



## Obituary

RICHARD A. SKOP 1943–2001

RICHARD A. SKOP had two remarkable careers. One as a research scientist in the Fluid Dynamics Branch at the U.S. Naval Research Laboratory (NRL) where he spent over 20 years and a second as an academic, Professor in the Division of Applied Marine Physics and Ocean Engineering, Rosenstiel School of Marine and Atmospheric Science, University of Miami. He died suddenly of a heart attack on 25 February 2001. Dick's contribution to the area of fluid–structure interactions in his 30+ years in research career was indeed exceptional.

Dick was born on 12 March 1943 in Baltimore, Maryland where he spent his childhood years. He enrolled at Washington University where he earned his BS degree in 1964 “cum laude” in physics and mathematics. He received a NASA fellowship to attend the Department of Mechanical and Aerospace Sciences at the University of Rochester, where he received his Ph.D. in 1968. He then joined the U.S. Naval Laboratory as a research mechanical engineer in the Shock and Dynamics Section, where his interest in structural cable systems became one of his major research interests. It is at this time that Dick interacted with the late Owen Griffin, G. H. Koopman and Steve Ramberg, to be among the first to use wake-oscillator formulations to model vortex-excited vibrations of bluff cylinders, which continues today. This work in the 1970s and 1980s for which Dick is widely known continues to have an impact on the analysis of vortex-induced vibrations in marine cables and risers.

In 1971, Dick became Head of the Fluid Dynamics Section at the laboratory, a position he held until 1985 except for temporary detail for the U.S. Navy from NRL. While in government service for the U.S. Navy, Dick received numerous awards and citations. He received the NRL Research Publications Award on seven occasions. Arthur S. Fleming Award for outstanding young federal employees was presented to him in 1977. He was given a SEACON II certificate for his contributions to mooring experiments in 1978. He served as Associate editor for *Shock and Vibration Bulletin*; Board of Editors, *HYDROSOFT*; and Editor, *Ocean Physics and Engineering*. In addition, he served as a member and advisor on several Naval research committees.

In 1985, he left NRL to pursue a career in academia at the University of Miami where he became Professor and Chairman of the Division of Applied Marine Physics at the Rosenstiel School of Marine and Atmospheric Science. There he expanded his research efforts into the measurement of ocean currents using VHF radar from moving ships as well as land-based operations; surface tension and surfactant studies in seawater; to vortex-shedding response of long bridges. During a 2 year absence from the Rosenstiel School, Dick headed a major study for the capability requirements of the next generation attack submarine for the U.S. Navy. In 1993, he returned to his passion for mathematical modeling of vortex-induced vibrations in marine applications. Dick and his student Sathish Balasubramanian extended and evaluated the applicability in realistic flow conditions. In this endeavor, they collaborated extensively with Al Szewczyk and combined experimental and

numerical modeling to extend the understanding and range of applicability of wake oscillator formulations. When his untimely death occurred, Dick with a new student was about to embark on some experiments on vortex-induced vibrations of flexible risers in shear flows and employ his newly developed inverse-direct method for determining the vortex-induced vibrations of cylinders. In his years as an academic, Dick directed more than a dozen masters' theses and Ph.D. dissertations and two Postdoctoral Scholars. Dick also enjoyed teaching several graduate courses in ocean wave mechanics, marine vehicle dynamics and a course introducing oceanography to nonscience majors. Dick served as the chair of the academic committee at the Rosenstiel School and was also very active in promoting science through active participation in high school science fairs in the greater Miami area.

It has been a crushing blow to lose Dick. He will be greatly missed: by his family, friends, colleagues, fellow researchers and by his many students. As aptly put by his students, Richard was more than just a mentor and research advisor during their graduate academic careers at the University of Miami. He enjoyed a close relationship with his students, be it working together on his passion, research on vortex-excited vibrations, or playing tennis. In his research efforts, Richard's dedicated and clinical approach served as an inspirational role model for his students. As a faculty advisor he always had the student's welfare foremost in his mind and often went farther to ensure the success of his students than one would normally expect.

Albin A. Szewczyk  
Sathish Balasubramanian