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HE ASME BOARD OF GOVERNORS confers the Fellow grade of membership on worthy candidates to recognize their outstanding engineering achievements.

Nominated by their peers, these 2013–2014 Fellows have had 10 or more years of active practice and at least 10 years of active corporate membership in ASME.

There are 144 new Fellows out of a total of 90,972.

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A MEMBERSHIP
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DISTINCTION

ASME 2014 FELLOWS

Avinash K. Agarwal



Avinash Kumar Agarwal has made significant scientific and practical contributions in the areas of biofuels, locomotive engines, laser ignition, engine tribology, particulates and engine aerosol toxicity and HCCI combustion. He has published many influential papers in these fields and built a modern engine research laboratory at I.I.T. in Kanpur, India to enable research and teaching. Agarwal has received numerous teaching and research awards and has directly instructed over 500 undergraduates, 30 master's and five doctoral students. Ph.D. (1999), Indian Institute of Technology, Delhi.

Philip L. Andrew



Philip Andrew is recognized throughout the gas turbine industry for his significant technical and professional achievements in the fields of gas turbine performance and operability, aerodynamics, and product development. He earned mechanical engineering degrees at Rochester Institute of Technology, The University of Tennessee Space Institute, and Virginia Tech, and completed the Diploma Course at

the von Karman Institute for Fluid Dynamics. Andrew's distinguished career at General Electric has benefited the aircraft engine, generator, and industrial gas turbine businesses. He also has been a strong supporter and participant of ASME, particularly the International Gas Turbine Institute. Ph.D. (1992), Virginia Polytechnic Institute.

Asif H. Arastu



Asif Arastu has 37 years of experience in Nuclear and Mechanical Engineering and has worked with more than 60 nuclear and non-nuclear power plants worldwide. His work involves thermal hydraulic and radiation dose/shielding analysis, research and development, computer code development, project management, and power plant systems reviews. He serves as Vice Chair of the ASME Nuclear Engineering Division Executive Committee and has played a significant role in organizing ASME International Conferences (ICONE, PVP and IMECE) for over 15 years. Arastu has published 30 technical papers in conferences, including a journal publication. He has received "Outstanding Technical Paper" awards from Bechtel. Ph.D. (1978), Queen Mary College, University of London.

Shiva Om Bade Shrestha



Shiva Om Bade Shrestha started his professional career more than 28 years ago as a lecturer at the Institute of Engineering, Tribhuvan University, Nepal. He worked as a chief scientist and technology officer for energy and environment companies before joining Western Michigan University ten years ago. His contributions to mechanical engineering, particularly in the area of alternative fuel combustion, IC engine knocking modeling, and flammability limits, are noteworthy and exemplary. He has over fifty scientific papers published in various international refereed journals and conferences, as well as four patent applications. Shrestha has been involved for many years in engineering education and has contributed to training hundreds of engineers. Ph. D. (1999), The University of Calgary, Alberta.

Judith Ann Bamberger



Judith Bamberger's research, conducting scaled experiments characterizing unsteady mobilization and mixing of Newtonian and non-Newtonian slurries applied to remediation of nuclear waste stored in underground tanks, led to development and application of in-situ real-

time instrumentation to characterize slurry physical and rheological properties, measurements of concentration of particulate-laden fluids and multi-phase suspensions in vessels and pipelines and development and assessment of fluids-based remediation technologies. She has had ASME leadership roles (Air Pollution Control Division Chair, North American Pacific District Leader, Fluids Engineering Division Committee Chairs), and was awarded the ASME Dedicated Service and US Department of Energy Honor Award. Ph.D. (2013), Washington State University.

Alan A. Barhorst



Alan Barhorst's career includes several years at Lockheed in Houston contracting for NASA. He worked with structural engineers regarding easing the work stream for NASTRAN data input for space shuttle payloads, and with space station control engineers developing efficient simulations. Barhorst analyzed the inch-worm-like motion of the Canada Robot Arm relative to attitude station keeping. Since joining the faculty at Texas Tech University in 1991, he has authored over 60 peer reviewed articles. He is co-author of a dynamics textbook, and he directed the research of 30 students, in diverse areas, including bio-mechanics, flexible multi-body dynamics, nonlinear

dynamics, orthotics, robotics for plutonium disposition, structural health monitoring, and wavelet based acoustic emissions. Barhorst served internationally as ME Program Coordinator at Texas A&M University at Qatar, prepping for initial ABET accreditation. Ph.D. (1991), Texas A&M University.

Joseph Batty



Joseph Clair Batty has enjoyed a long and distinguished career as a teacher, researcher, academic leader and entrepreneur. He has been recognized multiple times as an outstanding professor by students and peers. He has been directing major research programs for more than 45 years while mentoring over 70 M.S. and Ph.D. candidates, and is the author or coauthor of more than 150 publications emphasizing thermal management. Batty is the principal inventor for a number of innovative thermal management technologies being prepared for commercialization by Thermal Management Technologies, LLC. He co-founded the company in 2008 and is currently the CEO. Sc.D. (1969), Massachusetts Institute of Technology.

Christopher C. Berndt



Christopher Berndt has been involved in teaching and research within the materials engineering and mechanical engineering disciplines for the past 32 years. He has taken on leadership roles within professional societies for the past 15 years, including the presidency of ASM International, a society with affinities to ASME. Berndt has taught thousands of undergraduates as well as some 60 graduate students and a dozen post docs whom he has mentored. He has published more than 450 articles on thermal spray manufacturing technology and been invited as keynote speaker to many conferences. Berndt's Hirsch Index is 42. Ph.D. (1981), Monash University, Melbourne, Australia.

Charanjit S. Bhatia



Charanjit Singh Bhatia is known for his contributions to head-media interfaces and tribology for increasing the areal recording

density of hard disk and tape drives. Bhatia also developed and implemented novel materials for head/media interface for magnetic data storage systems. Ph.D. (1979), University of Minnesota.

Sherrill B. Biggers



Sherrill Biggers joined the Department of Mechanical Engineering at Clemson University in 1989, as an Associate Professor. He was promoted to Professor in 1995, and now serves as Associate Chair. He has been a leader in transforming the undergraduate curriculum so that it has a greater focus on active student learning. Previously, Biggers was Manager of NASA Composite Structures Programs at Lockheed where he worked for over 10 years. He began his academic career as an Assistant Professor at the University of Kentucky. Biggers' research has centered on composite structures analysis and design, with applications in aerospace, marine and land vehicles, and biomechanics. Ph.D. (1971), Duke University.

Kevin C. Bodenhamer



Kevin C. Bodenhamer has demonstrated significant technical contributions related to the transportation of hazardous liquids. Bodenhamer has spent the majority of his career working for three different pipeline operators where he held leadership positions in operations, technical services, compliance, major projects, and engineering. During this time, he also served as Chair for ASME B31.4 for 13 years, and currently is a member of the Joint Technical Committee and B31 Committee. His leadership and personal integrity are recognized across the pipeline industry. B.S. (1978), University of Missouri, Rolla.

Warren Brown

Warren Brown has spent years engaged in technical training experimental work, industry surveys, service experience, and participation in PVP Conferences. This work prepared him to serve as Technical Project Manager for the development of a guideline document entitled "Training and Qualification

of Bolted Joint Assembly Personnel" for inclusion as Appendix A in ASME PCC-1-2013, entitled "Guidelines For Pressure Boundary Bolted Flange Joint Assembly." Appendix A will advance efforts to assure the pressure integrity of bolted joints by establishing uniform criteria for training and qualifying assembly personnel, as well as guidelines for quality control. Ph.D. (2001), Ecole Polytechnique at the University of Montreal.

Stuart Cameron



Stuart Cameron has extensive experience in numerous fields of international Mechanical Engineering. He has used this experience efficiently in ASME Code developments and committee participations. Cameron has also provided important international technical liaisons for the advancement of ASME Codes, specific technologies, and the management of ASME Codes. He has been, and continues to be, an active member of the ASME Boiler and Pressure Vessel Code committees involved in the development and application of technologies and requirements for construction materials for power boilers. He is also a member of ASME supervisory management Councils and Boards. BSc (1970), University of Strathclyde & University of Glasgow.

Luciano Castillo



Luciano Castillo is the Don-Kay-Clay Cash Distinguished Engineering Chair in Wind Energy, and the executive Director and President of the National Wind Resource Center at Texas Tech University. His research has led to new ideas in turbulent boundary layers and the understanding of initial conditions on large scale turbulence, particularly on wind energy. His awards include the NASA Faculty Fellowship, the Martin Luther King Faculty Award, and the ASME Robert T. Knapp Award. Castillo has published over 100 articles, including a seminal paper on turbulent boundary layers and scaling laws. He has also developed novel approaches for drag reduction and smart wind farms. Ph.D. (1997), SUNY, Buffalo.

Nicholas P. Cernansky



Nicholas Cernansky is known for his work in the fields of combustion chemistry and internal combustion engines. This research has contributed significantly to the fundamental understanding of internal combustion engine systems, pollution from stationary and vehicular sources, fuel and energy conservation, fuels technology and environmental sciences. It has provided significant insights into a range of topics including air quality and pollutant formation, hydrocarbon kinetics mechanisms at low and intermediate temperature, advanced combustion systems and next generation fuels. His work in this area includes critical information for developing detailed descriptions of the phenomena responsible for knock in spark-ignited engines and plasma assisted combustion. B.S. (1967). University of Pittsburgh.

Chang-Po Chao



Chang-Po (Paul) Chao has made outstanding research contributions in the area of dynamic systems and controls, and is also recognized for extensive service to his professional community. His research has resulted in fundamental results and a wide range of applications, including passive and active vibration control, biomedical sensors, and input/output display technologies. Chao has authored or co-authored over 90 journal papers on these topics, and is listed as an inventor on seven U.S. patents. He and his former students have founded three startup companies aimed at producing commercial products based on these technologies. Ph.D. (1997), Michigan State University.

Geoff Chase



Geoff Chase's research in Model-based Therapeutics integrates innovative engineering models and methods, with physiology and clinical medicine. His research aims at mitigating the impact of demographic and health trends on society's ability to pay for health-care. It has demonstrated several novel results, the most salient of which, SPRINT, saves 60-100 lives per year in Christchurch Hospital's

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ICU, and saves \$500k-\$1M/year—at a total cost of \$150 per year. His research has provided significant health benefits, been taken up in several hospitals and companies worldwide, and demonstrated the ability of engineering to radically improve “everyday” healthcare at low, or even no, cost to society. Ph.D. (1996), Stanford University.

