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INFORMS NEWS: In Memoriam - Arthur 'Pete' Veinott Jr. (1934-2012)

– By Andrew Myers

Arthur "Pete" Veinott Jr., shown here in a 1968 photo, was remembered for his intellect and his wit. Photo credit: Stanford Report

Arthur F. "Pete" Veinott Jr., an emeritus faculty member in the Department of Management Science and Engineering at Stanford who made major contributions to the theory of operations research and

to its development as a field both at Stanford and nationally, died Dec. 12, 2012 at Stanford Hospital. He was 78.

Professor Veinott came to Stanford in 1962 and served until 2009 – a tenure of 47 years, one of the longest in the history of Stanford engineering. During his career, Veinott played a key role in the creation and development of the Department of Operations Research, including serving as department chair from 1975 to 1985. Operations Research would later be folded into the Department of Management Science and Engineering.

Veinott also helped found the journal *Mathematics of Operations Research*. It remains the leading journal for the publication of mathematical contributions to operations research and management science.

"Arthur Veinott – whom we knew as Pete – was the first outside appointment to the nascent operations research program. He was identified as having high promise," says former Stanford colleague and Nobel laureate Kenneth Arrow. "His scholarly accomplishments exceeded even that high standard; he was an outstanding figure in the field. He also supplied administrative leadership and was a great inspirer and guide of graduate students. He will be sorely missed, as a friend as well as a colleague."

Wide-ranging Contributions

"Pete completed a trifecta during the 1975-1976 academic year: He began a 10-year tour as chairman of the Department of Operations Research, founded the journal *Mathematics of Operations Research* and led the campaign that created the John von Neumann Theory Prize awarded by the Institute for Operations Research and the Management Sciences (INFORMS)," says Stanford colleague Donald Iglehart.

Professionally, Professor Veinott had three main contributions to his field: lattice programming,

inventory theory and dynamic programming.

In lattice programming, he developed a type of qualitative optimization theory to predict the direction and nature of change in global systems.

"Pete was a legend in the operations research community," says Frieda Granot of the Sauder School of Business at the University of British Columbia. Lattice programming had a profound effect on economics and in such classical operations research areas as production planning, project planning and scheduling, reliability and maintenance, and network optimization, she said.

In dynamic programming, Professor Veinott made fundamental contributions to sequential decision-making under uncertainty.

"Pete Veinott was a pioneer in the theory of inventory and supply chain systems as well," says Robin Roundy, a former student of Veinott's and now chair of the mathematics department at Brigham Young University. "He created powerful insights and effective policies for determining optimal prices and capacity levels, as well as inventory stocking levels."

Researcher and Mentor

Throughout his academic career, Professor Veinott was devoted to research and teaching, publishing 56 papers and guiding 27 students to their doctorates. He received the Graduate Teaching Award for 2000-01 from the Department of Management Science and Engineering.

"From the first time I met him I was impressed by his intellect, his wit, his intellectual curiosity and his encyclopedic knowledge of operations research," says Dimitris Bertsimas, co-director of the Operations Research Center at the Massachusetts Institute of Technology. "As an editor, he maintained very high standards on research and exposition. Even recently,

he was up on the latest research, the best results and the best young people. His spirit of excellence will live on through the students he educated in his almost half-century at Stanford."

"Pete was a wonderful loving and caring husband, of course, but he was also a dedicated teacher and mentor to his many students," says his wife, Adriana Diener-Veinott. "He followed their careers and tried always to shepherd them along their various paths."

"Pete was especially generous in nominating his students and colleagues for honors and awards," adds Professor Iglehart.

A Long Legacy

Arthur F. Veinott Jr. was born Oct. 12, 1934, in Boston and grew up in Newton, Mass. He earned his Bachelor of Arts and his Bachelor of Science from Lehigh University in 1956, where he was elected to Phi Beta Kappa. He earned his doctorate in industrial engineering from Columbia University in 1960.

Professor Veinott served in the Air Force Logistics Command as an operations analyst until 1962, when he joined the Stanford faculty as an assistant professor of industrial engineering. He retired in 2009.

In 1965, a biographical note submitted on the occasion of a major academic appointment noted, "He is without doubt one of the brightest young men in America in the field of operations research."
Later, when Yale tried to lure him away with the offer of a full professorship, a similar biographical note urged Stanford to retain him, warning that "his departure from Stanford would create a major gap in the Department of Industrial Engineering and in the Operations Research program." Veinott was just 32 at the time.

In 2002, Veinott was named an inaugural Fellow of INFORMS, and in 2007, he won the von Neumann

Theory Prize from INFORMS, the award he helped create. He was elected to the National Academy of Engineering in 1986, selected as a Fellow of the Institute of Mathematical Statistics and won a Guggenheim Fellowship in 1978-79.

Veinott is survived by his wife Adriana Diener-Veinott, children Michael and Elizabeth, sister Polly Reinacker and two grandchildren.

Andrew Myers is the associate director of communications for the Stanford University School of Engineering. A version of this article appeared in Stanford Report.

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