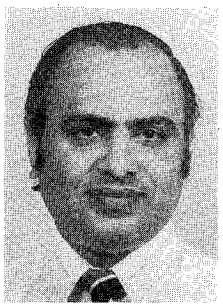
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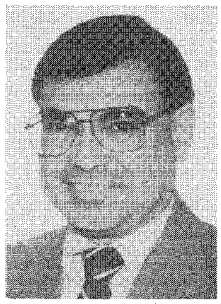
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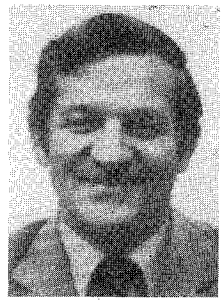
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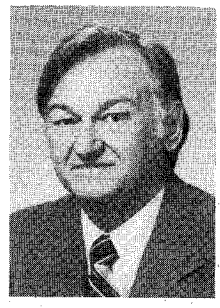
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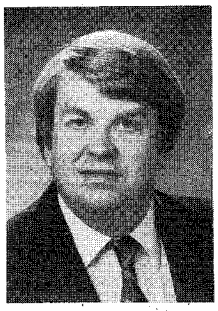
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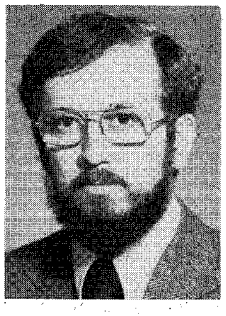
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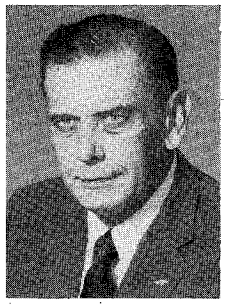
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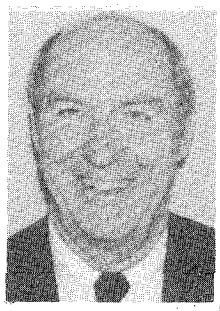
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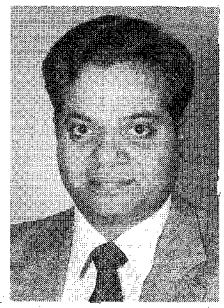
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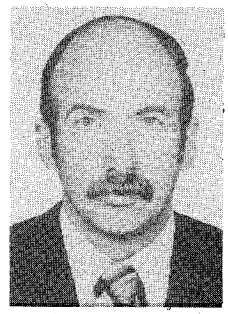
T. M. Weeks

The 1989 Team

Inderjit Chopra

Inderjit Chopra is Professor and Acting Chairman of Aerospace Engineering at the University of Maryland. He received a B.Sc. in Engineering from Punjab Engineering College, Chandigarh, India, in 1965; an M.E. from Indian Institute of Science, Bangalore, India, in 1968; and a Sc.D. from Massachusetts Institute of Technology in 1977. He worked at the National Aeronautical Laboratory in Bangalore from 1966 to 1974. His research there included aeroelastic wind tunnel testing of scaled models of airplanes and launch vehicles. At MIT, he worked on aeroelastic analyses of wind turbine rotors for his doctoral dissertation. In 1977, he joined NASA Ames/Stanford University Joint Institute of Aeronautics and Acoustics, where he researched aeroelastic analyses of advanced rotor systems and dynamic testing of full-scale helicopters in the NASA Ames 40 × 80 ft wind tunnel. In 1981, he joined the University of Maryland. He is a major participant of the Army's Center of Rotorcraft Education and Research at Maryland. An author of over 60 articles and papers, Dr. Chopra is also an associate editor of the *Journal of the American Helicopter Society* and a member of the editorial advisory board of *Vertica, The International Journal of Rotorcraft and Powered Lift Aircraft*. He is an Associate Fellow of AIAA.