Jharna Chaudhuri



Jharna Chaudhuri's career spans thirty-three years. She has performed defect characterization of metallic, semiconductors and nano materials for engineering applications. These include x-ray diffraction, synchrotron x-ray topography and transmission electron microscopy analysis of aluminum-lithium alloys, GaN, AlN, etc. Chaudhuri has received research grants from NSF, ARO, FAA, Boeing and Cessna, and has published in highly reputed journals. For her outstanding research accomplishments, she received a best educator award and became a Boeing Fellow. She has supervised thirty eight M.S. and fourteen Ph. D. students. As a Chair of the department, she improved the national ranking of the graduate program by about 30, to 81st position. Ph.D. (1982), Rutgers University.

Anne Chaudouet



Anne Chaudouet has extensive experience in numerous fields of Mechanical Engineering. With it she has made efficient contributions to ASME Code developments. She has also provided important international technical liaisons for the advancement of ASME Codes, and specific technologies. Chaudouet has been and continues to be an active member of the ASME Boiler and Pressure Vessel Code committees involved in the development and application of technologies and requirements for construction materials, heat transfer equipment, fitness for service, post construction evaluations, and major Code updates, such as the incorporation of international materials. Mechanical Engineering Degree (1976), Ingénieur de l'Ecole Nationale Supérieure des Mines de Paris.

Chien-Pin Chen

Chien-Pin Chen has made significant contributions to the modeling of multi-phase flows involving particles and droplets and to the numerical methodology that underlies these models. His work has advanced the understanding of particle dispersion and the modulation effect of particles in turbulent flows. His research in atomization, droplet breakup and coalescence and multicomponent evaporating spray has advanced the state of the art in spray combustion systems. Chen has graduated 22 masters and 14 doctoral students. He received the Outstanding Engineering Professor Award from the University of Alabama in Huntsville and the University of Alabama Foundation Award for Outstanding Research. Ph.D. (1983), Michigan State University.

Jiun-Shyan Chen



Jiun-Shyan Chen has made fundamental contributions to computational mechanics through his work on meshfree methods and multiscale materials modeling. He is one of the early developers of the Reproducing Kernel Particle Method. Chen's work has increased the efficiency, accuracy, and robustness of meshfree methods, allowing them to be used commercially for industrial analysis in areas as diverse as manufacturing, crash and impact analysis, geomechanics, biomechanics, and fragmentation modeling in homeland security applications. Ph.D. (1989), Northwestern University.

Quanfang Chen



Quanfang Chen has earned an outstanding reputation in both scholarship and education, while providing exemplary service and citizenship at local, national, and international levels. He has been a significant contributor to chemical sensors, robust microvalves, miniature robust pump/actuators realized with piezoelectric motors and high speed valves, the mechanics of materials at small scales, and the synthesis and conduction of nanocomposites. Chen has received several teaching

awards and he has directly instructed about 1000 undergraduates and over 200 graduate students. Ph.D. (1989), Tsinghua University.

Xi Chen



Xi Chen has made outstanding research achievements in new and interdisciplinary frontiers of applied mechanics, including novel energy conversion and harvesting mechanisms based on nanofluids, advanced nanomaterials for water purification and desalination, mechanics and morphogenesis of natural and biological systems, mechanical self-assembly of micro and nanostructures, and mechanics of nanomaterials and nanoindentation. He has earned distinctive reputations in both scholarship and education, and received numerous awards at national and international levels. Chen has published over 220 peer-reviewed journal papers (with an h-index over 33), and supervised over a dozen doctoral students. He has been a consultant to many clean energy companies. Ph.D. (2001), Harvard University.

Victor A. Chiriac



As the Senior Thermal Technologist for Qualcomm Technologies, Victor Adrian Chiriac is defining the company's overall thermal technology roadmap for developing state of the art cooling solutions at the die, electronic package and systems level product implementation. He has made industry wide contributions to the art and science of thermal management, and the cooling of electronic packages and portable consumer electronic devices, with focus on wireless technologies in smart phones and tablets. Chiriac has developed new figure of merit and industry guidelines for heat spreading over the surface of mobile electronic devices. He implemented new energy recovery solutions in small form factor products and developed novel methodologies for extracting transient thermal behavior of smart phones with reduced time implementation versus a full scale numerical approach. Ph. D. (1999), University of Arizona.

Yaroslav Chudnovsky



Yaroslav Chudnovsky has made significant contributions to the mechanical engineering profession as a technical leader and applied researcher. He has distinguished himself by leading innovative research programs based on the needs of emerging industrial markets. Most of his work has involved successful collaboration with a wide spectrum of industrial and academic partners. As a member of both Heat Transfer and Process Industries Divisions, Chudnovsky has served on several technical and executive ASME committees. He is currently an editor for the *Heat Exchanger Design Handbook*, *International Journal of Energy for a Clean Environment*, and *Journal of Enhanced Heat Transfer*. Ph.D. (1990), Bauman Technical University, Moscow, USSR.

Mark R. Cutkosky

Mark Cutkosky has made significant contributions in robotics and mechanical design. He is best known for his work on robotic hands and bioinspired running and climbing robots. His papers on grasping are among the most cited in the field and his robots have appeared extensively in the media (*NOVA*, *New York Times*, *National Geographic*). Cutkosky pioneered Shape Deposition Manufacturing to create prototypes with embedded electronics, reinforcing fibers, and hard and soft materials for tuned mechanical properties. He has graduated 40 Ph.D. students in leading industry and faculty positions (e.g., Harvard, MIT, U. Michigan, Stanford, CMU, Purdue). Ph.D. (1985), Carnegie-Mellon University.

Kalyanmoy Deb



Kalyanmoy Deb has made outstanding contributions in conceiving, developing and applying evolutionary multi-objective optimization methodologies for solving engineering problems since 1991. His suggested algorithms are routinely used by optimization researchers and practitioners and are adopted in major optimization software programs. He educates mechanical engineering students in the areas of design and optimization. Deb has

written two popular optimization textbooks, one of which was the first ever on EMO, and more than 365 research papers with more than 60,000 citations. He has received numerous awards and serves on the editorial boards of 20 international journals. Ph.D. (1991), University of Alabama, Tuscaloosa.

Ralph M. Drewfs



Ralph Drewfs is an esteemed expert in engineering management, with particular application to mass transit. He has overseen all aspects of the design and construction of more than \$960,000,000 of light rail and street car facilities in the Portland, Oregon, vicinity on behalf of the Oregon Department of Transportation and Washington County. M.S. (1981), University of Dayton.

Prashanta Dutta



Prashanta Dutta's seminal works have contributed to the fundamental understanding of electric field driven transport in micro/nano/bio-fluidic devices. His scientific contributions include: introduction of multi-dimensional electrophoretic models to design microchips for protein sensing, separation and preconcentration; the design of field-effect transistors for precise flow control in microdevices; fabrication of microscale ion mobility sensors for explosive and environmental contaminant detection; development of analytic models for electromagnetic heating for industrial and food processing; demonstration of dielectrophoretic particle chaining and self-assembly for reconfigurable antennas. Dutta has pioneered the use of transport phenomena in multidisciplinary fields for the betterment of human health and safety. Ph.D. (2001), Texas A&M University.

Paul Edwards



Paul Edwards has been an ASME Member for 35 years and made significant contributions impacting the ASME Codes and Standards Community through con-

formity assessment. Edwards has been a member of the ASME Board on Conformity Assessment since 1997, serving as ASME Vice President, Conformity Assessment from 2006 to 2009. He has been a member of the Subcommittee on BPVCA since 1991, currently serving as Chair. Edwards is a member of the QAI Subcommittee on Accreditation, serving as Chair from 1996 to 2005 and a Member of the QAI Standards Committee, serving as Vice Chair. B.S. (1972), University of Massachusetts, Dartmouth.

Mohamed El-Sayed



Mohamed El-Sayed has made significant contributions to the engineering profession with over thirty years of research, teaching and professional leadership. He is responsible for over a hundred research publications, and has made several original contributions. He has also contributed to the education of thousands of engineering students through his undergraduate and graduate teachings. In recognition of his continued professional services and leadership, he was recognized by ASME for "Valued Service in Advancing the Engineering Profession" in 1994, selected as WIT Fellow in 2003, and SAE Fellow in 2011. El-Sayed is currently Editor for CEJE, topic organizer for ASME IMECE 2013, and track co-organizer for IMECE 2014. Ph.D. (1983), Wayne State University.

Roxann L. Engelstad



Roxann Engelstad is an internationally recognized expert on the mechanical issues associated with the design, fabrication, and usage of advanced masks (and processes) for the next-generation lithographic technologies. She has developed a powerful set of numerical tools that correlates nano-scale models to macro-scale models, which track the distortion of features in the lithographic process. Her research results have been applied to many different types of lithography. As Chair of Mechanical Engineering, she facilitated innovations in communication, career advising, and practical experience that have significantly improved student education. Ph.D. (1988), University of Wisconsin-Madison.

Susan Finger



Susan Finger has made major contributions in the field of engineering design education and research, starting with her appointment in 1985 as the founding Program Director at the National Science Foundation and Director for the Design Theory and Methodology Program. At Carnegie Mellon University, her numerous contributions to engineering design education have been transformational. Finger played a key role in the Engineering Design Research Center and was the founding Director of the Engineering Design Research Lab at the Institute for Complex Engineering Systems. She continues to have an impact on engineering education as an NSF Program Director in the Division of Undergraduate Education. Ph.D (1981), Massachusetts Institute of Technology.

Datta V. Gaitonde



Datta Gaitonde is a world leader in advanced computational methods and their application to turbulent flows. Over the course of 25 years, first as a researcher and team leader at the Air Force Research Laboratory, and now as John Glenn professor at Ohio State University, his research has provided insight into jet noise, shock/turbulent boundary layer interactions and flow control with advanced plasma-based techniques. Gaitonde's methods are used worldwide by industry and academia for direct and large-eddy simulations. His vision has benefited numerous national review panels and advisory boards. Ph.D. (1989), Rutgers University.

John Gardner



John Gardner is recognized for his contributions in research and education and his service to the field of mechanical engineering. He has made high-impact contributions in the fields of mobile robotics, artificial hearts, and integrated energy systems. He has authored textbooks in the area of mechanical systems modeling and simulation and holds three US patents. Gardner has also contributed to engineering education through pioneering work in STEM education

support programs and engineering course development. Gardner has also served the profession through work at all levels of university administration and in public speaking and writing aimed at the general public. Ph.D. (1987), The Ohio State University.

