Dec. 23, 2015

Renowned computer scientist Charles Bachman (’48) awarded honorary doctor of engineering

The man who has been at the forefront of computer science and information systems development for 65 years was awarded an honorary doctor of engineering from Michigan State University during commencement ceremonies on Dec. 18.

Spartan alumnus Charles W. Bachman, who earned a bachelor’s degree in the MSU College of Engineering in 1948, was honored during MSU’s advanced degree ceremony in the Breslin Center.

Bachman, 91, developed the first generic database management system and rode the introduction of large disk storage technology into modern business systems.

After earning degrees MSU and the University of Pennsylvania, he launched a broad industrial career consisting of 10 years at Dow Chemical Co., 10 years at General Electric Co. and 10 years at Honeywell Information Systems.

The last five years at Honeywell were heavily loaded with work as the chairperson of the International Standards Organization’s X97/Open Systems Interconnection. That committee created the seven-layer networking model, which standardized communication functions among systems.

In 1983, Bachman founded Bachman Information Systems that grew to 350 employees. They created software tools to automate data structure diagrams and introduced forward and reverse engineering.

Bachman’s work has resulted in many awards including the 1973 A.M. Turing Award from the Association for Computing Machinery and the 2012 National Medal for Technology and Innovation from President Barack Obama. He was also named a fellow of the Computer History Museum in 2015.

Honorary Degree Citation: CHARLES WILLIAM BACHMAN
You have been at the forefront of computer science for more than 65 years, serving as an industrial researcher, developer, and manager for some of the most well known companies in the world.

From your service in World War II, where you were first exposed to computers for aiming 90 mm guns, to your recent work in helping preserve the history of software development, you have been an integral player in the industry.

You are best known for your conceptual work with databases, having developed the Bachman Diagram, used to design a relational “logical” architecture for storing data.

You developed one of the first database management systems, then you developed the first multiprogramming network access to your database system.

One of your most practical and far-reaching contributions derived from your leadership as chair of the Open Systems Interconnection (OSI) subcommittee of the International Organization for Standardization (ISO). That committee created the seven-layer networking model for Internet communication, which standardized communication functions among systems, without regard to their underlying internal structure.

Your work has earned you many awards, including the Turing Award from the Association for Computing Machinery (ACM) and, most recently, the National Medal of Technology and Innovation from President Barack Obama. Since your retirement, you have generously volunteered to help record the history of early software development and have contributed an oral history to the Institute of Electrical and Electronics Engineers.

As an alumnus of the MSU College of Engineering, your exemplary information technology success have added greatly to it stature. I am pleased to award you the honorary degree of Doctor of Engineering from Michigan State University.
Dec. 18, 2015
Michigan State University

Related Website: President Obama presents national medal to Charles Bachman
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