

BIOGRAPHY

Alan Norton

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Dr. Norton was born and grew up in Utah. He attended the University of Utah where he received his B.A. degree in mathematics in 1968. He attended Princeton University where in 1976 he received his Ph.D. degree in mathematics, on the subject of moduli of complex vector bundles.

For the next few years he worked on mathematics research and taught at the University of Utah and Hamilton College, before developing an interest in computer graphics through a consulting position at Evans and Sutherland Computer Co. In 1980 he joined the IBM Thomas J. Watson Research Center in Yorktown Heights, NY, working as a visiting scientist with IBM Fellow B. Mandelbrot on the computation and visualization of fractals. He developed algorithms for rendering various fractals, and discovered a class of 3-dimensional fractal shapes defined by iteration of quaternion polynomials. Images of these fractals have been widely reproduced in technical and artistic publications.

In 1982 Norton became a permanent member of the IBM Research staff, with initial assignment to work on the investigation of architectures for parallel processing. That study led to the founding in 1984 of RP3, the Research Parallel Processing Project. He then led a number of research studies in highly parallel processing; developing languages, algorithms, and performance analyses for RP3, while still maintaining an active research presence in computer graphics.

When RP3 was nearing completion in 1987, Norton established a project in computer animation research. That project is currently applying physical simulation to drive computer animation, deriving methodologies, systems, and user interfaces for computer graphics animation. The latest result of this effort is the video "Topsy Turvy," shown at Siggraph '89, a simulation-driven fantasy in which the Utah teapot has an unfortunate misadventure.