Michael Goldfarb



Michael Goldfarb is an international leader in the design and control of mechatronic assistive devices for the purpose of improving quality of life for people with physical disabilities. Among his technical and scholarly contributions, Goldfarb has authored more the 20 pending or awarded patents, and has published over 160 technical papers on mechatronics topics, including ones that were awarded best-paper awards in 1997, 1998, 2003, 2007, 2009, and 2013. Recent honors include the NIH NIBIB Edward Nagy Award in 2011, the Wyss Institute Translational Award in 2012, and the IEEE EMBS Outstanding Paper Award in 2013. Ph.D. (1994), Massachusetts Institute of Technology.

Saneshan S. Govender



Saneshan Govender has made outstanding achievements in scholarship, education, and at Eskom Holdings as a corporate specialist in gas turbines and thermo-flow systems. In addition, he has been appointed as honorary professor at the University of KwaZulu-Natal, Durban, South Africa. In scholarship he has published a large number of articles (some of a pioneering nature) in engineering journals. He has received awards from his university and other organizations, and has published three books on thermo-flow systems. D.Eng. (2008), University of Pretoria; Ph.D. (2000), University of Durban, Westville.

Samuel Graham



Samuel Graham is an Associate Professor and the Joseph H. Anderer Faculty Fellow in the School of Mechanical Engineering at the Georgia Institute of Technology. He is also the Associate Director of the NSF Science and Technology Center MDITR and a key member of the

High Reliability Electronics Virtual Center sponsored by the Air Force Research Laboratory. His group focuses on the packaging and thermal phenomena in wide band gap semiconductors including GaN HEMTs and LEDs. Graham also leads efforts in the packaging technology for flexible electronics and organic electronic devices. Ph.D. (1999), Georgia Institute of Technology.

Robert E. Grimes



Bobby Grimes has spent his more than 35-year career at Baker Hughes, working in all aspects of technology development for rotary drill bits for the Oil & Gas, Geothermal, and Mining industries, as evidenced by his numerous drill bit related patents and technical papers. He has visited most of the major drilling areas around the world, introducing new product lines and technologies to customers and BHI engineers. Grimes has also been active in ASME for over 25 years, currently serving as Senior VP—TEC Sector. He has mentored engineers in both industry and in ASME throughout his career. MSME (1989), University of Houston.

He has mentored engineers in both industry and in ASME throughout his career. MSME (1989), University of Houston.

Maurice E. P. Gunderson



Maurice Gunderson has made contributions in industrial leadership, management, and research and development for over 39 years. He has been a driving force for many energy technology startups. He has had the roles of initial innovator and designer and, more recently, investor and steward of concepts for technologies from initial spin-out to viable business units or companies. His high level of entrepreneurship and industrial leadership are evidenced by his roles on Boards of Directors and as Engineering and Corporate Strategy Advisor in numerous significant energy related start-ups. MBA (1985), Stanford University.

He has been a driving force for many energy technology startups. He has had the roles of initial innovator and designer and, more recently, investor and steward of concepts for technologies from initial spin-out to viable business units or companies. His high level of entrepreneurship and industrial leadership are evidenced by his roles on Boards of Directors and as Engineering and Corporate Strategy Advisor in numerous significant energy related start-ups. MBA (1985), Stanford University.

Rahul Gupta



Since 2006, Rahul Gupta has been a mentor for undergraduate and graduate mechanical engineering students from universities

through the Army Research Laboratory summer intern and guest researcher programs. He has also contributed much towards understanding complex mine blast modeling and simulation encompassing blast, structural, and occupant response, leading to the development of the 50th percentile mine blast human dummy. Gupta is an ARL Special Act Award recipient for developing enhanced underbody protection for U.S. Army tactical wheeled vehicles. His team's work on energy absorbing structures is important in designing safer and more survivable future military and civilian transportation systems. Ph.D. (2005), North Carolina A&T State University.

Levent Guvenc



Levent Guvenc is recognized for his significant contributions in research and development and education, in the field of mechanical engineering. He has made high-impact research contributions to automotive engineering in the areas of chassis control, hybrid electric vehicles, active safety, and cooperative mobility, as well as robust control theory and control applications to other areas including atomic force microscopy. Guvenc has been instrumental in the development of premier laboratories and programs in mechatronics and automotive engineering in Turkey, as well as course and curriculum development in these areas. Ph.D. (1992), The Ohio State University.

David W. Hahn



David Hahn has established a career of excellence in research, scholarship, and education, while providing state, national and international leadership and service. He has earned international recognition and has collaborated widely on laser-induced plasmas, with an emphasis on physical and transport processes. In his 20 years of research and education, Hahn has published journal papers, book chapters and secured U.S. patents. He is co-author of the third edition of *Heat Conduction*. In 15 years at University of Florida, he has taught more than 1,250 students, chaired 50 graduate committees, including 13 Ph.D. graduates, earned

numerous awards, and currently chairs the largest academic department on campus. Ph.D. (1992), Louisiana State University

John Hainsworth

John Hainsworth has the well earned respect and admiration of his clients and associates in the power industry. His forty years of experience in steel fabrication, research, and ASME code development have resulted in safer and more efficient rules governing boiler, pressure vessel and power piping construction. After more than 35 years with Babcock and Wilcox, Hainsworth continues to influence and benefit the power industry community as a metallurgical consultant and as a member of code and standard development organizations. M.S. (1969), Sheffield Polytechnic.

Hai-Chao Han



Hai-Chao Han has made significant contributions in cardiovascular biomechanics for over two decades. He discovered residual stress in the trachea, advanced measurements of residual strain in blood vessels, and developed models to predict cardiac function improvement for patients undergoing revascularization. He established new theory and model equations for blood vessel buckling that enrich vascular biomechanics. Han has authored over 80 peer-reviewed journal papers. He has been an excellent educator and mentored numerous students, postdoctoral fellows and junior researchers. He has been an active member of ASME technical committees and the San Antonio ASME Section and advises the UTSA Student Section. Ph.D. (1991), Xi'an Jiaotong University, China.

MD Aman Haque

Aman Haque has pioneered research on in-situ quantitative tests on thin films inside transmission electron microscopes. He has advised eight Ph.D. and seven M.S. students, and has published more than 70 refereed journal articles. He received the PSEAS Outstanding Research Award in 2011 and the NSF Career Award in 2006. Haque also received the Agilent Best Student Paper Award in the ASME, Microelectromechanical Systems Division, in 2001. He received the

PSEAS Outstanding Teaching Award in 2009. Haque has served as Chair, Vice Chair, and Secretary position of the ASME MEMS Division executive committee. Ph.D. (2002), University of Illinois, Urbana Champaign.

John F. Hawkins



John Hawkins has successfully served in engineering management, engineering, and sales roles in the field of flow borne noise, heat recovery, and exhaust emissions control for industrial engines and gas turbines, and heavy truck and bus exhaust systems, as well as noise control of high pressure venting of gases, for more than 40 years. Through design, innovation, streamlined processes, and application tools, he created new markets, market share, and customer acceptance of products ranging from truck and stationary mufflers, specialty catalytic converters, modular three-way and oxidation catalytic silencers, high pressure vent silencers, and heat recovery systems. Hawkins has also served in ASME leadership positions in Section, Region, Global Communities, District, and ASME level committees for more than 35 years. B.S. (1969), Louisiana Tech University.

Terry J. Hendricks



Terry Hendricks is recognized for continuing effective technical management and development of advanced energy systems. He has made innovative and foundational contributions to the engineering profession in the areas of transportation and industrial energy recovery systems, energy conversion system design, thermoelectric system design and analysis, nano-scale structures for enhanced boiling heat transfer, and thermal radiative properties of key ceramic materials for solar receiver and radiant burner designs. Hendricks' contributions and programs have led to critical advances in hybrid vehicle technology, automotive waste heat recovery systems, more comprehensive approaches to thermoelectric energy recovery design, high-performance stable microchannel boiling designs, and new volumetric solar receiver designs. Ph.D. (1993), The University of Texas, Austin.

Walter M. Hendrix



Walter Hendrix is a senior engineering manager at CommScope, responsible for wireless systems development. His areas of focus include network design and advances in thermal design. His past work experience includes development of long haul optical systems for Xtera Communications, access optical systems for Fujitsu Network Communications, and airborne active radar for Raytheon. Hendrix holds twelve U.S. patents and is a registered Professional Engineer in Texas. He has served on the leadership team of the North Texas Section of ASME, including Chair in 2009-2010. He received the ASME North Texas Engineer of the Year Award in 2010. M.S. (1985), Southern Methodist University.

Stephen Hensel



Stephen Hensel has established an outstanding record of technical accomplishment in over 23 years at the Department of Energy, Savannah River Site. His technical contributions include thermal analysis of radioactive materials packaging, design authority engineering for nuclear processing facilities, and managing analytical groups at the Savannah River National Laboratory. His work on nuclear materials packaging and storage safety has been important to the management of these materials at Department of Energy Facilities. Hensel has nine journal and twenty-nine conference publications. He has been active in the OAC Committee of the PVP Division for over seventeen years, serving as a Technical Program Representative and Technical Committee Chair. Ph.D. (1990), Texas A&M University.

Justus L. Herder



Just Herder is a professor at the Delft University of Technology and the University of Twente. His research interests include static and dynamic balancing, underactuated grasping and compliant mechanisms and their application in medical, rehabilitation and high-tech systems. His research has generated over 180 publications, 23 patents, several awards, and six start-up companies. He has served in the ASME

Mechanisms and Robotics Committee and is currently the elected Executive Council member and Treasurer of IFToMM. Herder serves on boards of several scientific journals and of various international conferences. He held visiting positions at Laval University in Canada and at MIT in the U.S. Ph.D. (1998), Delft University of Technology.

Dewey H. Hodges



Dewey H. Hodges is a Professor of Aerospace Engineering at the Georgia Institute of Technology and an internationally recognized authority in the areas of dynamics, structural dynamics, structural mechanics, computational mechanics, and aeroelasticity. He has made fundamental contributions in the areas of nonlinear deformation of rotor blades; flexible multi-body dynamics; finite element schemes for aeroelastic stability; plate and shell dynamics and asymptotically exact theories for anisotropic structures. Hodges has authored four books and numerous refereed journal papers. He has advised 35 Ph.D. graduates and 35 M.S. graduates. Ph.D. (1973), Stanford University.

Haoran Hu



Haoran Hu has made contributions to the development of powertrains for commercial vehicles, specifically, in chemical kinetic modeling, the invention and development of the lost motion variable valve actuation engine retarding mechanism, and the development of the first high pressure common rail fuel injection engine for on-highway heavy duty diesel engines. He also invented and developed an advanced non-urea aftertreatment system for heavy diesel engine emissions reductions. Hu is also recognized for his leadership for commercialization of advanced hybrid powertrains for the Asia Pacific market. Sc.D. (1987), Massachusetts Institute of Technology.

