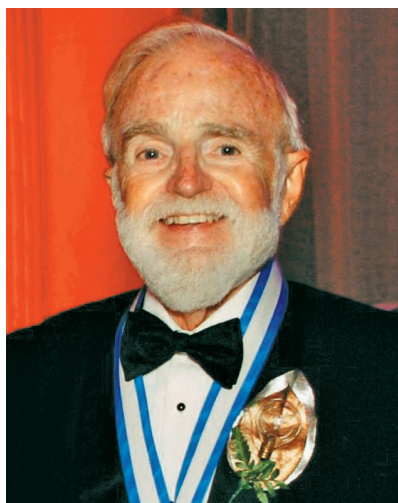


In Remembrance of Dr. Harry L. Van Trees

Dr. Harry L. Van Trees passed away peacefully on 29 December 2022 with his wife of 69 years, Diane, and his family by his side. He had a distinguished career that spanned a variety of academic, government, and industry positions, and he is widely recognized as one of the founders of the detection and estimation theory body of knowledge. His four-volume series of textbooks, *Detection, Estimation, and Modulation Theory (DEMT)*, are the classical texts in the area and have shaped the modern fields of communications, radar, and sonar.

Harry was born in Kansas City, MO, on 27 June 1930. He graduated first in his class from the U.S. Military Academy at West Point in 1952 and earned his Sc.D. from the Massachusetts Institute of Technology (MIT) in 1961. At MIT, he had the opportunity to be a student under some giants in the signal processing world: Y.-W. Lee, mentor Norbert Wiener, and Claude Shannon.

From 1961 to 1972, he was on the faculty of the MIT Electrical Engineering Department, where he formed a new research group in the area of signal processing. He and his students made significant contributions to detection and estimation theory, optimum array processing, Bayesian estimation of random processes, and Bayesian bounds. During this time, he wrote the first three volumes in the *DEMT* series.



Dr. Harry L. Van Trees

Harry's government career consisted of four positions: chief scientist of the Defense Communications Agency (1972–1975); chief scientist of the U.S. Air Force (1978–1979); principal deputy assistant secretary of defense for Command, Control, Communications, and Intelligence (C3I) (1979–1981); and acting assistant secretary of defense for C3I (1981). He received the Meritorious Civilian Service Award and the Presidential Award for Meritorious Executive for his contributions.

His industry career included leading the advanced planning for the Intelsat VI satellite at COMSAT (1975–1978); creating the Eastern Operations of M/A-COM Linkabit, where the first portable satellite terminal for the government was produced (1981–1985); president of the M/A-COM Government Systems division, which was a

leader in digital communication for the military (1985–1988); and cofounder of a startup company, CommQuest, which developed chips for Internet applications (1991–1999).

In 1988, he joined George Mason University, where he was a faculty member in the Electrical Engineering Department and the Systems Engineering Department and the founding director of the Center of Excellence in C3I. He returned to research and mentoring in the statistical signal and array processing area and published the fourth volume in the *DEMT* series, *Optimum Array Processing*, and *Bayesian Bounds for Parameter Estimation and Nonlinear Filtering/Tracking*. He retired in 2005 and was a university professor emeritus and a consultant up until his death. In 2013, he published a second edition of *DEMT*, volume I, with the up-to-date text in the field.

Harry was elected to the National Academy of Engineering in 2015. He was a Life Fellow of IEEE and received numerous IEEE awards including the IEEE Signal Processing Society (SPS) Education Award (2002), the IEEE SPS Technical Achievement Award (2008), and the IEEE Jack S. Kilby Signal Processing Medal (2015).

Harry Van Trees was a distinguished researcher, educator, mentor, engineer and leader who had a remarkable life and career in academia, government, and industry. His contributions to both the theory and practice of signal processing are immeasurable, and he will be greatly missed.