IEEE VGTC Virtual Reality Technical Achievement Award 2010

Ming C. Lin
University of North Carolina at Chapel Hill, USA

IEEE VGTC Virtual Reality Technical Achievement Award Recipient 2010

The 2010 Virtual Reality Technical Achievement Award goes to Ming C. Lin of The University of North Carolina at Chapel Hill, in recognition of her seminal contributions in the area of interactive physics-based interaction and simulation for virtual environments.

Dr. Lin is a scientist who has been working on physics-based interaction and geometric modeling for virtual reality, computer graphics, haptics, sound rendering, and robotics for more than 20 years. She is a leader and innovator in the VR research community who has led the development of over a dozen software systems in these areas and made them available for public download over the web.

The IEEE VGTC is pleased to award Ming Lin the 2010 Virtual Reality Technical Achievement Award.

Biography

Ming C. Lin is currently Beverly W. Long Distinguished Term Professor of Computer Science at the University of North Carolina (UNC) at Chapel Hill. She obtained her Ph.D. in Electrical Engineering and Computer Sciences from the University of California, Berkeley in 1993. She has published more than 200 refereed papers in VR, physically-based modeling, haptics, geometric computing, and robotics, and received six best paper awards at international conferences.

Lin has co-developed over a dozen software systems for interactive physical simulation and virtual environments. These include commonly used libraries: I-COLLIDE, RAPID, V-COLLIDE, PQP, SWIFT++, PIVOT, DEEP, and HAVOC3D, which have more than 100,000 downloads worldwide and have been widely adopted in commercial CAD/CAM, VR, robotics, and computer gaming systems.

Inspired by early research on applications of force feedback to scientific exploration at UNC, Lin and her students have developed haptic software technologies, including perceptually-motivated, real-time algorithms for haptic rendering and touch-enabled 3D modeling and painting systems. She has also co-authored/edited two books on haptics rendering. More recently, Lin and collaborators have been developing new techniques for interactive sound synthesis and propagation for computer gaming and VR applications. Her research group is also enhancing the realism of virtual cityscapes by incorporating interactive, large-scale crowd and traffic simulation. In addition, she is amongst the first few researchers to design parallel algorithms for physically-based simulation that exploit commodity multi-/many-core CPUs and GPUs for interactive applications.

Lin has co-chaired over 20 international conferences and workshops, including IEEE VR 2007, ACM VRST 2007, IEEE VR 2008, IEEE VR Workshop on Virtual Cityscape 2008, and ACM VRST 2010. She is the Associate Editor-in-Chief of IEEE Transaction on Visualization and Computer Graphics, editorial board member of six journals, and guest editor for many special issues of scientific journals and technical magazines. She has also served on several steering committees (including IEEE Virtual Reality Conference and Executive Committee of IEEE Visualization and Graphics Technical Committee) and technical advisory boards of international conferences, government organizations, and industry.

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 2010 awards chair for virtual reality, Larry F. Hodges, at vgtc-vr-awards@vgtc.org.