George P. G. Huang



George P. G. Huang is a leader in turbulence modeling and validation. He has more than 27 years of experience in computational

methods and their application to turbulent flows. His work on turbulence model validation has led to the creation of the turbulence model resources website. Huang helped NASA to develop a number of CFD codes including OVERFLOW. With support from NASA, he also worked on turbulence modeling for hypersonic flows and low pressure turbine transition models. In the past five years, he was supported by the Air Force to establish the Ohio Center of Excellence for Micro Air Vehicles Studies, where he and his teammates developed a number of flapping wing air vehicles. His work was cited by *WIRED* magazine. Ph.D. (1986), University of Manchester Institute of Science and Technology, England.

Hanchen Huang



Hanchen Huang is well-known for his contributions to nanomechanics and nanofabrication. He and his research team discovered two key physical mechanisms that dominate the mechanical stiffening of nanomaterials. The discovery expanded knowledge of the behavior of nanomaterials in physics and material science. Huang also developed a theoretical framework of nanorod growth which enabled the fabrication of the smallest well-separated metallic nanorods known today. The research resulted in a novel, patented, metallic sealing technology that can be done in an ambient environment. Ph.D. (1995), University of California, Los Angeles.

Rui Huang



Rui Huang is recognized for his research and creative use of mechanics to understand the instability of materials and structures at micro and nano scales. Ph.D. (2001), Princeton University

Laurence J. Jacobs



Laurence Jacobs' research focuses on the development of quantitative methodologies for the nondestructive evaluation, monitoring, and life prediction of structural materials. He applies advanced measurement techniques and signal processing for the quantitative char-

acterization of material states. This includes the application of nonlinear ultrasound for the characterization of fatigue, creep, stress-corrosion, thermal embrittlement and radiation damage in metals. His work in cement-based materials includes the application of linear and nonlinear ultrasonic techniques to quantify microstructure and progressive microcracking in concrete. As Associate Dean, Jacobs is responsible for the academic programs at the largest College of Engineering in the U.S. Ph.D. (1987), Columbia University.

Ratneshwar Jha

Ratneshwar Jha has an outstanding record as a scholar, educator, and practicing engineer through his contributions of more than 25 years. He has been recognized for his research in smart structures and structural health monitoring and his leadership roles in the AIAA and ASME professional societies. Jha has taught over 700 students, published over 100 archival journal and conference proceedings papers, advised 28 graduate students, and received awards for research and teaching excellence. He led a team of engineers for 10 years working on design and development of combat aircraft. Ph.D. (1999), Arizona State University.

Ramdev Kanapady



Ramdev Kanapady leads a high technology consulting firm providing multiphysics modeling, simulation solutions to industries in the U.S. He's an accomplished engineer with over 20 years in design, research, analysis, and technology development with a professional career that spans academics and industry. Starting as affiliate graduate faculty, he transitioned into industry first as principal investigator, then as consultant, and finally as founder of MSCWorks, in 2008. He is actively involved in ASME's Santa Clara Valley Section as a volunteer, Treasurer and Chair. As a Chair, he elevated SCVS to one of the top ranking sections in the country. Ph.D. (2001), University of Minnesota.

Thomas W. Kenny



Thomas W. Kenny is a Professor of Mechanical Engineering at Stanford University. He is widely recognized for his research in Micro-

ElectroMechanical Devices and Systems. Kenny's research leverages analytical and experimental studies of silicon MEMS devices with fundamental results related to atto-newton forces, van der Waals adhesion of geckos, and the observation of fatigue-free behavior in smoothed crystalline beams. His applied results include development of liquid cooling systems, and MEMS-based resonators for electronics timing. His recent work has focused on the development of wafer-scale MEMS encapsulation processes that enable enhanced device performance as well as manufacturability at low cost. Ph.D. (1989), University of California, Berkeley.

T. Kesavadas



T. Kesavadas has had a long and distinguished career in the Department of Mechanical and Aerospace Engineering at SUNY Buffalo. He has authored more than 125 papers in the areas of Robotics and Automation, Virtual Reality, Medical Simulation, and Haptics. He is also the co-founder of Simulated Surgical Systems, developer of the first stand-alone surgery simulator for the da Vinci surgical robot. His ASME activities include serving as Chair of the Material Handling Division and the Futures Team, founded by the Board of Governors. Kesavadas also served as a Leadership Development Intern from 1997 to 1998. Ph.D. (1995), The Pennsylvania State University.

Ali M. Khounsary

Ali Khounsary, a scientist and engineer from Argonne National Lab, is recognized for his contributions to thermal engineering and X-ray optics development. These include design, analysis, fabrication, testing, installation and evaluation of major scientific instruments and components. His international leadership extends to organizing/chairing over one hundred conferences, workshops, and sessions of interdisciplinary challenges in design, development, and operation of the nation's largest X-ray facility. Khounsary is a SPIE Fellow, Adjunct Professor of Mechanical Engineering at UIC and of Physics at IIT. He is associate editor of ASME's *Journal of Heat Transfer* and holder of several U.S. patents with over 150 publications and reports. Ph.D. (1987), University of Illinois.

Minjun Kim



MinJun Kim has served as Program Chair/Co-Chair for three ASME conferences, Conference Session Chair/Co-Chair for four ASME conferences, and a Technical and Program Committee Member for five years on ASME Micro Nano Fluidic Dynamics. He has also developed the Fundamentals of NanoManufacturing and Applications, and the Fundamentals of Nano Metrology and Best Practices for ASME's Online Nano Educational Series. Academically, Kim has received the NSF CAREER award, the Human Frontier Science Program Young Investigator Award, the ARO Young Investigator Award, an Alexander von Humboldt Fellowship for Experienced Researcher, a Brain Pool Fellowship, a Stein Fellowship, the Drexel University Faculty Career Development Award, and a Bionic Engineering Outstanding Contribution Award. Ph.D. (2005), Brown University.

Carlos E. Koeneke

Carlos Koeneke is well known in the energy and power Sector for his expertise in the field of gas turbine technologies, rotor dynamic analysis and vibration troubleshooting. His in-depth knowledge on vibrations helped to eliminate severe vibration problems in natural gas compression systems for offshore applications that had caused recurring outages with millions of dollars in production losses. After completing his Ph.D., which focused on high speed rotating machines, he joined MHI and diagnosed challenging vibration issues which have been referred to in several publications. Koeneke has actively participated in the ASME/IGTI, PowerGen International, PowerGen Europe and Electric Power committee. Ph.D. (1993), Tokyo University.

George B. Komora



George Komora has served the ASME Boiler & Pressure Vessel Committee with passion for over 22 years. His experience includes over 24 years of extensive design and manufacturing experience with boilers, heat exchangers, HRSG's, piping, pressure vessels, storage tanks, and associated equipment.

Komora's design and analysis experience includes extensive experimental stress analysis, fatigue analysis, finite element analysis, structural analysis, fitness for service, and engineering software development. His work in pressure vessel codes and standards includes ASME Sections I, II, III, V, VIII, IX and XI, API, ANSI, AD Merkblätter, AS1210, PD-5500, CODAP, EN 12952, EN 13445, and the European PED. M.S. (1975), Southern Illinois University.

Gül Kremer



Gül Kremer's research in engineering design and education has had a profound impact on a generation of students and practitioners all over the world. At The Pennsylvania State University she puts this research into practice, implementing techniques to improve student design team experiences and bringing research on engineering design to the classroom. Kremer has co-authored 3 books on engineering design and published numerous research papers. A leader in the ASME Design Engineering Division, she is serving as a program director in the Division of Undergraduate Education at the National Science Foundation, defining the future direction of engineering education research. Ph.D. (1997), University of Missouri-Rolla.

Miroslav Krstic



Miroslav Krstic is recognized for his pioneering contributions to PDE control and delay systems, nonlinear and adaptive control, extremum seeking, and applications to fluid flows and autonomous vehicles. Ph.D. (1994), University of California, Santa Barbara.

Waruna D. Kulatilaka



Waruna Kulatilaka has earned an outstanding reputation in fundamental and applied research and development through personal contributions as well as various leadership positions over the past decade. His primary scientific and technical contributions include development and application

of advanced laser-based optical diagnostics for fundamental combustion studies, aerospace propulsion and transportation applications, as well as plasma-flow systems. These diagnostic methods are becoming key enabling tools for designing clean and efficient next generation power systems. In addition, Kulatilaka has an outstanding track record of community service for the mechanical engineering profession with numerous leadership roles at ASME and other engineering/scientific organizations. Ph.D. (2006), Purdue University.

Foluso Ladeinde



Foluso Ladeinde, Professor of Mechanical Engineering at the State University of New York at Stony Brook, is known for exceptional work and sustained dedication to the use of advanced mathematics and modern computational techniques for the analysis of high-speed reacting and non-reacting flows. His pioneering work on supersonic combustion has won awards and his ability to communicate highly-advanced mathematical and engineering analysis concepts to others, in simple, ordinary language, enabled him to launch a highly-successful technology company with over twenty sensitive U.S. Department of Defense contracts. Ph.D. (1988), Cornell University.

Ming-Chia Lai



Ming-Chia Lai has significant achievements and contributions in engineering education and research. His outstanding research and effective teaching have been acknowledged by the many awards he has received and by many national and international competitions won by his students. Lai is active in the ICE, IGTI, Fluid Engineering, Fuel Cell, and Heat Transfer Divisions of ASME, and is a leading authority in the research on combustion engines, particularly fluid sprays and their applications, using advanced optically based diagnostic techniques and computational simulations. This is demonstrated by more than 300 refereed papers he published, including 40 at ASME. Ph.D. (1985), The Pennsylvania State University.

Robert G. Landers

Robert Landers has made many contributions to the mechanical engineering community in terms of research, education, and professional service. He advanced the field of dynamic modeling and control of manufacturing processes, specifically machining, laser metal deposition, freeze-form extrusion fabrication of ceramic pastes, friction stir welding, and wire saw cutting. His educational contributions include the development of three internet-accessible courses, two undergraduate emphasis areas, and three certificate programs. Landers' professional service includes serving as an associate editor for three journals, chairing two technical committees, serving on several conference program committees, and serving as a conference program co-chair. Ph.D. (1997), University of Michigan.

Chad M. Landis

Chad M. Landis is recognized for his pioneering contributions to the development of analytical and computational methods to understand the behavior of ferroelectrics. Ph.D. (1999), University of California at Santa Barbara.

