

Kai Guo

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Project Experience

- 2026 – 2028 **JSPS DCz**, Research Fellowships for Young Scientists, Japan Society for the Promotion of Science.
- 2025 – 2028 **Japan Science and Technology Agency**, SPRING GX, Support for Pioneering Research Initiated by the Next Generation.
- 2022 – 2023 **University-Industry Joint Research**, SAR (Synthetic Aperture Radar) Imaging and Compensation with Automotive Millimeter-Wave Radar.

Education

- 2025.4 – **Phd candidate. Environmental Engineering, The University of Tokyo** in Virtual Reality.
Research Topic: *Binocular rivalry and its applications in user interface design and visual effects.*
- 2023.4 – 2025.3 **M.Sc. Environmental Engineering, The University of Tokyo** in Virtual Reality.
Thesis title: *GUI Presentation Method based on Binocular Rivalry for Non-overlay Information Recognition in Visual Scenes.*
- 2019.4 – 2023.3 **B.Sc. Computer Science, Niigata University** in Radar Algorithm.
Thesis title: *Basic Study on Motion Compensation in carbon Millimeter Wave SAR by Using Range Doppler Method.*

Research Publications

Journal Articles

- 1 K. Guo, J. Hosoi, Y. Shimomura, Y. Ban, and S. Warisawa, “Glossary perception in vr,” *IEEE Transactions on Visualization and Computer Graphics (accepted, to appear)*, 2026.
- 2 K. GUO, J. HOSOI, Y. SHIMOMURA, Y. BAN, and S. WARISAWA, “Visual presentation method for paranormal phenomena through binocular rivalry induced by dichoptic color differences,” *IEEE Transactions on Visualization and Computer Graphics*, vol. 31, no. 5, pp. 3296–3305, 2025. [DOI: 10.1109/TVCG.2025.3549172.](#)

Conference Proceedings

- 1 H. Jiayi, G. Kai, K. Zhongrui, Y. Shimomura, Y. Ban, and S. Warisawa, “A full-body vibrotactile feedback method guided by body ownership in third-person perspective vr,” Dec. 2025.
- 2 H. Jiayi, G. Kai, K. Zhongrui, Y. Shimomura, Y. Ban, and S. Warisawa, “三人称視点 vr における身体所有感の切り替えとその影響要因の検討,” Sep. 2025.
- 3 G. Kai, J. Hosoi, Y. Shimomura, Y. Ban, and S. Warisawa, “Demonstration of visual presentation method for paranormal phenomena through binocular rivalry induced by dichoptic color differences,” in *2025 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, 2025. [DOI: 10.1109/VRW66409.2025.00456.](#)
- 4 G. Kai, J. Hosoi, Y. Shimomura, Y. Ban, and S. Warisawa, “How rendering style moderates the impact of binocular highlight disparity on gloss perception in vr,” Dec. 2025.

- 5 永 簾, 郭凱, 伴祐樹, and 割澤伸一, “低呼吸状態における視聴覚情報の動的提示による瞑想状態への誘導,” Sep. 2025.
- 6 K. Guo, J. Hosoi, Y. Ban, Y. Shimomura, and S. Warisawa, “Paranormal phenomenon visual experience through binocular rivalry in virtual reality,” in *SIGGRAPH Asia 2024 Emerging Technologies*, ser. SA '24, Association for Computing Machinery, 2024, ISBN: 9798400711374.  DOI: 10.1145/3681755.3688949.
- 7 K. Guo, Y. Shimomura, J. Hosoi, Y. Ban, and S. Warisawa, “Gui presentation method based on binocular rivalry for non-overlay information recognition in visual scenes,” in *Proceedings of the Augmented Humans International Conference 2024*, ser. AHs '24, Melbourne, VIC, Australia: Association for Computing Machinery, 2024, pp. 193–204, ISBN: 9798400709807.  DOI: 10.1145/3652920.3652939.
- 8 郭凱, 下 祐樹, 細井十楽, 伴祐樹, and 割澤伸一, “ビジュアルシーンと重畳せずに認識可能な視野闘争を用いた視覚的な ui 提示手法の検討,” Mar. 2024.
- 9 郭凱, 細井十楽, 伴祐樹, 下村祐樹, and 割澤伸一, “視野闘争を用いた超常現象の視覚提示についての検討,” Sep. 2024.

Skills

- Languages  Chinese, Japanese, English.
- Coding  C#, C++, C, Python, R, Matlab, ...

Miscellaneous Experience

Awards and Achievements

- 2025  **Student Award**, SICE (Society of Instrument and Control Engineers) Outstanding Student Award
- 2024  **Best Demo Award**, Best Demo Award in SIGGRAPH Asia 2024 Emerging Technologies (SA '24)
-  **News Coverage**, THE DAILY INDUSTRIAL NEWS (日刊工業新聞). “Binocular Rivalry by Presenting Different Colors to the Left and Right Eyes: The University of Tokyo’s HMD-based Technology,” December 6, 2024. (<https://www.nikkan.co.jp/spaces/view/0079399>)
- 2023  **University Prize for Global Talent Special Award**, Niigata University.
- 2022 – 2023  **Monbukagakusho Honors Scholarship**, JASSO.
- 2021 – 2022  **Educational Development Fellowship: awarded for academic excellence**, offered by UNION TOOL CO..
- 2020 – 2021  **Educational Development Fellowship: awarded for academic excellence**, offered by UNION TOOL CO..
- 2019 – 2020  **Monbukagakusho Honors Scholarship**, JASSO.

Certification

- 2023  **Toeic: 865**. Educational Testing Service(ETS).
- 2021  **Certified Level 3 in Bookkeeping**. Awarded by The Official Business Skills Test in Bookkeeping.
- 2018  **Certified Level N1 in JLPT Japanese-Language Proficiency Test(JLPT)**. Awarded by JLPT.