The 2013 Virtual Reality Technical Achievement Award

Mark Billinghurst

The 2013 Virtual Reality Technical Achievement Award goes to Mark Billinghurst of the HIT Lab NZ at the University of Canterbury, New Zealand, in recognition of technical developments that have significantly advanced research and commercialization in the field of Augmented Reality. Professor Billinghurst has been working in AR for over 15 years and has contributed to significant advancements in the field such co-developing the ARToolKit tracking library, novel interaction metaphors such as Tangible AR, innovative systems such as the MagicBook transitional AR interface, and the first collaborative AR system for mobile phones. His research has been commercialized through four AR companies he has co-founded, and software released into the open source community has been used by hundreds of thousands of developers and millions of end users. His efforts in AR research, commercialization and communication has contributed significantly to the growth of the entire field. The IEEE VGTC is pleased to award Mark Billinghurst the 2013 Virtual Reality Technical Achievement Award.



Mark Billinghurst
University of Canterbury, New Zealand
Award Recipient 2013

Biography

Professor Mark Billinghurst is the Director of the Human Interface Technology Laboratory New Zealand (HIT Lab NZ) at the University of Canterbury in New Zealand, developing innovative computer interfaces that explore how virtual and real worlds can be merged. He received his PhD degree in Electrical Engineering from the University of Washington in 2002, and Masters and undergraduate degrees from the University of Waikato, New Zealand.

Mark's PhD research explored the use of AR for computer supported collaboration and he produced one of the first AR systems for face-to-face collaboration and the first AR teleconferencing system, and conducted the first formal user studies, exploring the effect of the technology on communication. . One of his PhD research projects was the MagicBook transitional AR system that explored how AR technology could be used to seamlessly transition from the real world through to immersive VR spaces. This work was recognized by the prestigious 2001 Discover Award for the best Entertainment Application.

During this PhD he worked with Dr. Hirokazu Kato to develop the ARToolKit tracking library for AR tracking which was released as open source in 2000 and has since become the most widely used open source AR development tool. His efforts in building an open source community, developing documentation, tutorials, workshops and widely promoting ARToolKit contributed significantly to advancement of the field in the early 2000's, enabling millions of users to have an AR experience.

In 2002 Mark moved back to New Zealand and founded the HIT Lab NZ, which has grown to become a leading AR research group. In the past ten years, HIT Lab NZ staff and students have produced a number of significant research outputs such as the osgART AR library, the BuildAR AR authoring tool, and the Outdoor AR software. Fundamental research has been conducted on AR interaction methods leading to the Tangible AR metaphor, multimodal AR interfaces, transitional AR interfaces and lens based interaction. The HIT Lab NZ was also one of the first research groups exploring mobile AR and in 2005 developed the first mobile phone based collaborative AR application, and in 2007 the world's first mobile AR advertising campaign. Overall, Professor Mark's output has been substantial with over 250 conference papers, journal articles and book chapters, and he is one of the most widely cited researchers in AR.

In addition to significant research output he has also been active in commercializing AR technology. In 2001 he co-founded ARToolWorks, one of the oldest currently active AR companies. In 2002 he was the founder and CEO of the HIT lab NZ Ltd, which became Motim, a leading AR marketing company, and he has contributed to several other AR companies spun out from the HIT Lab NZ.

Mark has been the cochair of two ISMAR conferences, as well as other conference such as 3DUI, MUM and CHINZ. He has served on over 20 program committees for conferences such as IEEE VR, UIST, CHI, SIGGRAPH and VRCAI, and served in a number of other positions such as papers, panels, tutorial and demonstration chairs. He is also an associate editor of *Computers and Graphics* and the *Journal of Virtual Reality*.

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 and augmented reality. VGTC members may nominate individuals for the Virtual Reality Technical Achievement Award by contacting Arie E. Kaufman at vgtc-vr-awards@vgtc.org