Philip Leduc

Philip Leduc is recognized for his outstanding contributions to the development and application of cell and molecular biomechanics through original research and innovative methods. Leduc is also known for his mechanical engineering education through interdisciplinary educational efforts and the development of culinary mechanics. He has contributed to the engineering profession through significant leadership roles in professional societies. Ph.D. (1998), the Johns Hopkins University.

Kunwoo Lee

For over 25 years, Kunwoo Lee has made pioneering contributions in the area of assembly CAD algorithms, multi-resolution of

parts in assemblies, and human-centered CAD for simulating both the user and the artifact. He has published more than 150 papers in top journals and received numerous Best Paper awards. He served as Associate Editor of ASME Transactions, JCISE, and is the Chief Editor of CAD. He is the current president of the Korean Society of Mechanical Engineers, a member of the Korean National Academy of Engineering, and founder of the Korean CAD/CAM Society. Lee is Professor of Mechanical Engineering at Seoul National University. Ph.D. (1994), Massachusetts Institute of Technology.

Robert A. Leishear

Robert Leishear has served as lead engineer or principal investigator on projects that resulted in more than 48 million dollars in cost savings for the Savannah River Site, which is a nuclear facility in South Carolina. To complete these successes, he invented new theories and published his research in a book for ASME Press, several magazine articles, and forty-four conference and journal papers. These publications include the ASME *Mechanical Engineering* magazine, the *Mensa World Journal*, ASME journals, and many conferences. Leishear's research includes fluid mechanics, mass transfer, structural dynamics, fluid dynamics, machinery dynamics, piping design, pumps, and failure analysis. Ph.D. (2005), University of South Carolina.

Brian W. Leitch

Brian Leitch has made significant contributions to research and development in the Canadian nuclear industry. He has contributed to the understanding of delayed hydride cracking and creep of Zr-Nb pressure tubes. His research has contributed to the fitness-for-service guidelines of pressurized heavy water reactors. Leitch has also researched the consequences of pressure tube bursts, and his experimental data has been used to validate computer codes used for licensing power reactors. Leitch has also advanced the use of finite element modeling for nuclear-related applications. M.S. (1978), University of Strathclyde, Glasgow, Scotland.

Milton K. Leonard

Milton Kay Leonard has practiced Mechanical Engineering in the areas of Design, Manufacturing, and Management over the past fifty years. He has served as the Chief Engineer for several large companies covering a broad range of product areas. He is an expert in medium to large pump design and manufacturing for applications from process industries to hazardous/flammable material installations, including hydraulic and vacuum pumping systems. Leonard has worked in the design of large commercial HVAC systems for high-rise buildings, in the mechanical design of missile service equipment, and the improvement of equipment used in the pulp industry for manufacturing paper. He holds three patents. B.S. (1954), Washington State University.

Thomas W. Lester

Thomas Lester has been active in leadership and has developed an outstanding reputation in the areas of advanced education fundamental research and services, both nationally and internationally. He has contributed personally and directly to fundamental research in the field of combustion; to engineering management and to technical committees of professional and scientific societies; and as a consultant to industry. Lester has been associated with colleges of engineering of three State Universities, and for the last two decades as Dean, where he significantly increased both undergraduate and graduate student enrollment with improved student quality, increased research programs, and remarkable improvement in education and research facilities. Ph.D. (1974), Purdue University.

Xiaodong Li

Xiaodong Li is an internationally recognized pioneer in the development of novel experimental methodologies in mechanics with a focus on nano/biomaterials. His experimental techniques are well recognized by semiconductor and automotive researchers. He is a pioneer in the area of green manufacturing of composites and flexible

energy storage systems with cotton textiles. Li has an outstanding record in engineering curriculum development and is an excellent instructor and mentor. He has served ASME by organizing symposia, serving on committees, presenting invited papers, and serving as Associate Editor for ASME, Applied Mechanics Reviews. Ph.D. (1993), Harbin Institute of Technology, China.

Ching-Long Lin

Chin-Long Lin is recognized internationally for his outstanding contributions in the areas of computational fluid dynamics, multi-scale algorithms, and human lung modeling. Lin received the NSF CAREER award, has given several keynote/invited lectures, is an invited chapter author of *Comprehensive Physiology*, the landmark series Handbook of Physiology, is the lead Guest Editor of the special issue of the *Journal of Computational Physics* on multi-scale modeling and simulation of biological systems, and is a Fellow of the American Institute for Medical and Biological Engineering. Lin has also made significant contributions in teaching and has provided service and leadership to the multi-scale modeling and computational engineering communities. Ph.D. (1994), Stanford University.

Yuyi Lin

Yuyi Lin has been a member of ASME since 1988. He received his Ph.D. from U.C. Berkeley in 1989, and has been teaching at the University of Missouri since 1990. He is a registered Professional Engineer, serving actively in ASME, SME, ASEE, SAE, and the Chinese Society of Mechanical Engineers, as chapter chair, technical committee member, and journal editor. Lin is a leading expert in helical spring dynamics research. He is an inventor and practicing engineer, has designed unique machines in hydraulic press, pressure vessel, and metal-ceramic materials. Ph.D. (1989), University of California, Berkeley.

Cliff J. Lissenden

Cliff Lissenden, an expert on the mechanics of materials, has contributed new insights into the hardening behavior of high tem-

perature alloys and composites, an algorithm implemented in NASA's Micromechanical Analysis of Composites software, and solutions to the challenging ultrasonics problem of the generation of higher harmonic guided wave modes in a hollow cylinder. As founder of the Ben Franklin Center of Excellence in Structural Health Monitoring, his research is leading to reduced life cycle costs and earlier predictions of service lives. Lissenden served as recording secretary for the AMD and on the 2010 Technical Program Committee of the 16th U.S. National Congress of Theoretical and Applied Mechanics. Ph.D. (1993), University of Virginia.

Erdogan Madenci



Erdogan Madenci has been a faculty member of aerospace and mechanical engineering at the University of Arizona. Prior to his academic appointment, he worked in the aerospace industry for many years. He has authored more than 300 technical articles on structural dynamics, fracture mechanics, failure analysis, finite and boundary element methods, plates and shells, buckling/post-buckling of aerospace structures, and peridynamic theory. Madenci is the lead author of three books: *Peridynamic Theory and its Applications*, *The Finite Element Method and Applications in Engineering Using ANSYS*, and *Fatigue Life Prediction of Solder Joints in Electronic Packages* with ANSYS. Ph.D. (1987), University of California, Los Angeles.

Pedro Mago



Pedro Mago, TVA Professor of Mechanical Engineering at Mississippi State University, has earned a reputation as an outstanding educator and researcher. He was inducted into the Bagley College of Engineering Academy of Distinguished Teachers for his outstanding teaching career at MSU. He has made significant contributions to the field of energy, especially in combined heat and power and waste heat recovery technologies. Mago has published over 130 journal articles, conference papers, and book chapters. He was recognized as the BCoE 2013 Outstanding Fac-

ulty Researcher for all his accomplishments. Ph.D. (2003), University of Florida.

Harry F. Martin



Harry Martin has a Bachelor and Master of Science Degree in Mechanical Engineering. His experience includes design, product and technology development, and the operation of steam turbines. His published papers have included the subjects of turbine design, blading development and operation of steam turbines, including transient analysis. Martin has 10 patents. His technical specialization is in thermodynamics, fluid mechanics, and heat transfer. He is past Chairman of the Turbines, Generators and Auxiliaries Committee of the Power Division of the American Society of Mechanical Engineers. Martin authored the chapter on steam turbines for power generation, published in the *Energy and Power Generation Handbook*, ASME Press 2011. MSME (1966), Drexel University.

David F. Merrion



David Merrion has been involved with diesel engine engineering for 60 years and has distinguished himself as an engine designer, exhaust emissions expert, engineering manager, company executive, emission compliance auditor, consultant, and member of the board of directors. His accomplishments include designing five new diesel engines, discovering the cause of hydrocarbons and odor in diesel exhaust, leading the engineering department of a major diesel engine and transmission manufacturer, being a member of the team to purchase several companies after taking a company public, serving as compliance auditor reporting to EPA, and consultant to several companies and the National Academy of Science. MSME (1959), Massachusetts Institute of Technology.

Masaki Morishita

Masaki Morishita has 23 years of experience in structural design related research and development activities, with a focus on elevated temperature design and seismic issues of fast reactors. As a unit man-

ager, he is currently responsible for R&D covering structural design and integrity, seismic issues, thermal-hydraulics and safety study for next generation sodium fast reactors. Morishita is a member of the BPV III Standards Committee and Chair of the Subgroup High Temperature Reactors, which is responsible for the development and maintenance of Division 5 of the Section III Code. He has also been deeply involved in developing of an elevated temperature design code for fast reactors as part of the JSME nuclear codes and standards. Ph.D. (1982), University of Tokyo.

Vivek Mukhopadhyay



Vivek Mukhopadhyay has 40 years of research and teaching experience in the areas of aerospace design, optimal control, aeroelasticity, and structural dynamics. He has published numerous technical papers in archival journals, NASA and AIAA publications. Mukhopadhyay has made key contributions to the following NASA Langley projects: Aeroelastic Research Wing; Active Flexible Wing; Flutter Suppression; Load Alleviation; Controller Performance Evaluation; Benchmark Active Control Technology; Hybrid Wing Body Vehicle Design; Aeronautical Systems Analysis, Design & Optimization; Truss Braced Wing Research; Advanced Composite; and the Environmentally Responsible Aviation Research Program. Mukhopadhyay is an AIAA Associate Fellow. Sc.D. (1972), Massachusetts Institute of Technology.

Thomas J. Muldoon



Thomas Muldoon is recognized for his work in the thermal development of a feedwater heater desuperheating zone utilizing a No-Tube-In-Window baffle configuration. The development process included critical vibration analysis to address overload flow conditions and row by row thermal heat transfer evaluation. Muldoon presented supporting criteria in Code Case 2470 (BC04-490) which has been accepted and included in the ASME Codes Section VIII, Division 1 for the process for explosive tube to tubesheet welded joints. This process includ-

ed specific procedure and process criteria including proof that the joint was as good as a similar TIG welded joint. MBA (1981), University of Wisconsin, Oshkosh.

Andrew P. Murray



Andrew Murray has made fundamental contributions in several areas of mechanism synthesis. Notable among these is his recent work on designing shape-changing mechanisms with applications in variable geometry extrusion dies and morphing airfoils. Murray teaches innovative design-based courses and has been recognized on multiple occasions for his excellence in teaching. He has served his community as Program Chair of the ASME Mechanisms and Robotics Conference, General Program Chair of the ASME International Design Engineering Technical Conferences and as Associate Editor for the ASME Journal of Mechanisms and Robotics. Ph.D. (1996), University of California, Irvine.