Robert D. Cuthbertson

Robert D. Cuthbertson is Manager of Noise Technology Advance Programs with the Boeing Commercial Airplane Company. He received a B.Sc. in Mechanical/Aeronautical Engineering from the University of Wyoming in 1965 and studied fluid mechanics and turbulence on the post-graduate level at the University of Washington. He began his career with the propulsion staff at Boeing and began work on the SST program. Following his graduate studies, he became part of Boeing's Noise Technology Staff and worked on development of the 747. His work eventually led to recognition of the blow-in-door type inlet as a major noise problem of these jets. Cuthbertson was then lead engineer for an R&D project providing technology for the development of the 747. From 1975 to 1977, he supervised research programs in turbomachinery noise and acoustic lining technology. In 1978, he became Chief of Noise Technology Integration and Computing. His current responsibilities include all aspects of community and cabin noise technology of Boeing's future aircraft, such as the 7J7 and supersonic cruise transports.

Robert E. Duffy

Robert E. Duffy is an Associate Professor of Aeronautical Engineering and Astronautics at Rensselaer Polytechnic Institute. Dr. Duffy received his degrees from Rensselaer. He has worked as an aeronautical engineer at Wright-Patterson Air Force Base, Ohio, as a research engineer at Grumman Aerospace Corporation, and as a consultant to numerous corporations. He is currently the technical director of Panaflight Corporation. His professional society affiliations include membership in the American Helicopter Society, the American Society of Mechanical Engineers, and the AIAA, in which he is an Associate Fellow. An author of over 45 articles and papers, Professor Duffy is currently investigating nonsteady flow effects on the aerodynamic characteristics of rotorcraft as a member of the ARO Rotorcraft Center of Excellence at Rensselaer.

Franklin E. Eastep

Franklin E. Eastep is a Professor and Director of Aerospace Engineering at the University of Dayton. He received a B.S. from Ohio State University in 1958, an M.S. from the Air Force Institute of Technology in 1963, and a Ph.D. from Stanford University in 1968. Dr. Eastep has been teaching and conducting research within the technical areas of structural dynamics, aeroelasticity, and unsteady aerodynamics since 1968. During this period, he has been the principal thesis advisor for 5 doctoral students and over 25 masters students. He served on active duty with the U.S. Air Force for 20 years, retiring in 1978. Dr. Eastep is a member of the American Academy of Mechanics, an Associate Fellow of AIAA, and a member of the AIAA Structural Dynamics Technical Committee.

Lars E. Ericsson

Lars E. Ericsson is a Senior Consulting Engineer in the Engineering Technology Organization of Lockheed Missiles and Space Corporation, Inc., Sunnyvale, California, where he acts as a consultant to the Satellite and Missile Systems Divisions on problems associated with aeroelasticity and vehicle dynamics. Before joining Lockheed Aircraft Corporation in 1956, he was with the Aeronautical Research Institute of Sweden and the Swedish Aircraft Company, SAAB. Dr. Ericsson received his M.S. degree from the Royal Institute of Technology (KTH), Stockholm, in 1949, and his Ph.D. in 1972. He is a Fellow of the AIAA and is a member of the American Helicopter Society. Dr. Ericsson has published over 100 papers in his related fields.

Alten F. Grandt Jr.

Alten F. (Skip) Grandt Jr. is currently Professor and Head of the Purdue University School of Aeronautics and Astronautics. He received a Ph.D. in Theoretical and Applied Mechanics from the University of Illinois in 1971, and was then employed as a Materials Research Engineer by the Air Force Materials Laboratory, Wright-Patterson AFB, Ohio, where his duties involved basic research concerned with damage tolerance analysis of engine and airframe structures and materials. He joined the Purdue faculty in 1979, and became Head of the School of Aeronautics and Astronautics in 1985. In addition to his administrative duties, he also teaches and conducts research in the general areas of aerospace structures and materials. Professor Grandt has authored and coauthored approximately 60 papers and reports dealing with fatigue and fracture mechanics.

Ronald A. Hess

Ronald A. Hess is a Professor in the Division of Aeronautical Science and Engineering of the Department of Mechanical Engineering at the University of California, Davis. He received B.S., M.S., and Ph.D. degrees in aerospace engineering from the University of Cincinnati in 1965, 1967, and 1970, respectively. After completing his doctoral work, he joined the faculty of the Department of Aeronautics at the Naval Postgraduate School in Monterey, California. In 1976, Dr. Hess joined the staff in the Flight Systems Research Division of NASA Ames Research Center. At NASA, he conducted research in the areas of aircraft handling qualities, control/display and design, and manual control theory. In the fall of 1982, he assumed his present position at the University of California, Davis.

