

Takumi Hamazaki

Researcher, Toyota Central R&D Labs / Working PhD Student, Kajimoto Lab — The University of Electro-Communications

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Research Interests

Human perception — especially tactile illusions — and the haptic interfaces and sensing built upon them. I advance research by moving between psychophysical experiments and interface design, with chemical haptics as one of my current PhD themes. I am also interested in HCI and sensing.

Keywords: Haptics, Tactile Illusion, Chemical Haptics, Electrical Stimulation, Human–Computer Interaction, Psychophysics

Education

2026 –	Working PhD Student, Informatics The University of Electro-Communications — Kajimoto Lab
2022–2024	MEng The University of Electro-Communications
2020–2022	BEng The University of Electro-Communications
2015–2020	Associate Degree Ichinoseki National College of Technology

Appointments

2024 –	Researcher Toyota Central R&D Labs — Nagakute Campus (Collaborative Intelligence Research Domain)
2023.02–03	Internship Sony R&D Center
2022.08–09	Internship Toyota Central R&D Labs — Tokyo Campus
2019.07–08	Research Assistant Osaka University — Human Information Engineering Lab. (Maeda Lab)
2018.07–08	Internship The University of Tokyo — Information Somatics Lab. (Inami Lab)

Publications — Journal Articles

- H. Deguchi, S. Taguchi, **T. Hamazaki**, K. Takeyama, H. Sakai, K. Shimura, T. Yonezawa, N. Kawaguchi. “Act-Env matching: activity and context-aware avatar positioning for telepresence in heterogeneous environments.” *Front. Virtual Reality*, 2026. doi:10.3389/frvir.2026.1791810
- S. Taguchi, H. Deguchi, **T. Hamazaki**, H. Sakai. “SpatialPrompting: Pose-Aware Keyframe Prompting for 3D Spatial QA toward Smart Indoor Environments.” *Front. Robotics AI*, 2026.
- S. Kuroki, **T. Hamazaki**, H. Kajimoto, S. Nishida. “Passive human touch cannot recognize the shape of a pattern imprinted on the fingertip.” *iScience*, 2025. doi:10.1016/j.isci.2025.112331
- T. Hamazaki**, M. Kaneda, S. Kaneko, H. Kajimoto. “Chemical Approach to the Thermal Grill Illusion.” *IEEE Access*, 2024. doi:10.1109/ACCESS.2024.3368894
- T. Hamazaki**, T. Saito, S. Kaneko, H. Kajimoto. “Suppressing Discomfort Caused by Electrical Stimulation Using a Local Anesthetic Cream.” *IEEE Access*, 2023. doi:10.1109/ACCESS.2023.3241605

Publications — International Conferences

- T. Hamazaki**, T. Maeda, H. Deguchi, S. Taguchi, H. Sakai. “Enchanted Touch: Delivering Vibrotactile and Thermal Feedback Without Fingertap Contact.” *SIGGRAPH Asia E-Tech*, 2025. doi:10.1145/3757373.3763767 ★ **Emerging Technologies Honorable Mention Award**

- T. Hamazaki**, T. Takami, K. Ushiyama, I. Mizoguchi, H. Kajimoto. "ALCool: Utilizing Alcohol's Evaporative Cooling for Ubiquitous Cold Sensation Feedback." *ACM CHI*, 2024. doi:10.1145/3613904.3642113
- T. Saito, **T. Hamazaki**, S. Kaneko, H. Kajimoto. "Coldness Presentation to Ventral Forearm using Electrical Stimulation with Elastic Gel and Anesthetic Cream." *Augmented Humans*, 2023. doi:10.1145/3582700.3582713
- T. Hamazaki**, M. Kaneda, J. Zhang, S. Kaneko, H. Kajimoto. "Chemical-induced Thermal Grill Illusion." *IEEE Haptics Symposium*, 2022. doi:10.1109/HAPTICS52432.2022.9765569 ★ **Best Conference Technical Paper — Honorable Mention**
- T. Hamazaki**, T. Saito, S. Kaneko, H. Kajimoto. "Expanding Dynamic Range of Electrical Stimulation Using Anesthetic Cream." *EuroHaptics*, 2022. doi:10.1007/978-3-031-06249-0_21
- T. Hamazaki**, S. Kaneko, M. Miyakami, H. Kajimoto. "Mixing Glue Spray and Cold Spray for Realizing "Popping" Sensation." *AsiaHaptics*, 2022.
- T. Takami, S. Ando, S. Nakayama, A. Saito, Y. Suga, **T. Hamazaki**, Y. Yano, H. Kajimoto. "StressMincer: Enhancement of Catharsis Effect by Visualization of Words and Destruction with Haptic Feedback." *Augmented Humans*, 2022. doi:10.1145/3519391.3524030 ★ **Best Demo Award**