Nirm V. Nirmalan



Nirm Nirmalan has extensive experience in prototype testing on gas turbines, conducting experimental research, and development with emphasis in the area of gas turbine pyrometry and advanced turbine cooling. Nirmalan's experience includes program managing and execution, writing and presenting proposals and reports, designing engine tests and experimental rigs, modeling cooling techniques, writing data acquisition software, and acquiring and analyzing data. Applications for his research and development undertakings include optical temperature measurements, film cooling, liquid cooling of rotating and stationary airfoils, and thermal non-destructive evaluation. Ph.D. (1986), Iowa State University.

Marcia K. O'Malley



Marcia O'Malley has made significant contributions in the dynamics and control of mechanical systems, particularly those de-

signed to physically interact with humans. She has distinguished herself through high-impact research, education and service contributions. These include the design and clinical implementation of robotic exoskeletons for upper limb rehabilitation after neurological injury, the use of haptic feedback to enhance skill acquisition, training, and interaction in virtual environments, and the use of interactive haptic devices for education at the undergraduate level. O'Malley has also distinguished herself through service to the engineering profession through her activities in ASME. Ph.D. (2001), Vanderbilt University.

Kevin N. Otto



Kevin Otto is an outstanding engineer, an excellent researcher, and a noted educator. As an engineering consultant he has solved problems for companies in areas ranging from product development process improvement to energy management. As a design researcher, he has made important contributions in the areas of quality improvement, robust design methods, product portfolio definition, interpretation of customer needs, and the design of energy efficient buildings. Otto has received the Joseph Keenan Award and the Ralph Teetor Award, both for innovations in teaching. His range of accomplishments reflects both his versatility and his extraordinary engineering skills. Ph.D. (1992), The California Institute of Technology.

Brad E. Paden



Brad Paden is recognized for theoretical contributions in control, including nonsmooth stability theory, inversion of nonlinear systems, and control of robot manipulators. He has also led major design projects including the mechatronic design of left-ventricular assist devices (a form of artificial heart). He has over 120 technical publications and 17 patents. Paden has been awarded the ASME DSCD Kalman Best Paper Award, the ASME DSCD Draper Innovative Practice Award, and the IEEE Control Systems Society Technology Award. He is also an IEEE Fellow and AIMBE Fellow. Ph.D. (1985), University of California, Berkeley.

Robert I. Parry

Robert Parry has made outstanding and sustained contributions to ASME O&M Codes and Standards for over 20 years. He led the development of a ASME O&M Code process that allows flexibility in achieving check valve performance improvement through optimization of testing and maintenance activities. This breakthrough process, Condition Monitoring of Check Valves, is currently employed by more than 20 nuclear power plants worldwide. NRC and the industry regard Seabrook Station, where Parry is responsible for all the ASME in-service test programs, as the model in the nuclear industry. Parry has also been a leader in the nuclear industry. BS (1972), Worcester Polytechnic Institute.

Assimina A. Pelegri



Assimina Pelegri is professor and executive officer of the department of mechanical and aerospace engineering at Rutgers University and the director of the advanced materials and structures laboratories. In her academic career of the last fifteen years, she has made significant contributions to the areas of composites failure evolution, soft tissue behavior, nano-indentation, thin film characterization and bio-mechanics. Pelegri has organized numerous ASME symposia, has served as chair of the ASME AMD composites committee, JEMT and AIAA journal associate editor, technical program chair of ASME IMECE 2012 and 2013, and general program chair for IMECE 2014. Ph.D. (1997), Georgia Institute of Technology.

Yoav Peles



Yoav Peles is a leader in convective heat transfer in micro domains including single-phase flow, flow boiling, instability, and enhancement techniques. He has pioneered quantification of flow instabilities in microchannels through his extensive experimental and analytical modeling work, resulting in a number of publications and a book entitled *Contemporary Perspectives on Flow Boiling Instabilities in Microchannels*. Peles has organized several International Conferences and workshops. He chaired the ASME 11th ICNMM conference and recently chaired, together with professor Evelyn Wang, an NSF/ONR/

DARPA sponsored International Workshop on Nano and Microstructures for Phase Change. He received the ONR Young Investigator Award and the DARPA/MTO Young Faculty Award. D.Sc. (1999), Technion—Israel Institute of Technology.

Pedro Ponte Castaneda



Pedro Ponte Castaneda is an accomplished mechanical engineer and scholar. His research, teaching, and service to the applied mechanics and mechanics of materials communities have greatly advanced the theory and use of composite materials in a wide range of technologies. The technique he established for estimating the effective properties of nonlinear materials based upon a linear comparison material is a highly-cited hallmark. Ponte has over 150 publications and has received many honors. He has taught countless numbers of mechanical engineers over 25-plus years and has supervised over 20 Ph.D. students and post-doctoral fellows. Ph.D. (1986), Harvard University.

Siddiq M. Qidwai



Siddiq Qidwai has a diverse portfolio of accomplishments in the field of smart material behavior, multifunctional composite design, microstructure-sensitive modeling of materials, and biomechanics of injury. His research focuses on multiphysics phenomena with emphasis on the use of computational mechanics and materials science techniques guided by experimental knowledge to understand the driving mechanisms of performance in complex materials systems. Qidwai has also provided sustained and energetic service to the mechanical engineering profession through leadership in ASME as Chair of the 2000-plus member Washington D.C., Section, member of various technical committees, symposium organizer, reviewer and monograph editor. Ph.D. (1999), Texas A&M University.

Jinhao Qiu



Jinhao Qiu has earned outstanding reputations in research of smart structures, including vibration and noise control, struc-

tural health monitoring, novel piezoelectric actuators and adaptive structures, while conducting university education at both undergraduate and graduate levels. Qiu began his research in smart structures in the early 1990s and has now published more than 260 journal papers. He has also received several research awards. He was promoted to full professor at Tohoku University in 2004. He moved to the Nanjing University of Aeronautics and Astronautics in 2007, where he continues his research. Ph.D. (1996), Tohoku University.

Dhanireddy R. Reddy



Dhanireddy Reddy, chief of the aer propulsion division at NASA Glenn Research Center, has earned his outstanding reputation in research and development through personal contributions as well as serving in various leadership positions during his career. His focus has been in technology advancement in aerospace propulsion, including air-breathing propulsion as well as auxiliary and primary spacecraft propulsion for near-Earth and deep space missions. As a researcher, he has significantly advanced the state of computational fluid dynamics technology to enhance the understanding of key flow physics in advanced aerospace propulsion systems. In his 25 years of holding leadership positions, he has provided vision and motivation to the research groups he has led. Ph.D. (1983), University of Cincinnati.

Earl David Reedy



E. David Reedy, Jr. is known for developing techniques to predict the fracture of laminated, bonded, and coated materials. The hallmark of his work is the coupling of rigorous analysis with carefully planned experiments. He is best known for his development of a technique to predict failure at bi-material corners. He is the author of thirteen journal articles and one book chapter on various aspects on this topic. He has also made significant contributions that furthered the understanding of composite material failure, adhesive contact of coated materials, the strength of micromachined silicon, and the separation of patterned interfaces. Ph.D. (1977), Harvard University.

ASME 2014 FELLOWS

Christopher B. Rogers



Chris Rogers is an award winning teacher and research mentor with accomplishments in many disciplines. He has developed unique metrology techniques with Intel, worked with Steinway on piano analysis, studied aircraft noise with McDonnell Douglas (now Boeing), developed teaching tools with LEGO Education, developed software with National Instruments, and measured the burning of furniture in New Zealand. The Tufts Center for Engineering Education Outreach, which he co-founded and co-directs, is recognized internationally for its work on identification and understanding of learning and the development of tools that leverage that knowledge. Rogers has run workshops throughout the world on hands-on learning techniques. Above all, he loves to teach students ranging from grade school through post-docs. And has successfully flown over 700 parabolas on NASA's O-g aircraft without getting sick. Ph.D. (1989), Stanford University

Paul D. Ronney



Paul Ronney is a professor in the department of aerospace and mechanical engineering at USC. His research interests include microscale combustion, flame ignition, turbulent combustion, edge flames, internal combustion engines, micro-gravity combustion, fire spread and biophysics of bacteria. He's had experiments flown on three Space Shuttle missions and was a Payload Specialist Astronaut (Alternate) for two. Ronney received the National Science Foundation Presidential Young Investigator Award, a Best Paper Award from the *Journal of Automobile Engineering*, and the Bernard Lewis Lectureship Award of the Combustion Institute. Sc.D. (1983), Massachusetts Institute of Technology.

Virginia W. Ross



Virginia Ross has had a long and outstanding career as a mechanical and computer engineer and project manager. Her achieve-

ments in the field of project management include work on DARPA and Air Force programs dealing with cloud computing and computer facility management at the Air Force Research Laboratory in Rome, NY. Ross has chaired and co-chaired conference sessions on computer architecture, served on the ASME nominating committee, and is District A History and Heritage Chair. Through her involvement with ASME, she has been a role model for what can be accomplished through volunteering. Ph.D. (2010), Capella University.

Akshai K. Runchal



Akshai Runchal is an internationally recognized scholar, researcher, educator and entrepreneur. During his 45-year career, he has taught and conducted research at premier institutions including IIT Kanpur, Imperial College, London, UCLA, and Cal Tech, Pasadena. He has published over 200 technical papers and research reports and has consulted with over 200 clients in 22 countries. Runchal is a founder of the ACRI group of companies in the U.S., France, and India, and has set up the CFD Virtual Reality Institute to bring CFD tools and training to practicing engineers. Ph.D. (1969), Imperial College, London.

Kazuhiro Saitou



Kazuhiro Saitou is an expert in design optimization. His work on assembly synthesis advanced the practical application of structural optimization by incorporating design for manufacturing and assembly criteria in a rigorous optimization framework. He has co-authored more than 150 technical papers, which have been widely cited. Saitou served as the faculty adviser for the University of Michigan Solar Car team, which won two National Championships during his tenure. He provided outstanding leadership in the ASME Design Engineering Division by serving as conference chairs, technical committee chairs, and a journal associate editor. His services to other professional societies are equally impressive. Ph.D. (1996), Massachusetts Institute of Technology.

