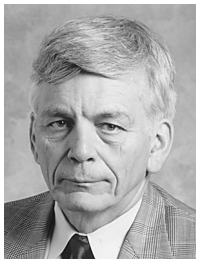
Professional Staff



Dara W. Childs has been Director of the Turbomachinery Laboratory since 1984 and holds the Leland T. Jordan Chair in Mechanical Engineering at Texas A&M University. He received his B.S. and M.S. degrees (Civil Engineering, 1961, 1962) from Oklahoma State University, and his Ph.D. (Engineering Mechanics, 1968) from the University of Texas. He was named an ASME Fellow in 1990, and received ASMEs Henry R. Worthington Medal in 1991.

Dr. Childs' expertise is in dynamics and vibrations, with an emphasis in rotordynamics. He has conducted research and engineering projects for NASA, DOD, and private firms. Current research includes: high-pressure testing honeycomb and hole-pattern gas damper seals; testing high-pressure laminar oil seals; force measurements in magnetic bearings using fiber-optic strain gauges.

Dr. Childs has authored numerous reviewed publications related to rotordynamics and vibrations, and the book, *Turbomachinery Rotordynamics*. He is presently completing a new dynamics book entitled, *Dynamics in Engineering Practice*.

Gerald L. (Jerry) Morrison is the Nelson-Jackson Professor of Mechanical Engineering at Texas A&M University. He received his Ph.D. degree from Oklahoma State University (1977). He is a member of various societies including: ASEE, Associate Fellow in AIAA, Fellow in ASME, Pi Tau Sigma, and Tau Beta Pi.

Dr. Morrison's research interests are in turbulent fluid flow and instrumentation. His research in coherent structures in turbulent flows has enabled him to develop expertise in hot wire anemometry, laser Doppler anemometry, acoustic measurements, and spectral analysis, and in other conditional sampling techniques.

Dr. Morrison manages a program to study labyrinth seals. This includes empirical and analytical schemes to predict leakage rates with experimental verification of the two schemes, and the use of a 3-D laser Doppler anemometer to measure the flowfield inside an actual seal. He is also active in the research area of flow fields inside centrifugal pumps and turbochargers.

John M. Vance is Professor of Mechanical Engineering at Texas A&M University. He received his B.S. (Mechanical Engineering, 1960), M.S. (Mechanical Engineering, 1964), and Ph.D. (1967) degrees from the University of Texas.

Prior to joining Texas A&M (1978), Dr. Vance held positions at Armco Steel, Texaco Research, and Tracor, Inc., and developed a Rotordynamics Laboratory at the University of Florida. He is currently conducting research on rotordynamics, damper seals, and bearing dampers. He has published a book, *Rotordynamics of Turbomachinery* (John Wiley, 1988), and over 50 technical articles and reports. Dr. Vance is consultant to industry and government and has held numerous summer appointments. He organized the annual short course for industry at Texas A&M on "Rotordynamics of Turbomachinery" and co-organized the biennial "Workshop on Rotordynamics Instability Problems in High Performance Turbomachinery." Dr. Vance is a member of ASME and ASEE, and is a registered Professional Engineer in the State of Texas.

Kalyan Annamalai is a Professor in Mechanical Engineering. He came to Texas A&M in 1981. He received a B.S. degree (Mechanical Engineering) from Anna University, Madras, an M.S. degree from Indian Institute of Science, and a Ph.D. degree from Georgia Institute of Technology.

Dr. Annamalai worked as a Research Associate in the Division of Engineering at Brown University, and as Associate Scientist at AVCO-Everett Research Laboratory. At AVCO-Everett, he was involved in the study of gasification of coal, slag flow in MHD channels, and wood combustion in boiler burners. He is conducting research in the area of group combustion of liquid sprays and coal suspension, and pollutants formation and destruction. Dr. Annamalai has extensive journal publications and has acted as a panel member for several federal agencies. He is a Fellow of ASME, the Combustion Institute, and is on the ASME Committee on Fire and Combustion.

Paul G. A. Cizmas is Assistant Professor of Aerospace Engineering at Texas A&M University. He received his Dipl. Ing. degree (Aerospace Engineering, 1984) from the Polytechnic Institute of Bucharest and his Ph.D. degree (Mechanical Engineering, 1995) from Duke University.

