IEEE VGTC Virtual Reality Technical Achievement Award 2005

The 2005 Virtual Reality Technical Achievement Award goes to Mark Bolas in recognition for seminal technical achievement in virtual & augmented reality. Mark Bolas has been a leader in the field of virtual reality for the past eighteen years. He is a Visiting Associate Professor in the Interactive Media Division at the University of Southern California. He and his company, Fakespace Labs, have designed and produced visualization instruments for hundreds of research labs, universities, and companies, both domestically and internationally. Most important, there have been many new discoveries and designs made by others due to his efforts to create immersive experiences that augment one's ability to visualize, understand, communicate, and design. The IEEE VGTC is pleased to award Mark Bolas the 2005 Virtual Reality Technical Achievement Award.

Mark Bolas
Fakespace, Inc.

IEEE VGTC Virtual Reality
Technical Achievement Award
Recipient 2005

Biography

Mark Bolas is a research scientist, artist, and designer of perceptually focused computer systems used to augment perception, agency, and intelligence. He is a Visiting Associate Professor in the Interactive Media Division, School of Cinema and Television at the University of Southern California, and Chairman of Fakespace Labs in Mountain View, California.

Mark's 1988-89 thesis work "Design and Virtual Environments" was done under the direction of Rolf Faste in Stanford's design program and Scott Fisher at NASA Ames. It was among the first efforts to map the breadth of virtual reality as a new medium. This effort provided the foundation for a number of seminal observations which led Mark toward a basic model for immersive experience design, concluding that the medium's power to deeply transport a user is closely tied to finding an appropriate balance between realism and abstraction.

Mark co-founded Fakespace Inc. to build instrumentation for research labs to explore virtual reality and grow the emerging field. His work with Ian McDowall resulted in the invention of display and interaction tools used by most VR research and development centers around the world. The Boom, the Pinch, the Rave, and VLIB software are just a few examples of the tools they created that changed design and research in many areas: automotive and aerospace design, oil and gas exploration, molecular modeling and data visualization, to name a few. Fakespace products have been used to design cars at Chrysler, bring immersion to software environments like Catia, allow our national laboratories and research centers around the world to dig a bit deeper in visualizing their data, and educate patrons at the Chicago Museum of Science and Industry.

Mark continues to explore the nature of virtual reality through the design of immersive experiences. His work focuses on creating virtual environments and transducers that fully engage one's perception and cognition to create a visceral memory of the experience. His work has been exhibited in many venues including six Emerging Technology exhibits at Siggraph starting in 1991 with Flatlands, which used the illusion of perspective to transform a sculpture into Mondrian's Composition with Line, 1918; the music-driven worlds of Vacuii and StillLife created with Christian Greuel and Niko Bolas; and the invisibly structured Snared Illumination created with Perry Hoberman and Ian McDowall.

Mark has been a professor at Stanford University and KEIO University exploring tangible interfaces, augmented reality, and computational illumination. These projects have explored context sensitive audio interfaces, socially interactive toys, augmented reality, confocal illumination, and mobile phone web logging. Mark has co-chaired The Engineering Reality of Virtual Reality conference at SPIE for over 10 years. He holds twenty patents with his co-inventors at Fakespace and has won many significant awards for his products and designs.

Mark's cross-disciplinary work and teaching have led him to understand that design is a conceptual discipline that can be taught independently of the field to which it's being applied. It is a personal process that transcends the specific implementation details of the science or art through which it is being learned or practiced. Developing the implications of this theoretical model of design is now part of his ongoing research and teaching at the University of Southern California.

Award Information

The IEEE VGTC Virtual Reality Technical Achievement Award was established in 2005. It is given every year to recognize an individual for a seminal technical achievement in virtual & augmented reality. VGTC members may nominate individuals for the Virtual Reality Technical Achievement Award by contacting the awards chair, John Staudhammer, at http://tab.computer.org/vgtc/.