IEEE VR 2022

The 2022 VGTC Virtual Reality Best Dissertation Award

Nami Ogawa

The 2022 VGTC Virtual Reality Best Dissertation Award goes to Nami Ogawa, a 2020 graduate from the University of Tokyo, for her dissertation entitled, "Effect of Self-Avatar Anthropomorphism on Perception and Behavior in Virtual Environments."

Nami Ogawa is a Research Scientist at CyberAgent AI Lab, Japan. She completed her Ph.D. at the University of Tokyo under the supervision of Prof. Michitaka Hirose. Her dissertation addresses the Sense of Body Ownership (SoBO) in VR, i.e., the sense that a self-avatar is experienced as if it is one's own body. It identifies and fills the gap that despite a considerable body of literature recognizing the importance of the SoBo, little is known about how the SoBO relates to users' experiences—how they perceive and behave—in virtual environments (VEs). In short, the dissertation addresses the question "Why does the SoBO matter in VR?"

Specifically, her doctoral research investigates the effect of self-avatar anthropomorphism (i.e., visual human-likeness), which has been shown to affect the SoBO, on users' perceptions and behaviors in VEs with respect to the following three aspects: 1) how to perceive information from one's own actual body; 2) how to perceive information from the environment; and 3) how to respond to the received information (i.e., behavior). The results of the three experiments provide compelling evidence that anthropomorphism influences the user experiences in VEs, in accordance with the hypothesis that human-like self-avatars not only strengthen the SoBO but also alter one's perception and behavior in VEs such that they rely more on the virtual body representation than the physical body representation.

Elucidating the effect of self-avatar anthropomorphism contributes to proposing a novel solution, namely, navigating users' perceptions and behavior in VEs simply by controlling the appearance of their avatars. More details regarding Dr. Ogawa's work can be found on her website: https://namiogawa-en.mystrikingly.com/

Award Information

The IEEE VGTC Virtual Reality Best Dissertation Award was established in 2016. This award is given every year to the author of the best doctoral dissertation in the broad field of virtual reality. Eligible nominees for the 2021 and 2022 awards included the authors of all relevant dissertations defended between January 1, 2019 and December 31, 2020. A total of sixteen nominations were received and were carefully reviewed by the IEEE VR Best Dissertation awards committee, which consisted of sixteen leading experts in the field. Each dissertation was read in full by three panel members, and after an initial binning process, the top-ranked dissertations were subsequently read (or re-read) by all panelists to determine the winner.

The 2022 VGTC Virtual Reality Best Dissertation Honorable Mention

Katharina Krösl

TU Wien

Dissertation Title: Simulating Vision Impairments in Virtual and Augmented Reality

Advisor: Michael Wimmer

Dr. Krösl developed a system and a methodology to simulate vision impairments, such as refractive errors, cataracts, cornea disease, and age-related macular degeneration in virtual and augmented reality, facilitating user studies in VR or AR with people with healthy eyesight and graphically simulated vision impairments. Her research aims to support architects and lighting designers in evaluating their designs for accessibility and to raise awareness and empathy for people with vision impairments and the need for more inclusive designs.