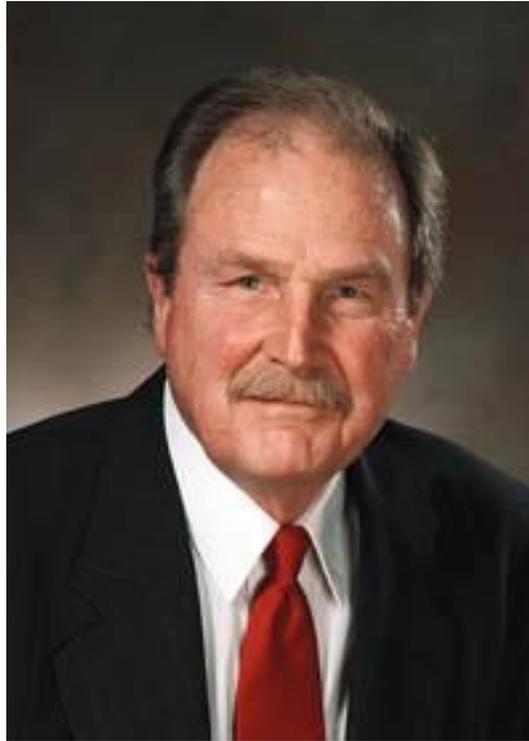


David A. Huffman

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David Huffman Photo: Don Harris

David Albert Huffman (August 9, 1925 – October 7, 1999) was a pioneer in computer science, known for his Huffman coding.^{[1][2]} He was also one of the pioneers in the field of mathematical origami.^[3] David Huffman died at the age of 74, ten months after being diagnosed with cancer.

Education

Huffman earned in 1944 his bachelor's degree in electrical engineering from Ohio State University, then served two years as an officer in the United States Navy. He returned to Ohio State to earn in 1949 his master's degree in electrical engineering. In 1953, he collected his Doctor of Science in electrical engineering at the Massachusetts Institute of Technology (MIT), with the thesis *The Synthesis of Sequential Switching Circuits*, advised by Samuel H. Caldwell.^{[1][2][4]}

Career

Huffman joined the faculty at MIT in 1953. In 1967, he joined the faculty of University of California, Santa Cruz and helped found its Computer Science Department, where he served as chair from 1970 to 1973. He retired in 1994.^[2]

Awards and honors

- 1999: The IEEE Richard W. Hamming Medal.^[5]
- 1998: A Golden Jubilee Award for Technological Innovation from the IEEE Information Theory Society, for "*the invention of the Huffman minimum-length lossless data-compression code*".^[6]

- 1981: Charter recipient of the Computer Pioneer Award from the IEEE Computer Society.^[7]
- 1973: The W. Wallace McDowell Award from the IEEE Computer Society.^[8]
- 1955: The Louis E. Levy Medal from the Franklin Institute for his doctoral thesis on sequential switching circuits.^{[4][9]}

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- 3 Lang, Robert. "Origami Science Links".
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- 5 "IEEE Richard W. Hamming Medal Recipients" (PDF). IEEE. Retrieved July 12, 2011.
- 6 "Golden Jubilee Awards for Technological Innovation". IEEE Information Theory Society. Retrieved July 14, 2011.
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October 11, 1999

Eminent UCSC computer scientist David Huffman dies at age 74

'Huffman Codes' used in fax machines, modems, other applications involving the compression of data

By [Tim Stephens](#) and [Jim Burns](#)

David A. Huffman, the founding faculty member of the Computer Science Department and a pioneer in the field, died at a local hospital on Thursday, October 7, after a 10-month battle with cancer. He was 74.

"Besides being a dear friend and a great colleague, David was one of the grand men in his field," said Patrick Mantey, dean of UCSC's Jack Baskin School of Engineering. "He made major contributions not only to the fields of computing and information science, but also to the development of the School of Engineering at UCSC, so this is a great loss."

Huffman is probably best known for the development of the Huffman Coding Procedure, the result of a term paper he wrote while a graduate student at the Massachusetts Institute of Technology (MIT). "Huffman Codes" are used in nearly every application that involves the compression and transmission of digital data, such as fax machines, modems, computer networks, and high-definition television.

Huffman joined the faculty at MIT in 1953. In 1967, he came to UC Santa Cruz as the founding faculty member of the Computer Science Department. He played a major role in the development of the department's academic programs and the hiring of its faculty, and served as chair from 1970 to 1973. He retired in 1994, but remained active until recently as an emeritus professor, teaching information theory and signal analysis courses.

Huffman made important contributions in many different areas, including information theory and coding, signal designs for radar and communications applications, and design procedures for asynchronous logical circuits. As an outgrowth of his work on the mathematical properties of "zero curvature" surfaces, Huffman developed his own techniques for folding paper into unusual sculptured shapes.

Huffman's accomplishments earned him numerous awards and honors. Most recently, he received the 1999 Richard W. Hamming Medal from the Institute of Electrical and Electronics Engineers (IEEE) in recognition of his exceptional contributions to information sciences. He also received the Louis E. Levy Medal of the Franklin Institute for his doctoral thesis on sequential switching circuits, a Distinguished Alumnus Award from Ohio State University, and the W. Wallace McDowell Award. He was a charter recipient of the Computer Pioneer Award from the IEEE Computer Society, and he received a Golden Jubilee Award for Technological Innovation from the IEEE Information Theory Society in 1998.

A native of Ohio, Huffman earned his bachelor's degree in electrical engineering from Ohio State University at the age of 18. He then served in the U.S. Navy as a radar maintenance officer on a destroyer that helped to clear mines in Japanese and Chinese waters after World War II. He subsequently earned his master's degree from Ohio State and his doctorate from MIT, also in electrical engineering.

David Huffman is survived by his wife, Marilyn Huffman, of Santa Cruz; his former wife, Jane Ayres Huffman; their two daughters, Elise and Linda Huffman, both of Santa Cruz; their son, Stephen Huffman, of Santa Cruz; a son-in-law, Jeff Grubb, of Santa Cruz; a stepdaughter, Marti Homer Kehlet, of Sacramento, her husband, Daret, and their daughter, Karsen; a stepson, Darin Homer of Prunedale, his wife, Jane, and their son, Ryan; and a brother, Donald Huffman, of Westerville, Ohio, his wife, Jean, and their family.

At the family's request, contributions in David Huffman's name may be made to the Hospice Caring Project of Santa Cruz County or the American Cancer Society, Santa Cruz Chapter.