John Saylor



The career of John R. Saylor has included positions in industry, government, and academia. He is a professor of mechanical engineering at Clemson University where his research focuses on problems in interfacial hydrodynamics and transport. He has authored seminal papers on the role of surfactant monolayers in interfacial transport. He has also worked on the use of microfluidics for biomedical applications such as drop generation for the treatment of asthma, and miniaturized flow cytometry. Saylor was an NRC Postdoctoral Fellow at the Naval Research Laboratory where he later joined the scientific staff. His current work focuses on the use of ultrasonics to improve the scavenging capability of water sprays. Ph.D. (1993), Yale University.

Douglas A. Scarth



Douglas Scarth is an outstanding engineer involved in structural integrity evaluation of nuclear components. He is well known in ASME Codes and Standards as an active member of the Section XI Standards Committee as well as chair and member of a number of Working Groups. He is also involved in the ASME Pressure Vessel and Piping division as a member of the executive committee and chair of the Honors and Awards Committee. Scarth has served as Associate Editor of the *ASME Journal of Pressure Vessel Technology*. He has received numerous awards and has published over 60 technical papers. Ph.D. (2002), University of Manchester.

Dennis J. Schumerth



Dennis Schumerth has more than 45 years of technical and managerial service accomplishments within the electric power generation business and is currently considered by many to be the industry authority regarding titanium tubed main steam surface condensers. He is an acknowledged industry spokesperson and author of many published technical papers for ASME, EPRI, Power, Energy Tech

Magazine and the Heat Exchange Institute. Schumerth has organized, chaired and served on numerous ASME and EPRI Technical Panels and Short Courses related to condenser experiences. He is a past or continuing member of professional societies including NACE, ASTM, HEI, ITA, SAE and is former Secretary and active member of the ASME Power Division Heat Exchangers Committee. Electrical Engineering Technology (1968), Milwaukee Institute of Technology.

Paul Shang



Paul Shang is recognized for his leadership and management of technology development programs that achieve and maintain stealth performance of naval platforms. Of particular note are the contributions he has provided to the design of current and future naval vessels. His technical and organizational leadership has been critical in addressing the challenges of providing both ship designs and on-board systems that achieve superior stealth performance and can be built and maintained affordably. All of these achievements are a testament to his skills as an engineer, program manager, and leader of a large and diverse organization. Ph.D. (1984), Rutgers University.

Kristina A. Shea



Kristina Shea has made original contributions to new computational design models, methods and tools that enable the design of more innovative and complex engineered systems and products as well as automate the design and fabrication processes. Her main contributions are in the areas of computational design synthesis and optimization, digital design-to-fabrication and model-based design. She has successfully applied her research internationally in the domains of transportation, mechatronics, consumer products and buildings. Shea has also made significant contributions to education in engineering design and computing at four top universities in Europe, and actively supports young women academics in engineering. Ph.D. (1997), Carnegie Mellon University.

Chiang Shih



Chiang Shih has made significant contributions in education and research and development in the FAMU-FSU College of Engineering during its formation years. He participated in curriculum development, research advancement, and service to the community. He served as the Chair for the department of mechanical engineering between 2002 and 2011, overseeing unprecedented growth of its educational program as well as the establishment of several research centers, including the Aero-propulsion, Mechatronics and Energy Center which he currently serves as Director. Shih has received teaching and advising awards. He is dedicated to engineering education with a focus on holistic professional preparation for engineering graduates. Ph.D. (1988), University of Southern California.

Hossein Shodja



Hossein Shodja is recognized for his work on various problems in the field of theoretical and applied mechanics, particularly, nano and micro-scale modeling of defects in ultra-small objects and thin films via atomistic approaches, augmented continuum theories, and micromechanical considerations. He's worked on capturing surface and size effects, and ab initio calculations of the characteristic lengths of the crystalline materials in first and second strain gradient elasticity. Shodja employed the combined analytical and first principles calculations based on density functional theory to study the mechanical behavior of carbon nanotubes. He determined the surface energy, surface stress, and surface elastic constants of ideal and reconstructed surfaces via combined first principles and analytical treatments. Ph.D. (1990), Northwestern University.

Rifat Sipahi



Rifat Sipahi is a productive researcher, highly committed to quality teaching, and a visible leader within the mechanical engineering profession as well as in the ASME community. His expertise in control systems and in time delay systems is

nationally and internationally recognized. Sipahi is also dedicated to professional service as evidenced by his many roles taken in many capacities within ASME, IEEE, and IFAC communities. His quality of teaching and his scholarly work have been recognized with two awards from the College of Engineering at Northeastern University. He was also one of the recipients of the 2011 DARPA Young Faculty Award. Ph.D. (2005) University of Connecticut. (Photo: Courtesy of Mary Knox Merrill/Northeastern University).

Bo Song



Bo Song has over twenty years of experience working on turbomachinery and gas turbines, with varying roles including lecturer, researcher, engineer, and entrepreneur. His extensive professional efforts have significantly contributed to academia and industry, promoting advanced technology for turbomachinery and gas turbines. As an entrepreneur, he led his team to produce a new broad centrifugal product line. This included development, manufacturing, testing, and marketing. He has 28 publications, 16 patents, and numerous honors and awards, including AIAA Associate Fellow, AIAA Outstanding Paper Award, ASME Journal Top 10 Most Downloaded Articles, and three China national awards. Ph.D. (2003), Virginia Tech.

Xubin Song



Xubin Song has made outstanding contributions to energy-efficient vehicle technology and has served the engineering community. He is a world-class professional in controllable suspensions and vehicle power management with application to automated manual transmissions and hybrid-electric and electric vehicles. His pioneering effort on adaptive shifting control with "Look Ahead Systems" can lead to considerable fuel economy improvements, using engine fuel map, GPS based geographic maps, and real-time traffic data. He has six U.S. and European patents with another 30 invention disclosures and more than 20 invited presentations to conferences and universities worldwide. Ph.D. (1999), Virginia Tech.

Zoltan Spakovszky



Zoltan Spakovszky is recognized for his achievements in two different venues. One is sustained and outstanding research contributions on unsteady flow and aeromechanical vibrations in turbomachinery and gas turbine engines, including first-of-a-kind descriptions of instabilities in axial and centrifugal compressors, rotor whirl, and acoustics of novel aircraft. A second is excellence in engineering education, on both undergraduate (thermodynamics and propulsion) and graduate (internal flow in fluid machinery) levels. Spakovszky's classes are marked by a strong interaction that promotes deep learning and enables students to apply, in new and innovative fashions, the concepts that are taught. Ph.D. (2000), Massachusetts Institute of Technology.

Natteri M. Sudharsan



Natteri M Sudharsan is a multifaceted personality. He has served with distinction in various academic capacities. He was teachers' nominee in the college academic council and has several highly cited publications in the area of engineering in medicine. Sudharsan is well known in the engineering services industry for his consultancy and training in Computational Fluid Dynamics. An ASME member for over 25 years, Sudharsan played a pivotal role in rejuvenating the India section that has the largest number of student members. He also leads a small business manufacturing specialized equipment for defense and aerospace industries on a turnkey basis. Ph.D. (2001), Nanyang Technological University, Singapore.

Yu Sun



Yu Sun is a professor at the University of Toronto and the Canada Research Chair in Micro and Nano Engineering Systems. He established an internationally recognized research program in physical manipulation and characterization of cells and nano-materials. A global leader in the development of micro-nano robotics and device technologies for biomedical, clinical, and precision instrumentation disciplines,

he has invented automated processes for cell manipulation that are revolutionizing how genetic studies, cancer research, and clinical cell surgery and diagnostics are conducted. Sun is a Fellow of the Engineering Institute of Canada and currently holds an NSERC Steacie Fellowship. Ph.D. (2003), University of Minnesota, Twin Cities.

Kenichiro Takeishi



Kenichiro Takeishi earned the JSME award in education while contributing to the development of high temperature industrial gas turbines, research on cooling and heat transfer of gas turbine blades and vanes, and supersonic flow. He has already contributed more than 35 years to the society of engineers. Takeishi continues to be involved as a professor and devoted to fundamental research on heat transfer of gas turbines. After moving from industry to academia, he directly supervised 52 undergraduates and 35 graduate students. Ph.D. (1995), Osaka University.

Darryl G. Thelen



Darryl Thelen has conducted fundamental research in neuromuscular biomechanics. He has developed a number of unique computational and imaging tools for investigating the mechanics, dynamics, and control of motion of the human body, and he has applied these tools to study prevention and rehabilitation of injuries associated with the musculoskeletal system. He has also used these tools to analyze the design of rehabilitation devices and for predicting the functional consequences of orthopedic surgical interventions. Thelen's studies have established a body of knowledge on the role that age, injury, and disease have on musculoskeletal performance. Ph.D. (1992), The University of Michigan.

Fan-Gang Tseng



Fan-Gang Tseng is an internationally recognized expert in microfluidics and BioNEMS research and education. He co-invented a breakthrough micro droplet generator operated at an ultra-high droplet

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generation rate without satellite droplets. The formed droplets can be self-propelled on a nano-engineered surface with world-record speed. Tseng also served as an Associated Vice President, Deputy director, and Department Chair at National Tsing Hua University. He received many awards, including the NSC Excellence in Research award, the National Innovation Awards, the NTHU Excellence in Teaching award, and numerous best papers/poster awards. Ph.D. (1998), University of California, Los Angeles.

Kimberly L. Turner



Kimberly Turner has made major contributions in the area of micro-electro-mechanical-systems and is also recognized for her extensive service to her professional community. She has served as Chair of the ASME MEMS Division and in numerous leadership roles for technical committees and for the organization of conferences. Her research has made significant contributions to bio-inspired adhesives and the use of resonant devices for sensing and signal processing. Turner has authored over 50 journal papers on these topics, is listed as an inventor on seven U.S. patents, and regularly serves as a consultant for leading micro-systems companies. Ph.D. (1999), Cornell University.

Herbert B. Voelcker



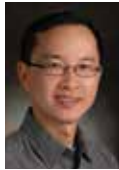
Herb Voelcker formed and led the team that established the mathematical foundations for solid modeling—the core technology in contemporary CAD systems—while also developing, with industrial collaborators, first-generation modeling-system technology. Even after the realization of his work in commercial CAD systems, Voelcker continued making significant contributions to solid modeling R&D and developed university courses and industrially oriented short courses to disseminate the new technologies. He continues to teach and to work with the Y14.5.1 committee charged with rigorizing the national tolerancing standard, and will soon release a needed teaching monograph on tolerancing. Ph.D. (1961), Imperial College of London, UK.