Publications — Domestic Conferences (Japan)

- 浜崎 拓海**, 高見 太基, 牛山 奎悟, 溝口 泉, 梶本 裕之. "Ubiquitous Cold Sensation Presentation Using Alcohol Evaporation." *SICE SI*, 2023. ★ **Best Presentation Award**
- 牛山 奎悟, **浜崎 拓海**, 梶本 裕之. "Development of Bag-installed Haptic Device to Deliver Vibration and Pressure Feedback in Everyday Life." *SICE SI*, 2023. ★ **Best Presentation Award**
- 浜崎 拓海**, 金田 実久, 金子 征太郎, 梶本 裕之. "Examination of Stimulus Arrangement in the Chemical Thermal Grill Illusion (Second Report)." *ROBOMECH*, 2023.
- 浜崎 拓海**, 金田 実久, 金子 征太郎, 梶本 裕之. "Examination of Stimulus Arrangement in the Chemical Thermal Grill Illusion." *VRSJ Annual*, 2022. ★ **Encouragement Award**
- 浜崎 拓海**, 宮上 昌大, 金子 征太郎, 梶本 裕之. "Comparison of Popping Sensation Presentation Using a Mixture of Glue Spray and Cold Spray." *VRSJ Annual*, 2022.
- 浜崎 拓海**, 金田 実久, 張 建堯, 金子 征太郎, 梶本 裕之. "Thermal Grill Illusion Using Chemical Substances." *VRSJ Annual*, 2021.

Honors & Awards

International

- 2025 Emerging Technologies Honorable Mention Award, SIGGRAPH Asia 2025
- 2022 Best Conference Technical Paper Honorable Mention, IEEE Haptics Symposium 2022
- 2022 Best Demo Award, Augmented Humans International Conference (StressMincer)

Domestic

- 2023 Best Presentation Award, SICE System Integration Division
- 2022–24 Student Award from the President of the University of Electro-Communications
- 2022 Encouragement Award, VRSJ Annual Conference
- 2022 Megurokai Award, The University of Electro-Communications
- 2022 Best Presentation Award, 15th Meeting of the Young Researcher Association for Haptics
- 2022 Excellence Award, Giiku-ten 2022 (StressMincer)
- 2022 HEROES LEAGUE 2022 — Gold ×1, Silver ×2, Bronze ×1
- 2021 HEROES LEAGUE 2021 — Gold ×1, Silver ×3
- 2021 Jury Award (Nanako Ishido Award), IVRC2021

Academic Service

- Reviewer — ACM CHI
- Reviewer — ACM UIST
- Reviewer — ACM SIGGRAPH Asia
- Reviewer — IEEE World Haptics Conference

Skills

C / C++, Python, Unity / C#, PCB Design, Psychophysics, Multimodal LLMs

Exhibitions & Demonstrations

- 2022 Gigiku-ten 2022 — Selected Work
- 2022 HEROES LEAGUE 2022 — Online League Finalist
- 2021 HEROES LEAGUE 2021
- 2021 IVRC2021 — SEED / LEAP STAGE (2 works)