2007 ACM SIGGRAPH Awards

Steven A. Coons Award

Nelson Max

ACM SIGGRAPH presents Dr. Nelson Max with the Steven A. Coons Award for Outstanding Creative Contributions to Computer Graphics. We present this award in recognition of his work in pioneering scientific visualization, his deep technical contributions, and of his generous participation in the encouragement and stimulation of ideas and intellectual exchange in computer graphics.

Nelson Max received his Ph.D. in mathematics in 1967 under the direction of Herman Gluck at Harvard. He is currently a professor of computer science at the University of California at Davis, and a computer scientist at Lawrence Livermore National Laboratory. In the early 1970s, he produced two films, *Space Filling Curves* and *Turning the Sphere Inside Out*, that profoundly influenced a generation of young scientists, helping some of them see the wonders of mathematics, and helping others see the potential of computer graphics to convey deep ideas. What few realized then was that scientific visualization required both aesthetic choices and deep mathematical understanding to work well, because Max's films made it look easy.

A few years later, his film *Carla's Island* further demonstrated not only the new power of computer graphics, but Nelson's combined visual and mathematical sensibility. Trigonometric functions and numerical approximations became water waves reflecting moonlight and endlessly lapping at the shores of the island. The film conveyed a tranquil mood that was universally admired.

Nelson has produced a remarkable body of research. He has steadily published papers over the last four decades in SIGGRAPH, the major visualization conferences, graphics journals and journals in the areas that use his visualization methods. Most of his papers are on topics motivated by his interests in visualization, including many photorealistic rendering topics (shadows and penumbras, radiosity, visibility algorithms, sampling, antialiasing, and motion blur), hierarchical modeling and rendering, volume rendering, and a wide array of topics in volume visualization. He has also published on topics such as cloud modeling and rendering, and atmospheric illumination and shadowing.

Those of us who have had the privilege of attending a conference with Nelson know that he's always ready with a question for any speaker; we know how often that question is one that will provoke the speaker to realize that there's even more to the paper than he or she realized, and to see a whole new direction for follow-up work. Those of us who have had the privilege of having a paper reviewed by Nelson – you always knew it was Nelson, because the paper came back with extensive markup, always in pencil, and all too often asking subtle questions about the very things you were hoping to hide from the reviewers! – had a special treat. The paper may have been accepted or rejected, but it was always made better by Nelson's comments. Serving on a papers committee with him was an education as well: one learned not only how to read a paper carefully, but how to speak in favor of it, and how to treat even weak work with respect and encouragement. The standard Nelson sets is one of the reasons why SIGGRAPH reviewing is so good.

For his foundational work in scientific visualization, classical and volume rendering, and modeling, and for his contributions to the intellectual life and character of our field, we are honored to present the Steven A. Coons Award to Nelson Max.

Previous Award Recipients

2005 Tomoyuki Nishita
2003 Pat Hanrahan
2001 Lance J. Williams
1999 James F. Blinn
1997 James Foley
1995 José Luis Encarnação
1993 Ed Catmull
1991 Andries van Dam
1989 David C. Evans
1987 Donald P. Greenberg
1985 Pierre Bézier
1983 Ivan E. Sutherland