The 2006 Visualization Technical Achievement Award

Thomas Ertl

This 2006 Visualization Technical Achievement Award goes to Thomas Ertl, University of Stuttgart, in recognition of his research in volume graphics, flow visualization, and the efficient use of graphics hardware for interactive visualization.

Thomas Ertl has created internationally visible visualization research groups, first at the University of Erlangen and now at the University of Stuttgart, that have published numerous influential papers at the IEEE Visualization conference. His work spans volume graphics and visualization, flow visualization and feature extraction, hierarchical and adaptive algorithms, large datasets and interactive steering, and parallel and hardware accelerated graphics. Thomas Ertl is an organizer of the Dagstuhl seminars on Scientific Visualization, member of the steering committee of the IEEE Visualization Conference and of the Eurographics Working Group on Data Visualization, and Editor in-Chief of the IEEE Transactions on Visualization and Graphics (TVCG). The IEEE VGTC is pleased to award Thomas Ertl the 2006 Visualization Technical Achievment Award.

Thomas Ertl

University of Stuttgart

Award Recipient 2006

Biography

Thomas Ertl is a full Professor of Computer Science at the University of Stuttgart, Germany and the Director of the Visualization and Interactive Systems Institute (VIS) and the newly founded Visualization Institute of the University of Stuttgart (VISUS). He received a MS in Computer Science from the University of Colorado at Boulder in 1982 and a PhD in Theoretical Astrophysics from the University of Tuebingen, Germany in 1988.

In 1994 Tom became an Associate Professor of Computer Graphics and Visualization at the University of Erlangen and he started to build up a research group focusing on engineering and medical applications of visualization and exploiting advanced texturing functionality of graphics hardware. In 1997 his group made its entry to the IEEE Visualization Conference and published more than 30 papers at Vis and VolVis during the following 10 years covering volume graphics and visualization, flow visualization and feature extraction, hierarchical and adaptive algorithms, large datasets and interactive steering, parallel and hardware accelerated graphics.

In 1999 Tom moved to the University of Stuttgart and continued to expand the VIS group. The extended research scope at the Institute of Visualization and Interactive Systems Institute also includes non-photorealistic rendering, graphics for mobile devices and large displays, and human computer interface aspects (especially graphics for the blind). Prominent visualization research examples are the IEEE Visualization 2000 paper on "Hardware-accelerated volume and isosurface rendering based on cell-projection" (together with S. Roettger and M. Kraus), the EG/SIGGRAPH Graphics Hardware 2001 paper on "High-quality pre-integrated volume rendering using hardware-accelerated pixel shading" (together with K. Engel and M. Kraus), and the IEEE Visualization 2003 paper on "A Texture-Based

Framework for Spacetime-Coherent Visualization of Time-Dependent Vector Fields" (together with D. Weiskopf and R. Erlebacher). Since 2006 Tom is building up a new visualization research center at the University of Stuttgart (VISUS) which will especially focus on applications from simulation technology, systems biology, and molecular dynamics.

Tom is a coauthor of more than 250 scientific publications and he served as a reviewer for most of the conferences and journals in the field and for many funding agencies. He has been a member of numerous paper committees (e.g. ACM SIGGRAPH, Eurographics), a papers or program co-chair for several conferences (e.g. IEEE Visualization, EG/IEEE EuroVIS, IEEE Volume Visualization, IEEE/EG Volume Graphics, EG/SIGGRAPH Graphics Hardware) and an organizer of the Dagstuhl seminar on Scientific Visualization. Tom is a member of the steering committee of the IEEE Visualization Conference and of the Eurographics Working Group on Data Visualization. Since 2007 Tom is Editor-in-Chief of the *IEEE Transactions on Visualization and Graphics* (*TVCG*) and Vice President of 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 http://tab.computer.org/vgtc/.