

DAVID GARRISON HARKRIDER(1931 - 2016)



HARKRIDER, David Garrison 84, of Concord, died on Tuesday, February 16, 2016. He was born in Houston, TX on September 25, 1931, the son of the late William Max Harkrider and Willie Mae Garrison Harkrider. He had been a resident of Concord, MA since 1995. He is survived by his wife Sara H. Brydges of Concord, his daughter Claire Harkrider Topp and her husband Jason of Tonka Bay, MN and his son John D. Harkrider and his wife Anja Kroencke of New York, NY, his grandchildren McKinley and Samantha Topp and June and Rose Harkrider. David is also survived by his sisters Kay Wetzel and Sharon Harkrider and his brother Bill Harkrider of Houston. David received a B.A. in Physics from Rice University in 1953, an M.A. from Rice in

Geology in 1957 and a Ph.D. in Geophysics from the California Institute of Technology in 1963. He was a Research Fellow at Caltech from 1963-65 before becoming an Assistant and then Associate Professor at Brown University from 1965-70. He returned to Caltech as Associate Professor in 1970, becoming Professor of Geophysics in 1979 and Professor of Geophysics, Emeritus in 1995. He was Associate Director of the Seismological Laboratory at Caltech from 1977-79. To his colleagues and students he was a supportive mentor, a font of wisdom and a ready source of useful advice. He had an inquisitiveness and willingness to delve deeply into his scientific interests and was always open and forthright with the people around him. An expert in seismological wave propagation, David investigated diverse topics within the field of geophysics. Early in his career he studied the theory of air-wave trains – the oscillations of the atmosphere in regions experiencing strong shocks, such as a meteor or a nuclear explosion. At Caltech he collaborated with other faculty to analyze and interpret the propagation of seismic waves in the earth. His work was focused on the analysis of the propagation of surface waves – a type of seismic wave that travels through the crust – and their coupling with air waves and tsunami waves. He led the development of a digital computing system to recognize the seismic signals from earthquakes, rapidly determine their locations, and distinguish the signatures of earthquakes from those of nuclear explosions. His modeling efforts played a key role in ensuring the compliance of the Nuclear Test Ban Treaty with the Soviet Union. Although his most widely known published works are on the excitation and propagation of surface waves in multi-layered media, his handwritten class notes on propagation of acoustic-gravity waves were very useful for seismologists who ventured into the field of acoustic-gravity waves from seismic waves. David took surface wave theory from the rather primitive state in which it existed in the late 1960s to the point where a generalized seismic source could be embedded at any depth in an arbitrarily layered media and the response, including synthetic seismograms, calculated. He was a pioneer in the application of computer techniques to seismological problems. He was elected a Fellow of the American Geophysical Union in 1979, elected to the Board of the Seismological Society of America from 1982 to 1988 where he served as Vice President in 1987 and as President in 1988. He was elected a Fellow of the Royal Astronomical Society in 2009. Entering the Navy as Ensign during the [Korean conflict](#) in 1953, he served as LTJG until 1955. Concord's town flag will be flown at half-staff on Friday, February 26 in recognition of his service to his country. David was a kind and generous man with a sharply irreverent wit who loved his family, his friends, his cats and dogs, and his research. He was pleased to live in Concord and especially in Conantum. He enjoyed football, golf, old musicals, Mexican food, martinis and Tabasco on everything. His ashes will be scattered near the camp in the Texas Hill Country where he spent happy summers as a teenager. A gathering to celebrate his life will be held later this year. Donations in memory of David may be made to The Concord Orchestra, P.O. Box 381, Concord, MA 01742 (www.concordorchestra.com). For his online guestbook, please visit www.deefuneralhome.com Dee Funeral Home of Concord 978-369-2030 Caring for families since 1868



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