SETH BONDER

1932–2011

Elected in 2000

“For technical and organizational leadership in military and civilian operations research.”

BY STEPHEN POLLOCK AND DAVID MADDOX

SETH BONDER, a respected, admired, and valuable member of the operations research community, died in Ann Arbor, Michigan, on October 29, 2011, at the age of 79. He served many roles—exemplary analyst, innovative applied researcher, entrepreneur, educator, philanthropist, mentor, and critical advocate for his profession.

Seth Bonder was born in the Bronx, New York, in 1932. His parents had immigrated from Russia and worked in the garment district. By his own admission, Seth took little interest in education during his youth and did not do well academically. Instead, he became an accomplished pool, billiards, and basketball player in the South Bronx streets. He enrolled in the City College of New York to play basketball, but left soon after as an innocent victim of its 1951 point-shaving scandal. After driving a truck in New York for a while, he enlisted in the Air Force and took advantage of a program that allowed enlisted men to apply to flying school. He received his commission and served as a pilot in the Air Force from 1952 through 1956. During his service it became clear that a college degree would be necessary if he were to have a meaningful career, so he left the Air Force and entered the University of Maryland in 1957. After a rocky start, he excelled academically and showed his entrepreneurial leanings by starting a freshman tutoring service, creating and participating in a flying club, and driving a taxicab at night in the District of Columbia and Prince Georges County, Maryland.
Upon obtaining a degree in mechanical engineering from Maryland in 1960, and after a short stint at the Westinghouse Air Arm Division in Baltimore, Seth Bonder enrolled at the Ohio State University as its first systems fellow. He was introduced to military operations research via a project meant to determine requirements for new armored systems. He identified two unresolved problems that he referred to as “interesting”: determining the feasibility of the requirements (could the system actually be built?) and the operational effectiveness of the system (would the resulting system be of any value?). He wrote a proposal to study these questions and—as a graduate student—landed a contract to run a multiyear research program in which he was responsible for the work product of both faculty and graduate students. He received his PhD in industrial engineering (operations research) from Ohio State in 1965.

From 1965 through 1972, as a faculty member in the Department of Industrial Engineering at the University of Michigan, Seth Bonder developed the capabilities and processes required of an operations analyst and created unique ways to teach and mentor these analysts. Throughout the rest of his professional career he was an adjunct professor at Michigan—something of which he was exceedingly proud (except for exactly one day during each football season).

In 1972, at the urging of the Army’s assistant vice chief of staff, Seth Bonder founded, and then headed for the next 32 years, Vector Research, Inc. (VRI), an operations research consulting firm. VRI grew over the next three decades to eventually employ over 400 professionals in Ann Arbor, Texas, and Washington, DC. Seth and his colleagues at VRI developed a variety of novel mathematical models to represent military operations and—most important to him—used the insights from these models to inform decision making about national security issues at the highest levels. In 1990, he received the Award for Patriotic Civilian Service from the Secretary of the Army.

From 1995 through 2001 Seth Bonder led VRI in a successful effort to convince private firms, as well as federal and state
agencies, to invest in operational and systems engineering approaches to address increasingly critical problems inherent in the delivery of health care. In 2001 VRI was acquired by ERIM (the former Willow Run Laboratory) and the merged entity was renamed the Altarum Institute. While serving on Altarum’s board of directors, Seth Bonder maintained his commitments to the profession and community. He founded the Bonder Group and contributed to, led, and participated in studies sponsored by the National Academies, serving on the NRC Board on Army Science and Technology as well as the Army Science Board and a variety of academic and healthcare boards, and provided consultant services to the Department of Defense up until his untimely death.

One critical hallmark of Seth Bonder’s unique and far-reaching contributions to operations engineering was his insistence on addressing real problems using application-driven theoretical developments. In the national security domain, his friendships with decision makers reinforced this concern, and these provider-client interactions evolved into close professional and personal relationships based on mutual appreciation and respect for excellence and intellectual depth.

Seth Bonder’s role as a mentor was an equally valuable and appreciated influence. His students at Michigan and associates at VRI formed a cadre of high-level analysts, populating the leadership and awardee lists of his profession and forming what can be reasonably called a virtual “Bonder School” of operational systems engineering.

Seth Bonder’s professional leadership and consequent recognition were extensive: he served as president of the Operations Research Society of America and vice president of the International Federation of Operations Research Societies. He received the Institute for Operations Research and the Management Sciences (INFORMS) President’s Award for service to society (2001), its Kimball Award for distinguished service to the society and to the profession of OR (1993), its Military Applications Society’s Jacinto Steinhardt Memorial Prize (1999), and the Omega Rho Distinguished Lectureship (2004). He was a member of the Military Operations Research
Society (MORS) board of directors, its vice president, and president. He received its Rist Prize for the best-implemented study presented at a MORS Symposium and was awarded its 1986 Vance R. Wanner Memorial Award for distinguished service to the profession.

Seth Bonder was elected a member of the National Academy of Engineering (NAE) in 2000 and chaired the Industrial, Manufacturing, and Operational Systems Engineering Section. In that forum and other venues he campaigned for the recognition of operational systems engineering as the implementation component of operations research. He was active in studies and programs of both the NAE and the Institute of Medicine, bringing to bear his experience and perspectives to problems in both defense and health care.

He generously endowed fellowships at the Ohio State University and the University of Michigan and established and funded two INFORMS scholarship programs, for applied operations research in military applications and in health services.

In the last decade of his life, after leaving behind the pressures of running a multimillion-dollar enterprise, Seth Bonder found many ways to relax and enjoy life. He made time to appreciate foreign travel (not necessarily associated with visiting a military base or installation). He developed an appreciation for fine food and wines and devoted his legendary focus and undiluted passion for excellence to a well-designed program for physical fitness for himself and those around him. He was an excellent tennis player (his son Eric played tennis for Ohio State University and his daughter Lisa was a highly ranked professional).

More recently he took up golf and used his second home in Longboat Key, Florida, as a base from which he continued his consulting and enjoyed life with the same intensity and attention he had dedicated to his professional work.

Seth Bonder is survived by his wife Merrill, two children, Lisa and Eric, four grandchildren, two step-grandchildren, and hundreds of deeply saddened and appreciative friends and colleagues.