Dr. Hess' current research interests lie in the areas of automatic and manual control of aircraft. He is an Associate Fellow of the AIAA, Member of the IEEE and Sigma Xi, and an Associate Editor of the *IEEE Transactions on Systems, Man and Cybernetics.*

Harry H. Heyson

Harry H. Heyson earned his B.Ae.E., cum laude, at the Polytechnic Institute of Brooklyn in 1949. He received his M.S. in Aeronautical Engineering from Virginia Polytechnic Institute in 1958. He joined the staff of NACA's Langley Laboratory in 1949. His research at NACA and NASA has resulted in over 75 papers on the theoretical and experimental aspects of helicopter and V/STOL induced flowfields, ground effects and wind-tunnel wall effects, as well as on innovative new aircraft concepts. He is a frequent lecturer in university short courses and helicopter safety seminars.

Now retired from government service, Mr. Heyson is an Aerospace Consultant and an Associate at the Hampton, Virginia office of Eagle Engineering. He is an Associate Fellow of the AIAA, and a member of the American Helicopter Society.

Kenneth J. Holt

Kenneth J. Holt is Manager of Customer Relations, Southwest U.S. for McDonnell Aircraft Company. He received his B.Sc. from Hampton University in Virginia and his M.B.A. from the University of Missouri, St. Louis. He served 20 years in the U.S. Air Force and retired as a Lieutenant Colonel and a Command Pilot. His background is in fighters, having flown the F-86, F-100, F-4, F-15, F-18 and also tours in the Air Training Command and Strategic Air Command. He joined McDonnell in 1973. There he flew production test flights and was the company's interface with the military and Federal Aviation Administration for test flights. He developed much of the flight test operating procedures for the F-18 and AV8B, and was the McDonnell flight operations consultant to the Government Aircraft Factory F-18 facility at Avalon, Australia. He retired from active flying in 1984. Mr. Holt is a Member of AIAA and serves on the Aircraft Operations Technical Committee.

Bellur L. Nagabhushan

Bellur L. Nagabhushan received his B. Tech. degree in Aeronautical Engineering from Indian Institute of Technology, Madras, India, in 1971 and his M.S. and Ph.D. degrees in Aerospace Engineering from Virginia Polytechnic Institute and State University in 1973 and 1977. He was a senior staff engineer at Bendix/King Avionics Division of Allied-Signal Aerospace Company and was involved in the development of digital FBW flight control systems for aircraft. He was with the Defense Systems Division of Goodyear Aerospace Corporation from 1976 to 1987, where he evolved conceptual and preliminary designs of V/STOL airships and hybrid rotorcraft configurations and evaluated their flying qualities. Also, he conceived and developed prototypes, and demonstrated innovative concepts for tactical weapons and smart dispensing systems. He served as a consulting engineer on problems related to aircraft systems design, simulation and performance. Presently, he is an Associate Professor of Aerospace Engineering at Parks College of Saint Louis University.

Dr. Nagabhushan is interested in all types of aircraft systems and associated flight mechanics and control technologies. He has authored over 40 technical papers and articles in archival journals. He has received many Engineering Awards for Technical Achievement at Goodyear and holds several patents in the U.S. and Europe. He is an Associate Fellow of AIAA and a member of the American Helicopter Society.

Thomas M. Weeks

Thomas M. Weeks completed his degree work at Syracuse University, Department of Mechanical and Aerospace Engineering in 1965. He entered active commissioned service that year, assigned to the Air Force Flight Dynamics Lab at Wright-Patterson AFB, Ohio. His initial work was in the area of electrogasdynamics at the nearly completed 50 MW facility. In 1968, he separated from the Air Force but remained at the same location working as a civilian.

He was assigned in 1972 to the Analysis Group attached to the Aeromechanics Staff working on transonic wind tunnel wall interference. In 1976, he became Technical Manager of the External Aerodynamics Group of the Aerodynamics and Airframe Branch. He then served as deputy and acting manager of the X-29 Advanced Technology Development. He is currently Chief of the Experimental Engineering Branch in the Flight Dynamics Laboratory of Air Force Wright Aeronautical Laboratories. Dr. Weeks is an Associate Fellow of the AIAA.