

## Editorial Board Biographies

### Dr. Shailendra D. Sharma



Dr. Shailendra D. Sharma is currently working as professor in the department of Aerospace Engineering at Indian Institute of Technology (IIT) Bombay, India. He has obtained Bachelor's degree in Mechanical Engineering (1977) from S.P. University in Gujarat and M.Tech. and Ph.D. degrees (1979 and 1989, respectively) in Aeronautical Engineering from IIT Bombay. Before joining as a faculty member in the IIT Bombay, he worked as a Senior Scientific Officer at the Indian Institute of Science in Bangalore from 1982 to 1988. He has fascination for experimental techniques and has to his credit indigenous development of several different types of wind tunnels and other test facilities including a vertical, close-circuit water tunnel. Dr. Sharma has a unique experience of working on a variety of research problems involving both the water and the air media; for example, flow noise of underwater bodies, cavitation noise from marine propellers in uniform and in shear flows, control of inception of tip vortex cavitation, supersonic wall flows, shock waves, drag reduction, active and passive control of coherent structures, application of vortex generators to control flow separation, wing tip vortex flows, swirling flows in diffuser, slender delta wing vortex flow structures at high alpha and yaw, high speed ejector and free jet flows, turbulent mixing, thermo-acoustic interaction in combustor flows, etc. He has also undertaken experimental investigations in bio-fluid related areas that involved flow through human airway models and pulsating flow through prosthetic heart valves. He is consultant to industries for fluid flow related issues.

### Dr. Robert E. Breidenthal



Dr. Robert E. Breidenthal teaches and conducts research on the fundamentals of turbulent entrainment at the University of Washington. He received his M.S. and Ph.D. degrees in Aeronautics at Caltech, the latter in 1979. Following graduation, he remained at Caltech for two years as a post-doctoral fellow, before joining the Department of Aeronautics and Astronautics at UW. He has explored the effects of acceleration, compressibility, confinement, rotation, stationarity, and stratification on the entrainment rate. Recent work has demonstrated that acceleration of the eddy rotation rate in almost all turbulent flows reduces the normalized entrainment rate, as does vortex stationarity near a solid surface. As a consequence of the latter, his research group has discovered that a turbulent boundary is at least partially relaminarized by introducing strong, stationary vortices into the flow. Other research interests include bluff body and two-phase flows. Professor Breidenthal is a frequent consultant for a variety of industrial firms.

### Dr. Charles Yang Chun



Dr. Charles Yang Chun obtained his B.Eng. degree from Tsinghua University, M.Eng. degree from University of Science and Technology of China, and Ph.D. degree from University of Alberta. Dr. Yang was a lecturer in Shanghai Institute of Electric Power from 1988 to 1994, and was a researcher in Oil Sands programme in Syncrude Canada Ltd – Edmonton Research Centre from 1996 to 1999. Currently he is Associate Professor in the School of Mechanical and Aerospace Engineering. He is the author and coauthor of 90 referred journal papers, 80 conference papers, and 10 book chapters. He also has 5 US patents in his name, and has co-authored one text book entitled "Elementary Electrokinetic Flow". He has been as an external reviewer for the Research Grant Council of Hong Kong, Research Grant Council of Australia, and Dutch Technology Foundation, a peer reviewer for about 30 referred journals, and an external examiner for several Ph.D. thesis.

**Dr. Shouting Gao**

Dr. Shouting Gao is currently working as a Professor in the Division of Laboratory of Cloud-Precipitation Physics and Severe Storms, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China where he joined as an Assistant Professor in 1988. He has been in the positions of Director of Division of Laboratory of Cloud-Precipitation Physics and Severe Storms during 2004 - 2006, and Director of Division of Mesoscale Meteorological Studies and Reduction Disaster during 1999 - 2004 in the same institute. He has served as a Lecturer at Chengdu Institute of Meteorology, Chengdu during 1983 - 1985. He has been a Post Doctoral Fellow (1990 - 1992) and a Research Fellow (1994 - 1995) at the University of Dundee, UK. During 1992 and 1994, he was a Visiting Scientist at the University of Oklahoma, Norman, USA. He obtained his Ph.D. (1988) and M.A. (1981) both in Atmospheric Sciences from the Institute of Atmospheric Physics, Beijing, and B.Sc. (1968) in Synoptic Dynamics from Nanjing Institute of Meteorology, Nangjing, China. The areas of his research interests are Wave and Meanflow interactions; Mesoscale Dynamics; Data Assimilation; Mesoscale Numerical Simulation and Synoptic Diagnosis of Severe Storms.

