  
**AH2017 Best Demo Award**
- [C.18] **Takeo Hamada**, Katsuya Yoshiho, Ryota Kondo, Yasushi Ikei, Koichi Hirota, Tomohiro Amemiya, and Michiteru Kitazaki. Changing Perceived Leg Length and Motion on Virtual Walking Generator, In *Proceedings of the 23rd International Display Workshops in conjunction with Asia Display 2016 (IDW/AD '16)*, Japan, 3D2/3DSA2-3, 790–793, December 2016.
- [C.19] **Takeo Hamada**, Katsuya Yoshiho, Ryota Kondo, Yasushi Ikei, Koichi Hirota, and Michiteru Kitazaki. Virtual Walking Generator by Rhythmical Modulation of Omnidirectional Images and Foot Sensations, *EuroHaptics 2016 Demonstrations*, UK, July 2016.
- [C.20] **Takeo Hamada**, Hironori Mitake, Shoichi Hasegawa, and Makoto Sato. A Teleoperated Bottom Wiper, In *Proceedings of the 6th Augmented Human International Conference (AH'15)*, 145–150 (2015.3).  
DOI: [10.1145/2735711.2735794](https://doi.org/10.1145/2735711.2735794)
- [C.21] Katsuhito Akahane, **Takeo Hamada**, Takehiko Yamaguchi, and Makoto Sato. Development of a High Definition Haptic Rendering for Stability and Fidelity, In *Proceedings*

of the 14th international conference on Human-computer interaction (HCI'11), part 2, 3-12 (2011.7).

DOI: [10.1007/978-3-642-21605-3\\_1](https://doi.org/10.1007/978-3-642-21605-3_1)

- [C.22] Koki Nagano, Takeru Utsugi, Mika Hirano, **Takeo Hamada**, Akihiko Shirai, and Masayuki Nakajima. A new multiplex content displaying system compatible with current 3D projection technology, In Proceedings of *ACM SIGGRAPH 2010 Posters*, (2010.8).

DOI: [10.1145/1836845.1836931](https://doi.org/10.1145/1836845.1836931)