The 2010 Visualization Technical Achievement Award

Hanspeter Pfister

Harvard University

Award Recipient 2010

Hanspeter Pfister

The 2010 Visualization Technical Achievement Award goes to Hanspeter Pfister, Harvard University, in recognition of his seminal technical achievements in real-time volume rendering.

Starting from Hanspeter's 1996 Ph.D. dissertation at Stony Brook University, his pioneering research has enabled the development of innovative hardware designs for volume rendering and have directly led to numerous commercial applications. These include VolumePro, the award-winning real-time volume rendering hardware for PCs, whose design and development was led by Hanspeter at Mitsubishi Electric Research Laboratories (MERL). In 2007, Hanspeter joined Harvard where he has made significant advances in the application of visualization and high-performance computing to problems in computational biology, appearance modeling, computational astronomy, and computer vision.

The IEEE VGTC is pleased to award Dr. Hanspeter Pfister the 2010 Visualization Technical Achievement Award.

Biography

Hanspeter Pfister is Gordon McKay Professor of the Practice in the School of Engineering and Applied Sciences at Harvard University. His research lies at the intersection of visualization, computer graphics, and computer vision. It spans a wide range of topics, including scientific visualization, point-based graphics, appearance acquisition, GPU computing, and 3D displays.

In 1991 he received an M.S. in Electrical Engineering from ETH Zurich, Switzerland. After receiving a U.S. Fulbright Scholarship he moved to Stony Brook University, where he did his graduate work on real-time architectures for volume visualization under Prof. Arie Kaufman. His 1996 Ph.D. dissertation laid the foundation for the VolumePro system that he would continue to develop commercially for the following three years.

Prior to his appointment at Harvard, Dr. Pfister worked for 11 years at Mitsubishi Electric Research Laboratories (MERL) where he was most recently Associate Director and Senior Research Scientist. He was the chief architect of VolumePro, Mitsubishi Electric's award-winning real-time volume rendering hardware for PCs. During his time at MERL he made many pioneering contributions that led to over 40 US patents and more than 90 peer-reviewed publications and book chapters, including 18 ACM SIGGRAPH papers, the premier forum in Computer Graphics. He is coeditor of the first textbook on Point-Based Computer Graphics, published by Elsevier in 2007.

Dr. Pfister has been teaching introductory and advanced graphics and visualization courses since 1999 at Harvard and the Harvard Extension School.

His awards include a U.S. Government Fulbright Grant, 1991; Swiss Academy of Technical Sciences Fellowship, 1992; ABB Switzerland Research Fellowship, 1991 and 1992; The Jack Heller Award, SUNY Stony Brook, 1994; Mitsubishi Electric Presidents Award, 2000; Distinguished Teaching Performance Award, Harvard Extension School, 2002-2004; Harvard Extension School Dean's Thesis Prizes in 2005, 2007, and 2009; and the 2009 Petra T. Shattuck Excellence in Teaching Award.

Dr. Pfister has served on the papers committees of all major visualization and graphics conferences, including ACM SIGGRAPH, IEEE Visualization, EuroVis, Eurographics, Pacific Graphics, and many others. He has been the co-organizer of various international symposia and was conference chair of IEEE Visualization in 2002. He is papers cochair of IEEE Visualization 2009/10, EuroVis 2011/12, and will be papers chair of ACM SIGGRAPH 2012. He is serving on the editorial boards of various journals, including as associate editor of IEEE Transactions on Computer Graphics and Visualization (TVCG), ACM Transactions on Graphics (TOG), and the Journal of Graphics, Games, and GPU Tools (jgt).

Dr. Pfister previously chaired and is currently a director of the IEEE Visualization and Graphics Technical Committee. He was Executive Committee Member of the IEEE Computer Society Technical Activities Board and Member of the IEEE Computer Society Conferences and Tutorials Board. He has served on review panels for the NSF and DOE and is coeditor of the the 2006 NIH/NSF Visualization Research Challenges Report. For his numerous service activities he received the IEEE Meritorious Service Award in 2009. He is a senior member of the IEEE Computer Society, and a member of ACM, ACM SIGGRAPH, and the Eurographics Association.

Award Information

The IEEE VGTC Visualization Technical Achievement Award was established in 2004. It is given every year to recognize an individual for a seminal technical achievement in visualization. VGTC members may nominate individuals for the Visualization Technical Achievement Award by contacting the awards chair, Bill Lorensen, at vgtc-vis-awards@vgtc.org.