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C. Forbes Dewey, Jr.

was born in Pueblo, Colorado on March 27, 1935. He received the B.E. degree from Yale University, New Haven, in 1956, the M.S. degree from Stanford University, Stanford, in 1957, and the Ph.D. from the California Institute of Technology, Pasadena, in 1963.

From 1963 to 1968, he was Assistant Professor of Aerospace Engineering Sciences at the University of Colorado in Boulder. His main research interests were in the areas of high-temperature gas dynamics and fully-ionized plasmas. The experimental work included research on surface ionization of cesium, thermionic converters, and the effects of strong magnetic fields on electrostatic probes. He was a Visiting Scientist at the Institut für Plasmaphysik, Garching, Germany, in 1966-67, during which period he held a University of Colorado Faculty Fellowship and lectured at 23 different laboratories and universities throughout Europe for the NATO Advisory Group for Aeronautical Research and Development.

In 1968 he was appointed Associate Professor and, in 1976, Professor of Mechanical Engineering at the Massachusetts Institute of Technology, Cambridge. From 1975 to 1983 he was Head of the M.I.T. Fluid Mechanics Laboratory, a center for the research activities of 35 faculty, staff, and students. His research and teaching duties have centered around fluid mechanics, biomedical engineering, information systems, and instrumentation. From 1970 to the present, he has been involved in numerous biomedical fluid mechanics research projects dealing with blood flow and atherosclerosis. This research has, most recently, dealt with the effects of fluid flow forces on vascular endothelial cells in collaboration with colleagues at the Harvard Medical School. He has held appointments as a Consultant in Medicine, Massachusetts General Hospital (1976-1980), Visiting Professor of Pathology, Harvard Medical School and Peter Bent Brigham Hospital (1978-79), and Associate in Pathology, Harvard Medical School (1980 - 1995). In the Fall of 1992 he was a Visiting Professor at the Bagrit Center for Biological and Medical Systems at Imperial College, London.

A second area of research at M.I.T. has been lasers and laser applications. Under research programs sponsored by the Department of Defense and the Department of Energy, this work has included research on nonlinear optical mixing in twinned crystals, dye laser mixing to produce tunable infrared lasers, new laser lines in sulfur and barium vapor, optoacoustic spectroscopy for pollution detection, and the development of specialized spectroscopic instruments based on lasers and narrow-band optical filters. He holds 6 patents in these areas. In 1986, he was a Visiting Scientist and Hefei Polytechnical University, PRC, and delivered a series of invited lectures on instrumentation, modern optics, and computer-aided analysis.

Dr. Dewey's research interests are reflected in over 150 peer-reviewed papers and patents and an equivalent number of invited talks and lectures in the fields of high-speed aerodynamics, boundary layer theory, free-molecular flow, low-density plasmas, nonlinear optics and laser applications, biomedical fluid mechanics , medical imaging and information systems, and industrial and medical instrumentation. The American Society of Mechanical Engineers lists the paper *The dynamic response of vascular endothelial cells to fluid shear stress,* **J. Biomech. Eng.** 1981; 103: 165-197 to be the most cited paper published in that journal since its inception.

He is a founder and Co-Director, with Prof. Richard I. Kitney of Imperial College, London, of the International Consortium for Medical Imaging Technology, an organization that includes 13 members from university and hospital research laboratories and numerous industrial and governmental sponsors. Founded in 1992, the ICMIT is dedicated to improving the delivery of diagnostic medical images in healthcare on a world-wide basis. The Consortium has produced significant innovation in the information infrastructure that will support multimedia medical records and electronic patient records. Among the major interests of the consortium and its members are: database technology, clinical patient information folders, image understanding using digital methods, clinically useful image compression, telemedicine, improved ultrasound and MR, nuclear medicine, and home health care.

Since 1960 he has been a consultant to numerous academic and industrial organizations, including The RAND Corporation, Sansum Clinic Research Foundation, Arthur D. Little, Massachusetts General Hospital, University Hospital, Faulkner Hospital, IBM, GM, Ropes & Gray, 3M, Gould, Inc., W.R. Grace, Fischer Controls, Thermo Electron Corporation, Thermo Instruments, Etec Corporation, and the Whitaker Foundation. He was a founder of the Massachusetts Computer Corporation in 1981 and served as a member of the Board of Directors of its successor, Concurrent Computer Corporation until he retired after 18 years of service to the corporation. In 1997, he joined with J. Craig Oxford to found Saba Medical Imaging Technology. Saba is bringing new image-enabled information system products to the healthcare marketplace. From 1974 to 1980 he was a Trustee of the Cardiovascular Charitable Trust of Boston. He was Chairman of the M.I.T. United Way campaign for the academic year 1996-97.

Dr. Dewey is or has been a member of Tau Beta Pi, Sigma XI, the Coblentz Society, the American Physical Society, the Biomedical Engineering Society, the American Association for the Advancement of Science, and the Yale Engineering Association. He is on the

Editorial Board of Telemedicine and is a frequent reviewer for the National Institutes of Health, the National Science Foundation, and many technical journals.

He is a Founding Fellow of the American Institute of Medical and Biological Engineering, a Senior Member of the Biomedical Engineering Society, and has been listed in Who's Who in America for the past 15 years. He resides in Marblehead, Massachusetts with his wife, Carolyn. He has one son, Devan Forbes Dewey, who is with Teradyne Corporation in Boston, MA.