Dr. Cizmas' expertise is in the areas of unsteady aerodynamics, computational fluid dynamics and heat transfer, and propulsion. He worked as a Senior Engineer/Scientist at Westinghouse Science and Technology Center. At Westinghouse, he developed computer codes for numerical simulation of stall flutter and rotating stall in turbomachinery, as well as parallel computation of multistage unsteady flows. He received the ASME Liquid Propulsion Best Paper Award (1996) and the Westinghouse Science and Technology 1997 Technical Publication Award.

Je-Chin Han, holds the HTRI Professorship of Mechanical Engineering at Texas A&M University, received his B.S. degree from the National Taiwan University (1970), M.S. degree from Lehigh University (1973), and Sc.D. from Massachusetts Institute of Technology (1976), all in Mechanical Engineering. He worked for four years as a Process Development Engineer at Ex-Cello-O Corporation. This experience included design techniques for industry process heating and thermal performance improvement of heat transfer equipment such as boilers, heat exchangers, condensers, cooling towers, etc.

Dr. Han is a member of ASME and AIAA. His current research is in the areas of high temperature gas turbine blade cooling and heat transfer augmentation. He is the principal investigator for recent research programs on blade internal cooling sponsored by NSF and General Electric Aircraft Engines. He is also working on blade film cooling, supported by the U.S. Air Force and Textron-Lycoming.

C. Fred Kettleborough is a Distinguished Professor of Mechanical Engineering at Texas A&M University. He received his B. Eng. degree (1947) and Ph.D. degree (1950) from the University of Sheffield, England. Dr. Kettleborough came to Texas A&M University after serving as Head of the Department of Mechanical Engineering at the University of New South Wales, Sydney, Australia, and previously at the University of Auckland, Auckland, New Zealand. Previous appointments included the University of Melbourne, Australia; the Westinghouse Research Laboratories, Pittsburgh, Pennsylvania; the British Thompson Houston Company, Rugby, England; and the Royal Naval Scientific Service, United Kingdom. He also served a two year industrial apprenticeship at the United Steel Company in England.

His major research interests are in the area of tribology, solar systems, and numerical fluid mechanics and heat transfer. Current research interests are oil mist lubrication, starting phenomena of thrust bearings, and solar assisted desiccant cooling systems.

Robert P. Lucht is Professor of Mechanical Engineering at Texas A&M University. He received his B.S. degree (Nuclear Engineering, 1977), and M.S. degree (1979) and Ph.D. degree (1981) in Mechanical Engineering from Purdue University. Dr. Lucht was then employed with Sandia National Laboratories. He accepted a faculty position at the University of Illinois at Urbana/Champaign and moved to Texas A&M University in 1998.

Dr. Lucht's research activities center around the development and application of advanced laser diagnostic techniques for probing gas phase media. These diagnostics include laser-induced fluorescence, coherent anti-Stokes Raman scattering, and polarization spectroscopy for the measurement of species concentration and temperature. His research program ranges from fundamental research on the physics of emerging laser techniques to application of laser diagnostics in practical combustion devices. He is published and is a member of AIAA, ASME, SAE, the Combustion Institute, and a Fellow of the Optical Society of America.

Alan B. Palazzolo, Professor of Mechanical Engineering, received his B.S. degree (1976) from the University of Toledo, and M.S. (Mechanical Engineering, 1977) and Ph.D. degrees (Mechanical Engineering, 1981) from the University of Virginia. He worked for Bently Nevada, University of Virginia, Allis Chalmers, and Southwest Research Institute, before joining Texas A&M in 1985.

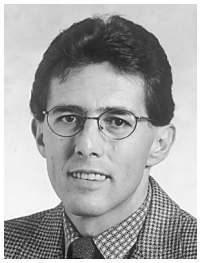
Dr. Palazzolo's expertise is in vibrations, rotordynamics, finite, and boundary elements. He has been involved with field troubleshooting of mechanical malfunctions in rotating and reciprocating machinery. Dr. Palazzolo has presented papers at ASME Gas Turbine and Vibration Conferences, Texas A&M Turbomachinery Symposium, Society of Tribologist and Lubrication Engineers, and has published 50+ papers in technical journals. His current research includes magnetic bearings, cryogenic vibration dampers, active vibration and noise control, fluid film bearings, shaft currents, and gear couplings. Dr. Palazzolo has done consulting for Southwest Research Institute, Goodyear, and Wright Patterson AFB, along with Forensic Engineering.

