

ACM SIGGRAPH Distinguished Artist Award for Lifetime Achievement in Digital Art

Lillian Schwartz



Lillian F. Schwartz, photographed by unknown photographer at Bell Telephone Laboratories, Murray Hill, New Jersey.

The 2015 ACM SIGGRAPH Lifetime Achievement Award in Digital Art is awarded to Lillian Schwartz, who is best known for her pioneering work in the use of computers in art, including graphics, film, video, animation, special effects, virtual reality and multimedia, and computer-aided analysis of art and architecture.

Schwartz began her computer art career as an offshoot of her practice of merging art and technology. This culminated in the selection of her kinetic sculpture *Proxima Centauri* by the Museum of Modern Art for its epoch-making 1968 Machine Exhibition. Her work was recognized for its aesthetic success and was the first in this medium to be acquired by the Museum of Modern Art.

Her very early pioneering work in computer art took place in the 1970s at AT&T Bell Laboratories, IBM's Thomas J. Watson Research Laboratory, and Lucent Technologies Bell Labs Innovations, where she worked in a team of important creative researchers. Here she developed effective techniques of motion-graphics-based film and video art that could be viewed in both 2D and 3D.

Through her ground-breaking work, Schwartz helped to establish computer art as a viable field of endeavor. She also contributed to the scientific research areas of visual and color perception and sound. Her efforts have led to the use of the computer in the philosophy of art and made an impact on the history of art. She devised databases to analyze the choices of artists such as Picasso and Matisse regarding color palettes, structures of paintings, sculptures, and graphics used, thus investigating the creative process itself.

Schwartz's contributions to electronic art analysis and restoration have been recognized specifically in relation to her work with colleagues to construct 3D models of Italian Renaissance painting and fresco. This includes a model of the Refectory at Santa Maria Grazie to study the perspective construction of Leonardo's *Last Supper* and, more recently, a finite element model of the Leaning Tower of Pisa to understand its structure and aid in its preservation. Such efforts have proved invaluable to art historians and restorers.

Schwartz's education began immediately after World War II, when she studied Chinese brushwork with Tshiro in Japan and, later, fine art in the United States. But she always had a keen interest in the combination of art with technology and science. However, although fascinated with the technological aspects of the computer as a new approach to creating art, Schwartz was most concerned with the finished product—the permanent work of art. In her early computer work, due to the technological limitations of early programs, she enhanced her work with more traditional materials, including silkscreen and film. In time, the technology advanced to the degree that her digital computer work could be viewed in its finished state on a high-quality monitor and printed out with the intensity and nuances of color desired. She continues to experiment and to push the medium to achieve the results for which she is striving.

Schwartz has always had close ties to the academic community, having been a visiting academic at a number of leading universities throughout the world. She has represented the United States as guest lecturer in over two dozen countries, from the Royal College of Art in London to the People's Republic of China. Schwartz has received numerous fellowships and honors, most recently the Computerworld Smithsonian Awards in three categories. Her work has been in great demand internationally for museums and festivals. She has exhibited and won awards at the Venice Biennale, Zagreb, Cannes, the National Academy of Television Arts and Sciences; she received Emmy nominations and an award in the 1980s. Her work has been exhibited throughout the world and is held in both private and public collections. Her 1992 book, *The Computer Artist's Handbook*, influenced the subsequent generation of computer artists. She has been the subject of numerous articles, books and television news and documentary programs. She is a Fellow in the World Academy of Art & Science.

ACM SIGGRAPH is honored to recognize Lillian Schwartz as an important pioneer in the incubation and practice of computer and digital arts, art analysis, and the field of virtual reality.

Sue Gollifer

CHAIR
THE DISTINGUISHED ARTIST AWARD FOR LIFETIME ACHIEVEMENT IN DIGITAL ART