Norman I. Badler, Computer & Information Science

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Norman Badler

Norman I. Badler, an emeritus professor in the department of computer and information science (CIS) in the School of Engineering & Applied Science, died on May 15. He was 77.

Dr. Badler earned a bachelor's degree in creative studies (mathematics) from the University of California, Santa Barbara in 1970, then a PhD in computer science in 1975 and a master's degree in mathematics in 1977, both from the University of Toronto.

In 1974, while earning his PhD, Dr. Badler joined the faculty of Penn's Moore School of Electrical Engineering, which was later integrated into Penn Engineering, as an assistant professor in CIS. Over a career that lasted nearly fifty years, he went on to serve in multiple leadership roles at Penn, including serving as chair of CIS from 1990 to 1994 and as associate dean for academic affairs in the School of Engineering & Applied Science from 2001 to 2005. He held two endowed professorships at different points in his tenure at Penn: the Cecilia Fitler Moore Professorship from 1990 to 1994, and the Andrew S. and Debra Rachleff Professorship from 2013 until his retirement and assumption of emeritus status in 2021. He joined Penn's 25 Year Club in 1999.

In 1998, Dr. Badler launched Penn Engineering's digital media design undergraduate major, one of the first engineering-emphasis degrees devoted to computer graphics. He was also the founding director of the Center for Human Modeling and Simulation, which under his leadership became internationally recognized for its groundbreaking work on virtual humans, embodied agents, and simulation technologies that have impacted industries from animation and gaming to military training and human-computer interaction.

Dr. Badler leaves behind a legacy in the fields of computer graphics, human modeling, and artificial intelligence. His research helped define how computers could simulate realistic human motion and behavior, making him a seminal figure in the evolution of computer animation and interactive virtual environments. His work laid the foundation for many of the technologies in visual computing.

Throughout his career, he served as the senior co-editor for the journal *Graphical Models* (for 20 years) and on the editorial boards of several other journals; he also authored several books, including *Simulating Humans: Computer Graphics Animation and Control* (1993) and, most recently, *On Raising a Digital Human: A Personal Evolution* (2024), a collection of lecture transcriptions that served as a memoir. He was active in the Association for Computing Machinery's Special Interest Group on Computer Graphics and Interactive Techniques (ACM SIGGRAPH), which named him to its 2021 academy class, considered one of the highest honors in the field of computer graphics.

"Dr. Badler's legacy will continue through the work of his students, the ongoing impact of his research, and the enduring strength of the academic programs he helped build at Penn Engineering," said his department in a tribute.