Alexander G. Parlos is an Associate Professor of Mechanical Engineering at Texas A&M University. He received his B.S. degree (Nuclear Engineering, 1983) from Texas A&M University, M.S. degrees (Mechanical Engineering, 1985; Nuclear Engineering, 1985), and a Sc.D. degree (Automatic Control and Systems Engineering, 1986) from the Massachusetts Institute of Technology.

Dr. Parlos' current research interests center around the development and application of methods and algorithms for the proactive fault diagnosis and prognosis, and end-of-life prediction of complex electromechanical and mechanical systems, with emphasis on rotating machinery. Dr. Parlos has been involved with research and teaching in neural networks, control systems, and system identification since 1988. He has conducted extensive sponsored research on the development and applications of artificial neural networks to modeling, fault diagnosis, and control of complex machines. Dr. Parlos has served on the editorial board of the IEEE Transactions on Neural Networks since 1994.

David L. Rhode is a Professor of Mechanical Engineering. He received his B.S. (1972) and M.S. (1978) degrees (Mechanical Engineering) from the University of Texas at Austin, and his Ph.D. degree from Oklahoma State University (1981). His membership includes ASME, and Phi Kappa Phi. His experience includes Frederich Air Conditioning and Refrigeration Company where he developed a variety of product quality tests, supervised computational optimization of air conditioning design, and conducted several research projects.

Dr. Rhode's primary research interests lie in the thermal science area, especially in computational fluid dynamics and heat transfer. His research has included the computation and measurements of turbulent swirling flow in idealized gas turbine combustors, and the two-phase flow of geopressured geothermal fluid in wellbores, geothermal power plants, etc. Currently, he is developing a finite difference computer code to predict the destablizing fluid pressure forces on labyrinth seal rotors of the configuration found in turbomachines.



Luis A. San Andres, Professor of Mechanical Engineering, received his M.Sc. degree from the University of Pittsburgh (1982) and his Ph.D. degree from Texas A&M University (1985). He received the Organization of American States Applied Science and Technology Award, and has been a TEES Fellow since 1993.

Dr. San Andres' research interests concern fluid film lubrication at high speeds, mechanics of squeeze film flows, and rotordynamics. He has contributed extensively to the understanding of fluid inertia effects in thin film squeeze flows and performed experimental work on the measurement of pressure fields on squeeze film damper apparatus.

Dr. San Andres' current research includes the development of computational fluid flow models for prediction of static and dynamic force performance of hydrostatic journal and pad bearings, and annular pressure seals for cryogenic liquid applications. He is also developing a test program to measure the effects of advanced integral squeeze film dampers on rotorbearing systems.

Taher M. Schobeiri is a Professor of Mechanical Engineering at Texas A&M University. He received his Dipl.-Ing. (M.Sc, 1970) and Dr.-Ing. (Ph.D., 1978) degrees from Technical University of Darmstadt, Germany. Dr. Schobeiri has eight years industrial experience at BBC Brown Boveri Turbomachinery, Switzerland. As Group Leader for Aerothermodynamic Design, he was responsible for development of design methods for new gas turbine types. He joined Texas A&M in 1987. His research interests include unsteady flow behavior in turbomachinery, turbine, and compressor flow.

Dr. Schobeiri is the author of numerous articles. He is a member of the ASME Turbomachinery Committee and VDI (the German Society of Mechanical Engineers).

Stuart L. Scott is Associate Professor of Petroleum Engineering at Texas A&M University. He holds a B.S. degree (Petroleum Engineering, 1982), an M.S. degree (Computer Science, 1985), and a Ph.D. degree (Petroleum Engineering, 1987) from The University of Tulsa, where he was the 1986-1987 Shell Doctoral Fellow.

Dr. Scott leads several research projects relating to multiphase oil, and gas transportation and production including multiphase pumping. Before joining Texas A&M, he was an Assistant Professor at Louisiana State University and worked nine years for Phillips Petroleum Company. International winner of the 1987 Society of Petroleum Engineers graduate student paper contest, he is an active member, having served as Chair of the Panhandle Section and the Production Operations Technical Committee. In 1992, Dr. Scott served as the overall Chair for the first SPE Forum on Multiphase Flow, Pumping, and Separation Technology and, in 1998, organized the first MMS/LSU Workshop on Deepwater Production.

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