**Dr. Satoyuki Kawano**

Dr. Satoyuki Kawano is a Full Professor of Fluid Sciences at Osaka University, Japan. He was born in Osaka in 1964, and received B.S., M.S. and Ph.D. degrees in Mechanical Engineering from Tohoku University, Japan. Following graduation he was a Postdoctoral Fellow of the Japan Society for the Promotion of Science in 1992. He was appointed as a Research Associate in 1993 and as an Associate Professor in 1996 at Tohoku University. He was a Visiting Scholar of DAMTP at University of Cambridge, U.K., in 1999. During 2002 to 2005, he was Research Advisor to the Panasonic Corporation. In the year 2005, Dr. Satoyuki Kawano was appointed as a Professor at Osaka University where he served as the Chair of the Division of Mechanical Engineering of the Graduate School of Engineering Science from 2006 to 2009.

His research interest is molecular fluid dynamics including interfacial phenomena, plasmas, blood cells and biomacromolecules. His novel experimental and computational techniques have been successfully applied in development of plasma display panels, lithium ion batteries, artificial organs and DNA nano-devices. He received the Best Paper Awards from the International Institutes for Liquid Atomization and Spray Systems, the Japan Society of Mechanical Engineers, the Japanese Society for Multiphase Flow, and the Japan Society for Simulation Technology for his studies on the fluid interfacial phenomena from the microscopic viewpoint.

In the Pressure Vessels & Piping Division (PVP) of the American Society of Mechanical Engineers, he has been a member of the Fluid-structure Interaction Committee since 1998, and was a Co-organizer of the International Symposium on Computational Technologies for Fluid/Thermal/Chemical Systems with Industrial Applications in 1998, 1999, 2001, 2002 and 2004 honored with the PVP conference award.

**Dr. Josua P Meyer**

Dr Josua P Meyer obtained his B.Eng. (cum laude) 1984, M.Eng. (cum laude) 1986, and his Ph.D. (1988) all in Mechanical Engineering from the University of Pretoria. He is registered as a Professional Engineer and he completed his military service at the Faculty of Military Science, University of Stellenbosch where he lectured aerodynamics for pilots in the South African Air Force. After his two years of military service (1988 – 1989), he accepted a position as Associate Professor in the Department of Mechanical Engineering at North-West University in 1990. He was Acting Head and Professor in Mechanical Engineering before accepting a position as professor in the Department of Mechanical and Manufacturing Engineering at the University of Johannesburg in 1994. He was the Chairperson of Mechanical Engineering from 1999 until the end of June 2002 after which he was appointed as Professor and Head of the Department of Mechanical and Aeronautical Engineering of the University of Pretoria from 1 July 2002. He is Chairperson of the School of Engineering since 1 January 2004. The School has almost 5 000 students and has eight departments and ten different programmes. He teaches and conducts research in heat transfer, fluid mechanics and thermodynamics. He is the author and co-author of more than 250 research articles, conference papers and patents and has received various prestigious awards for his research. He is also a fellow or member of various professional institutes and societies (i.e. South African Institute for Mechanical Engineers, South African Institute for Refrigeration and Air Conditioning, American Society for Mechanical Engineers, American Society for Air-Conditioning, Refrigeration and Air-Conditioning, Royal Aeronautical Society, and American Institute for Aeronautics and Astronautics) and is regularly invited to be a keynote speaker at local and international conferences. He has also received various teaching awards as Lecturer of the Year (at the University of North-West and University of Johannesburg) as well as two Exceptional Achiever awards by the University of Pretoria. In 2006 he was evaluated by the Foundation of Research Development (NRF) as an established researcher who enjoys considerable international recognition for the high quality and impact of their recent research outputs.

**Dr. Andrew Seng Hock Ooi**

Dr Andrew Seng Hock Ooi is currently an Associate Professor in the department of Mechanical Engineering, University of Melbourne, Australia. He received the degrees of B.E. (Mech. and Manuf. Engineering) in 1992 and Ph.D. in 1997, both from the University of Melbourne, Australia. He has received several awards for excellence in teaching. He is on the editorial board of *Advances in Mechanical Engineering*. He has over 60 publications in refereed journals and conference proceedings. His main areas of research interests are turbulence, heat transfer, vortex flows and acoustics.

**Dr. Ganesh Raman**

Dr. Ganesh Raman is Associate Dean for Research and Associate Professor for Mechanical and Aerospace Engineering at the Illinois Institute of Technology (IIT). He obtained his Bachelor's degree from the Indian Institute of Technology, Bombay and a Ph.D from Case Western Reserve University, USA. Before coming to IIT he spent 14 years performing contract research at NASA Glenn Research Center on jet aeroacoustics. He is a Fellow of ASME, the Royal Aeronautical Society (UK), Associate Fellow of AIAA, and a member of ASEE. He has also served as the chairman of the Fluid Mechanics Technical Committee of the ASME and the Aeroacoustics Technical Committee of the AIAA. For over 10 years he has organized a Forum for advances in fluids engineering education for ASME. He was awarded the ASME Lewis F. Moody best paper award in 2002. In addition he was cited in 2001 Boeing inventions awards and received a U.S. Patent and a NASA Certificate of recognition for a creative innovation. He currently serves as the editor-in-chief of the *International Journal of Aeroacoustics*. He has edited two books on "Jet Aeroacoustics" and "Computational Aeroacoustics." His interests are in the areas of Fluid Dynamics, Flow Control and Aeroacoustics. His research in the areas of supersonic jet noise, jet screech and high speed jet flows is widely recognized. He has over 100 publications to his credit that have appeared in conference proceedings and leading scientific journals.

