Gerard Salton

Born May 8, 1927, Nuremberg, Germany; longtime leader in practical information retrieval.

Education: BA, Brooklyn College, 1950; MA, Brooklyn College, 1952; PhD, applied mathematics, Harvard University, 1958.

Professional Experience: instructor to assistant professor, Harvard University, 1958-1965; Cornell University, Computer Science: associate professor, 1965-1967, professor, 1967-present, department chairman, 1971-1977.

Honors and Awards: Guggenheim Fellow, 1963; first ACM-SIGIR Award for Contributions to Information Retrieval, 1983; Humboldt Foundation Senior Scientist Award, 1988; Award of Merit, ASIS, 1989.

Salton was the last of Howard Aiken's PhD students at the Harvard Computation Laboratory in the 1950s, and he was one of the first programmers for the Harvard Mark IV computer. He became interested in natural-language processing, especially in information retrieval, and in the early 1960s he designed the well-known SMART retrieval system which, for some 30 years, has been a test-bed for the evaluation of large numbers of information retrieval techniques and strategies. Under the SMART umbrella, many well-known information retrieval concepts were introduced, including the vector processing model replacing the standard Boolean processing systems, sophisticated statistical term-weighting schemes that distinguish concepts important for text representation from other more marginal concepts, and the widely used "relevance feedback" technique for query optimization.

From 1965 to 1968, Salton was editor-in-chief of *Communications of the ACM,* and from 1969 to 1970, editor-in-chief of the *Journal of the ACM.* Between 1972 and 1978, he served on the ACM Council as Northeast regional representative. Currently, Salton is an editor of *Information Systems* and of the *ACM Transactions on Database Systems.* He was a Guggenheim Fellow in 1963 and has received the first ACM SIGIR Award for contributions to information retrieval in 1983, as well as a Humboldt Foundation Senior Scientist Award in 1988 and the ASIS Award of Merit in 1989. He has published a large number of articles and several books on information retrieval and related areas. The most recent text is *Automatic Text Processing* (Addison-Wesley, 1989).

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Significant Publications

Salton, Gerard, *Automatic Information Organization and Retrieval*, McGraw-Hill, New York, 1968.

Salton, Gerard, ed., *The SMART Retrieval System: Experiments in Automatic Document Processing*, Prentice-Hall, Englewood Cliffs, NJ., 1971.

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Salton, Gerard, and Michael J. McGill, *Introduction to Modern Information Retrieval*, McGraw-Hill, New York, 1983.

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Salton, Gerard, *Automatic Text Processing: The Transformation, Analysis, and Retrieval of Information by Computer*, Addison-Wesley, Reading, Mass., 1989.

Salton, Gerard, "Developments in Automatic Text Retrieval," *Science*, Vol. 253:5023, 1991, pp. 974-980.

UPDATES

Salton was born Gerhard Anton Sahlmann on 8 March 1927 in Nuremberg, Germany. He received a Bachelor's (1950) and Master's (1952) degree in mathematics from Brooklyn College. Gerry Salton died 28 August 1995 (MRW, 2012)

Portrait added (MRW, 2013)