

Those who are about to receive doctoral degrees at this ceremony may be cheered to know that dissertations are sometimes a great deal more than union cards. The thesis that secured Ivan Sutherland his Ph.D. from the Massachusetts Institute of Technology in 1963 is generally credited with originating much of modern computer graphics, and he himself with being the father of that artistic yet practical subject.

The pursuit of practical science has been for him a consistent goal. A native of Nebraska, he took bachelor's and master's degrees in electrical engineering at Carnegie-Mellon University and the California Institute of Technology respectively before moving to MIT for his doctorate. After army service and a stint at Harvard he joined the faculty at the University of Utah, where the computer science department soon became known as a pioneering one. Next he spent three years at the Rand Corporation, and in 1976 accepted the chairmanship of the Computer Science department at Cal Tech, which is still his academic base.

No less important than his research, however, has been his role in making its fruits widely available. On the basis of Sketch Pad, the system developed in his doctoral work, he and a colleague founded a corporation, Evans and Sutherland, which quickly became one of the leading manufacturers of computer graphics systems. At Cal Tech he became instrumental in moving the American academic community into the new area of very-large-scale integrated circuitry, one that had previously been open only to industry. This thrust -- exemplified clearly in the vital matter of the display of medical images like CAT-scans -- has also been an important element in our own microelectronic effort in North Carolina.

Ivan Sutherland has been honored by awards from the National Academy of Engineering and the Association for Computing Machinery and by election to the National Academy of Sciences. Today we add our recognition of his pioneering technical work, entrepreneurial achievement, and public service through this degree of Doctor of Science.