Biographical Sketch of T. Sarpkaya

Dr. Sarpkaya joined the Naval Postgraduate School in l967 as Professor and Chairman of Mechanical Engineering. He spent l97l at the Aerodynamics Research Institute in Gottingen (Germany) and returned to NPS in l972 as Professor of Mechanical Engineering. He was named Distinguished Professor in June l975.

His research over the past 45 years in hydrodynamics has involved stability of flows, vortex-shedding in time-dependent flows, vortex breakdown, wave forces on offshore structures, numerical fluid dynamics, discrete vortex methods, trailing vortices of aircraft and submerged bodies, hydroelastic response of flexible structures, vorticity/free-surface interaction, sprays, flow about parachutes, aircraft-wake vortices. He has conceived and designed some of the most unique research facilities in the world. His oscillating flow tunnel is the first and the largest in the world. His vortex-breakdown research facility was for a long time the only one of its kind.

He has made unique and lasting contributions to the understanding of the vortex breakdown phenomenon, to the determination of wave forces on offshore structures, to the evolution of the discrete vortex modeling of separated time-dependent flows, to the understanding and application of hydroelastic oscillations, and to the motion of submerged bodies in homogeneous and density stratified media. His most recent research activities dealt with vortex/free-surface interactions, time dependent flow about parachutes, motion of submerged bodies in wave environment, internal waves in density stratified medium, with the numerical analysis of separated flow about bluff bodies and airfoils through the use of vortex methods, hydrodynamic damping and vortex-induced vibrations..

His research has been supported by many organizations such as National Science Foundation (for 43 years uninterrupted), Office of Naval Research (for about 15 years), Army Research Office, Defense Advanced Research Projects Agency (for about ten years), Naval Sea Systems Command, IBM Corporation, Exxon Corporation, David Taylor Naval Ship Research and Development Center, Nuclear Research Center, among others.

During the past 45 years, Dr. Sarpkaya published a book and more than 250 papers, and edited several books. He has directed 28 Ph.D.'s and more than l50 MS and Engineer degree theses.

Among Dr. Sarpkaya's awards are the l97l **Sigma Xi Research Award**, the l967 **Lewis F. Moody Award**, for an outstanding paper, from ASME, and the

Collingwood Prize in l977. He has been awarded the prestigious **Freeman Scholar Award** by the American Society of Mechanical Engineers in 1988. As part of this award, He delivered a special lecture on a critical Review of the "Computational Methods with Vortices" (subsequently published in the Journal of Fluids Engineering, Trans. ASME, Vol. 111, No. 1, March l989, pp. 5-52). In November 1990, he was presented The **Fluids Engineering Award** of ASME at the Winter Annual Meeting of ASME. In September 1993, he was presented the **Offshore Mechanics and Arctic Engineering Division Award of ASME** for his contributions to Marine Hydrodynamics. In 2003, he was presented the prestigious award of “Turning goals into reality” by NASA and another patent on the prediction of the characteristics of wake vortices of large aircraft.

Dr. Sarpkaya has served as editor and Associate editor of numerous journals, as member and later as chairman of the Executive Committee of the Fluids Engineering Division of ASME, as chairman of the Heat Transfer and Fluid Mechanics Institute, as member of various Government Review Panels, and as member of many committees within and outside NPS. He is a Fellow of the Royal Society of Naval Architects and Marine Engineers, and a member and/or Fellow of a number of other professional and honor societies.