KEYNOTE TALK

Wednesday, October 6, 2021 at 9am

Combining Brain-Computer Interfaces and Virtual Reality: Novel 3D Interactions and Promising Applications

Anatole Lécuyer
INRIA
France

Abstract: In this talk I will present a research path on Brain-Computer Interfaces (BCI) aiming to establish a solid connection with Virtual Reality (VR) and Augmented Reality (AR). I will first evoke the great success of OpenViBE, an open-source software platform dedicated to BCI research used today all over the world, notably with VR systems. Then, I will illustrate how BCI and VR/AR technologies can be combined to design novel 3D interactions and effective applications, e.g. for health, sport, entertainment, or training.

Speaker Bio-Sketch: Anatole Lécuyer is Senior Researcher and Head of Hybrid research team, at Inria, the French National Institute for Research in Computer Science and Control, in Rennes, France. His research interests include virtual reality, haptic interaction, 3D user interfaces, and brain-computer interfaces. He regularly serves as expert in Virtual Reality and BCI for public bodies such as European Commission (EC), European Research Council (ERC), or French National Research Agency (ANR). He is currently Associate Editor of "IEEE Transactions on Visualization and Computer Graphics", "Frontiers in Virtual Reality" and "Presence" journals. He was notably Program Chair of IEEE Virtual Reality Conference (2015-2016) and General Chair of IEEE Symposium on Mixed and Augmented Reality (2017). He is author or co-author of more than 200 scientific publications. Anatole Lécuyer obtained the Inria-French Academy of Sciences Young Researcher Prize in 2013, and the IEEE VGTC Technical Achievement Award in Virtual/Augmented Reality in 2019.