Chow Wan Ki



Chow Wan Ki is recognized for his thirty years of research in architectural science and fire engineering. He has made contributions to building fire safety, fire suppression systems, atrium fire engineering, building energy efficiency, and indoor environment quality. He helped develop the fire engineering discipline and led associated professional activities. Ki developed the master degree programme in fire and safety engineering with over 300 quality fire engineers graduated at Hong Kong Polytechnic University since 2001. He has published over 470 refereed journal papers and successfully graduated about 50 Ph.D. students. His research results have assisted the government in reviewing fire safety provisions for over 200 construction projects. Ph.D. (1983), University of Hong Kong.

Gaofeng Gary Wang



Gaofeng Wang is recognized for his work in both scholarship and education. He has also provided exemplary service and citizenship at local, national, and international levels. Wang has developed a series of leading algorithms in the area of metamodel based design optimization, which have been used by researchers worldwide. Wang has also developed innovative curriculums in engineering education, and taught numerous undergraduate and graduate students. He has also provided diligent services and leadership for the Technical Committee of Design Automation of ASME in the past years. Ph.D. (1999), University of Victoria, BC.

Lihui Wang



Lihui Wang is an internationally recognized front-runner in innovative manufacturing research and education. His contributions to mechanical engineering include the development of a novel technique that enables adaptive mesh generation for dynamic finite element analysis, and methods to improve responsiveness and dynamism of manufacturing operations with uncertainty through well-informed,

adaptive decision making, by means of distributed process planning and Web-based Integrated Sensor-driven e-Shop Floor (Wise-ShopFloor). For these contributions, Wang has been recognized with honors and awards, including membership of the Swedish Production Academy Presidium and Fellow of the Society of Manufacturing Engineers. Ph.D. (1993), Kobe University, Kobe, Japan.

Xinwei Wang



Xinwei Wang has contributed greatly in micro and nanoscale thermal probing and characterization, and laser-material interaction. He has developed six novel technologies for thermal characterization at the micro and nanoscale. His work has built new knowledge about thermal/electrical transport in metallic films down to 0.6 nm thickness. His molecular dynamics research on laser-material interaction provides in-depth understanding of underlying complex physics, especially shockwave structure and behavior. Using Raman spectroscopy, Wang has achieved sub-nm resolution thermal probing and pioneered thermal transport study in optical near-field and graphene-substrate interfaces. He has authored 88 articles in highly visible journals, one book, and three book chapters. Ph.D. (2001), Purdue University, West Lafayette.

Gregory N. Washington



Gregory Washington is recognized for his scholarship and education, while providing exemplary service to ASME at local and national levels. He is internationally known for research on ultra-lightweight structurally active antenna systems and other structures using “smart materials.” He has served as dean of two engineering programs and is the first permanent African-American dean of engineering at any of the University of California campuses. Washington has received numerous teaching awards, directly instructed hundreds of undergraduates, and graduated 40 graduate students. He has served as an advisor to the Air Force and the National Science Foundation. Ph.D. (1994), North Carolina State University.

Michael E. Webber

Michael Webber is recognized for his contributions to convergence of policy, technology, and resource management related to energy and the environment; for his groundbreaking research on the energy-water nexus; for mentoring the next generation of energy leaders through multi-disciplinary and high-impact research; for his educational work in the collegiate classroom; for his extensive efforts in energy literacy; through general interest articles, new educational programs on public television and radio; and for a globally-available online energy course that reached nearly 45,000 students. Webber's work has heightened public awareness to current energy issues and policy. He is engaged with policymakers through briefings and congressional testimony. Ph.D. (2001), Stanford University.

Kyle Wetzel

Kyle Wetzel is recognized for his original contributions to the development of advanced wind turbine airfoil aerodynamic designs and turbine blade manufacturing. Ph.D. (1995), University of Kansas.

David A. Willis



David Willis joined Southern Methodist University after completing his Ph.D. at Purdue in 2001. He developed the Laser Micromachining Laboratory which investigates short pulse laser-material interactions. His research has been published in the top applied physics and thermal science journals and he has received several teaching awards, including the Golden Mustang and the Altshuler Distinguished Teaching Professor Awards. Willis received the ASME North Texas Section Young Engineer of the Year Award in 2008. He has served on the ASME North Texas Section leadership team for several years, concluding with the Chair position in 2012-2013. Ph.D. (2001), Purdue University

Chee Wei Wong



Chee Wei Wong has made contributions to the control of nanostructures to modify light properties, addressing three themes simul-

taneously: sub-wavelength optics, nonlinear dynamics, and nanoscale optomechanics. He pioneered precision-nanofabricated nanostructures to achieve negative/zero-refractive indices and sub-diffraction focusing. He also demonstrated nonlinear dynamics in ultrafast frequency combs, solitons, and graphene, in the semiconductor chip and at mesoscopic length scales. Wong has examined micro and nano-electromechanical systems, driven by light radiation pressure for precision sensing at and beyond the Brownian noise limit, and laser cooling of nanomechanics. He has instructed more than 600 undergraduates, more than 150 graduate students, and has worked with 30 postdocs and Ph.D.s in his team. Ph.D. (2001), Massachusetts Institute of Technology.

Kristin L. Wood



Kristin L. Wood is an exceptional engineering educator with an outstanding record of research and scholarship in engineering design. Over his 24 year career, he has taught or co-taught 27 graduate and undergraduate courses, and has received 13 teaching awards. He has published over 300 technical papers and advised almost 100 graduate students. Wood has been a consultant for almost 50 companies. Ph.D. (1989), California Institute of Technology.

Christine Q. Wu

Christine Wu's theoretical research on nonlinear dynamic systems has been a significant contribution to engineering applications. Wu has received research awards and best paper awards. She has published over 50 journal papers and 90 conference papers. She has supervised over 70 undergraduate students, 20 graduate students and seven postdoctoral fellows and visiting scholars. Wu has also been active in her professional community and taken a leadership role. She is the current president of CSME and she has tirelessly promoted and supported women developing careers in engineering. Ph.D. (1996), University of Manitoba.

Xinran Xiao



Xinran Xiao has led a distinguished career in industry and academia. She has held a variety of positions, including associate professor of

mechanical engineering at Michigan State University, senior engineer, staff researcher at General Motors, and faculty at Concordia University, Montreal. Xiao has authored over 130 papers. Her work on methods and material models for crashworthiness analysis, dynamic tensile testing, and multiphysics modeling of batteries is respected internationally. She has contributed widely to the engineering profession through her service on professional societies, working groups, and technical committees. She has mentored over 30 graduate students and instructed over 1400 students. Ph.D. (1987), Vrije Universiteit, Brussel.

Maria Yang



Maria Yang has established an exceptional record as a mechanical engineer, researcher and educator in the field of engineering design. Her research has consistently appeared in top international journals and conferences in her field, including the ASME *Journal of Mechanical Design* and ASME Design Engineering Technical Conferences. Several of these papers have received awards for their quality and impact on the larger engineering community. In education, Yang has developed a substantial record of inspiring students to think creatively about the design of products through hands-on projects that consider societal needs as well as engineering and technology. Ph.D. (2000), Stanford University.

Da-Jeng J. Yao



Da-Jeng Yao was the recipient of the 2009 Wu-Da-You Memorial Award from the National Science Council, Taiwan. He is internationally recognized for his seminal contributions to biomedical related microelectromechanical systems. He has contributed with research on fertilization on a chip, electronic noses, thermoelectrics, and digital microfluidic systems. Yao has been the associate editor of IEEE *Nanotechnology Magazine* and on the editorial board of the *Journal of Applied Chemistry*. He has also provided outstanding professional service, including his role as secretary at the Society of Theoretical and Applied Mechanics adher-

ing under the International Union of Theoretical and Applied Mechanics. He has also developed the nanotechnology education program for ten years under the national project. He currently works for the Institute of NanoEngineering and Micro-Systems, National Tsing Hua University, Taiwan. Yao has authored over 200 original papers (about 50 Journal papers), 21 patents, and organized many ASME/IEEE conferences. Ph.D. (2001), University of California, Los Angeles.

Jer-Liang Yeh



Jer-Liang Andrew Yeh recognized for his outstanding work as a researcher, leader, and educator. He has received many awards, including the Distinguished Research Award in Taiwan. Yeh has served as an ASME member for 18 years and he has been an enthusiastic promoter of the ASME Taiwan Section. He was elected as the Chair of ASME Taiwan in 2010. Yeh continues to work to broaden and extend the impact of the ASME via his networking and profession. Ph.D. (1999), Cornell University.

Luzeng Zhang



Luzeng Zhang is a gas turbine cooling designer and industrial researcher. He is recognized for his work in both engineering design and industrial research with Solar Turbines for the past 20 years. He has extensive experiences in gas turbine hot section hardware design and technology development, film cooling and heat transfer, production support, manufacturing and test verification. Zhang is known for his numerical, analytical and experimental capabilities. He is an enthusiastic contributor to ASME heat transfer activities and has been a corporate member since 1993. He has served as a K-14 Gas Turbine Heat Transfer Committee member since 2001. Ph.D. (1993), Texas A&M University.

Xiang Zhang

Xiang Zhang's pioneering research on nanomanufacturing and metamaterial has made a profound impact on nanotechnology and engineering. Zhang developed plasmonic lithography, an enabling technology that

has made a significant impact on modern manufacturing and uses very small wavelengths of plasmons to pattern nanostructures. He has also made many ground-breaking demonstrations of metamaterials, including the first optical super lens, the first optical negative index metamaterials, the first optical invisibility cloak, and the first plasmonic laser. He has contributed to the community with over 200 journal publications, including 50 papers published in *Science*, *Nature* and *Physical Review Letters*. Ph.D. (1996), University of California, Berkeley.

Yongxing Zhang



Yongxing (John) Zhang is a cardiovascular device professional having 20 years of experience in product development. He is currently the principal scientist at the Center for Innovation and Strategic Collaboration, St. Jude Medical. Among his major contributions, he was recognized for his significant role in the development of the technology for cardiac resynchronization therapy for chronic heart failure. More recently, he has been a key team member in developing a renal denervation system for the treatment of resistant hypertension. He has received 32 US patents and published 48 US patent applications. His research has been published in international journals and presented in international conferences. Ph.D. (1994), Old Dominion University.

Zhengji Zhang



Zhengji Zhang is a superb fluid dynamicist with a very wide level of experience. He has excelled at laser Doppler flow measurements and hydraulic engineering in water turbines, pumps, and other products, such as valves, sprays and process equipment. His theoretical approach and publications have been a major factor in changing the way in which the technical community understands problems in this area. He has also had a substantial impact on a number of improvements to products as well as design processes. In particular, his two monographs on laser anemometry and on Pelton turbines have become standard texts in their fields. Ph.D. (1989), Ruhr-University Bochum, Germany.

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