



A. Alan B. Pitske

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1933–2000

Elected in 1985

“For the design and development of simulation languages and network techniques and their applications in improving industrial productivity.”

BY RALPH L. DISNEY AND JAMES R. WILSON

SOMETIME IN THE EARLY 1960s, I heard from a young professor at Arizona State University (ASU) about a not very sophisticated article I had written on congestion theory and materials handling. Alan Pritsker, my correspondent, had just begun work on the modeling of queuing networks and wanted to share ideas. I, of course, was happy to comply. Thus began an association I treasured for nearly 40 years. When I heard of his untimely death on August 24, 2000, at the age of 67, I was shocked.

A. Alan B. Pritsker was born in Philadelphia, Pennsylvania, on February 5, 1933, and lived there until he left for college. He attended Central High School, where he starred in basketball and soccer and received the school’s student-athlete award in 1950. He entered Columbia University as a student-athlete until, as he said, he grew weary of sitting on the bench and decided to become exclusively a student. He received his B.S. in electrical engineering in 1955 and his M.S. in industrial engineering in 1956, both from Columbia. After graduation, he was hired at Battelle Memorial Institute (now Battelle Institute) in Columbus, Ohio; at the same time, he started a part-time Ph.D. program at Ohio State University under Jack Mitten. In 1961, he graduated with a Ph.D. in industrial engineering and operations research. His dissertation was titled “The Optimal Control of Discrete Stochastic Processes.”

After graduation, Alan moved to ASU as assistant professor of industrial engineering; he was also a consultant to the RAND Corporation. He remained at ASU until 1969, when he became a professor of industrial and systems engineering at Virginia Polytechnic Institute and State University. In 1970, he moved to Purdue University, where he held professorships in the School of Industrial Engineering and the School of Aeronautical, Astronautical, and Engineering Science. He was also director of the Center for Large-Scale Systems (LSS), an interdisciplinary academic program involving eight departments. The goal of LSS was to reform engineering education to address societal needs directly; the role of engineering in service to society was a recurrent theme throughout the rest of Alan's career.

In 1973, still a professor of industrial engineering at Purdue, Alan and two graduate students established Pritsker and Associates, Inc., a major focus of his energy for the rest of his life. Alan became adjunct professor in 1981 but continued to teach courses at Purdue until he retired in 1998. Over a period of three decades, Pritsker and Associates developed at least 10 well-known commercial software packages, such as GASP, Q-GERT, SLAM, TESS, FACTOR/AIM, and AweSim, which are legendary in the field of discrete and combined discrete-continuous simulation. An extensive discussion of significant applications of these simulation packages can be found in Alan's professional autobiography, *Papers, Experiences, Perspectives* (Systems Publishing Corporation, 1990), and two excellent reviews of his work co-authored by James R. Wilson (one of Alan's many former students) and David Goldsman ("Alan Pritsker's Multifaceted Career: Theory, Practice, Education, Entrepreneurship, and Service," *IIE Transactions* 33(3) 139–147; and "In Memoriam: A. Alan B. Pritsker (1933–2000)" *OR/MS Today* 27(5), available online at: <http://www.lionhrtpub.com/orms/orms-10-00/pritsher.html>).

Alan was president of Pritsker and Associates from 1973 to 1986 and chairman of the board and CEO from 1987 to 1989. Beginning in 1986, he was also chairman of the board of FACTROL, Inc. When the two companies merged in 1989 to form Pritsker Corporation, Alan was chair and CEO until his retirement in 1998.

During the 1990s, Alan and Pritsker Corporation worked on a federally mandated study with the United Network for Organ Sharing (UNOS) to evaluate the allocation of liver transplants based on a national waiting list ranked by sickest-patients first. The results of this study showed that an allocation procedure based on a national waiting list would result in many more deaths than an improved version of the existing procedure, as revealed by comprehensive experimentation with the UNOS Liver Allocation Model (ULAM). In June 1998, Alan presented the results of the study in congressional hearings; the ULAM-based transplant-allocation procedure was subsequently adopted by UNOS.

When Alan was elected to the National Academy of Engineering (NAE) in 1985, he was only the second industrial engineer to be so honored. He served NAE as chair of the Peer Review Committee for Section 8, Industrial, Manufacturing and Operational Systems Engineering (IMOS); member of the Committee on Membership; chair of the IMOS Section; and various other committees, boards, and panels.

Alan was a member of the board of directors of the Winter Simulation Conference (1970–1973 and 1981–1987) and a co-founder of the Operations Research Division (1968) and Systems Engineering Conference (1973) of the Institute of Industrial Engineers (IIE). For service to IIE and for contributions to the welfare of mankind, Alan was elected Fellow in 1978 and was awarded the Frank and Lillian Gilbreth Industrial Engineering Award in 1991, the highest honor awarded by that institute. He was an active member of the Institute for Operations Research and the Management Sciences Simulation Society, which presented him with the Distinguished Service Award (1991) and the Lifetime Professional Achievement Award (1999), the highest award given by that organization.

In addition, Alan served on many advisory panels for commercial, government, and professional organizations, including the National Science Foundation, National Research Council, and colleges of engineering at several major universities. In fact, his many contributions to the engineering profession over a period of more than four decades can only be suggested in this brief summary.

Alan wrote 12 books on systems engineering and computer modeling and simulation and 15 chapters in handbooks of industrial engineering, production systems, and scheduling of manufacturing operations. He also published more than 90 research papers in prestigious journals in his field. He was awarded honorary doctor of science degrees from ASU in 1992 and Purdue University in 1998.

Alan is survived by his wife, Anne Pritsker; his children, Caryl DuBrock, Pamela Poteet, Kenneth Pritsker, and Jeffrey Pritsker; and five grandchildren.

ACKNOWLEDGMENT

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