**Dr. Sutanu Sarkar**

Dr. Sutanu Sarkar is currently working as Professor of Fluid Mechanics in the Department of Mechanical and Aerospace Engineering. He received his B.Tech. in Mechanical Engineering from Indian Institute of Technology Bombay, India in 1982; Master of Science from Department of Mechanical Engineering at Ohio State University in 1984 and then Ph.D. from the Mechanical and Aerospace Engineering Department at Cornell University in 1988. He spent the following years until 1992 as a staff scientist in the Institute for Computer Applications in Science and Engineering (ICASE) at NASA Langley Research Center. He has been with the MAE faculty since 1993. His primary research interests are in the areas of computational fluid mechanics and turbulence.

Professor Sarkar's current research projects include the simulation and modeling of turbulence in high-speed flows, reacting flows and stratified environmental flows. In the environmental area, his interest lies in specifically how pollutants are transported in fluids such as air and water. Sarkar's findings may lead to more environment-friendly systems. These studies also have implications for better understanding of large-scale flows in the natural environment. Sarkar also studies combustion phenomena in propulsion devices such as gas turbines. By better understanding the underlying turbulent flow, cleaner burning and more efficient engines can be created. Sarkar is also interested in the prediction and mitigation of air-traffic noise.

**Dr. Hyung Jin Sung**

Dr. Hyung Jin Sung is working as professor in the Department of Mechanical Engineering at Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea. He also held the position of Dean of Research Affairs at KAIST during May 2001 and March 2003. He received degrees of Ph.D. and M.S. in 1984 and 1980, respectively in Mechanical Engineering from KAIST, and B.S. in 1978 in Mechanical Engineering from Seoul National University, Seoul, Korea. Soon after his graduation, he joined as Assistant Professor in the Department of Mechanical Engineering at KAIST. He has been on visiting faculty assignment at the University of Illinois at Urbana-Champaign (February 1986 – February 1988), the University of Hokkaido (December 1989 – February 1990), the University of Karlsruhe (June 1990 – August 1990), and the UCLA (August 1996 – August 1997).

Dr. Sung's major research interests are in the areas of Fluid Mechanics, Heat Transfer, Turbulence, Turbulence Modeling and Measurement, Flow control, Flow noise. He has been conferred several national awards for academic and research excellence and has been involved in a large number of externally funded research projects.

**Dr. Tapan K. Sengupta**

Prof. Tapan K. Sengupta, is a faculty member at the Department of Aerospace Engineering, IIT Kanpur since 1990. He has received his education in Aerospace Engineering from IIT Kharagpur (B. Tech., 1979), IISc Bangalore (M.E., 1981) and Georgia Institute of Technology, USA (Ph.D., 1984). After his Ph.D., he has worked in various capacity at National Aerospace Laboratories- Bangalore (1984 to 1988) and Univ. of Cambridge, UK (1988 to 1990). He has also been with National University of Singapore as a senior visiting fellow from (1999-2001 and 2003). He is a senior associate of International Centre of Theoretical Physics (ICTP), Trieste, Italy (2005 to 2011). His research interests are in the areas of fluid mechanics; aerodynamics and on instability and transition of flows. He also has interest in scientific and high performance computing for problems in fluid mechanics; acoustics; instabilities and waves; transition and turbulence. He is the author of the book, titled: Fundamentals of CFD.

**Dr.-Ing. O. Wünsch**

Dr.-Ing. O. Wünsch is full Professor of Fluid Mechanics at the Department of Mechanical Engineering in the University of Kassel, Germany. He received his diploma degree in mechanical engineering from the University of Hannover, Germany in 1989. Following that he was a research assistant at the University of Armed Forces, Hamburg, Germany and received his doctoral degree and his postdoctoral lecture qualification in the field of fluid mechanics. He has worked in several companies as a research engineer for three years before joining as a Professor in Fluid Mechanics in 2003.

Professor Wünsch teaches and conducts research in different areas of fluid mechanics with numerical and experimental methods. One focus is the measurement and modeling of material behavior of highly viscous fluids like polymer melts at high temperature and pressure, the implementation of models in numerical codes and the simulation of flow in complex apparatus. Further research interests are two phase flow, surface waves in viscous fluids and thermo-mechanic coupling problems in fluid mechanics. He is a member of the International Association of Applied Mathematics and Mechanics (GAMM), director of the Institute of Mechanics and Vice Dean of the Department of Mechanical Engineering at the University of Kassel.

