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

Nominated by their peers, these 2012–2013 Fellows have had 10 or more years of active practice and at least 10 years of active corporate membership in ASME.

There are 140 new Fellows out of a total of 3,238.

THE ASME FELLOW

A MEMBERSHIP GRADE OF DISTINCTION

ASME 2013 FELLOWS

A.K.W. Ahmed

A.K.W. Ahmed, professor of Mechanical Engineering at Concordia University, has contributed immensely as an engineering educator and a researcher. His work in road and railway vehicles has been widely recognized. He developed a comprehensive curriculum in Vehicle Systems at Concordia and served as director of the internationally respected CONCAVE Research Centre. He has authored over 100 articles in journals and conference proceedings, a book chapter and a U.S. patent on independently controlled steering. He has worked with many institutions worldwide. He was one of the founding executives of the ASME Quebec section and is now serving on the Advisory Board of the Bangladesh University of Engineering and Technology mechanical engineering journal. Ph.D. (1986), Concordia University, Montreal

William P. Bahnfleth

William P. Bahnfleth has made significant contributions as a professional engineer, educator, scholar, and technical society leader. His research has produced widely cited advances in earth-coupled heat transfer, chilled water systems design, stratified thermal energy storage, UV air and surface disinfection, multizone modeling, and chem/bio risk assessment. He has contributed to the design of more than 25 chilled water storage systems worldwide. Bahnfleth has been active in ASHRAE, the leading global building technology society, with members in 130 countries, for more than 30 years. He will serve as its president in 2013-14. Ph.D. (1989), University of Illinois at Urbana-Champaign.

Heng Ban

Heng Ban has made significant contributions in the areas of research and development, education, and leadership in the mechanical engineering profession. He has advanced the understanding of the thermophysical properties of nuclear materials, especially on the effect of irradiation on thermal conductivity. Ban has won many teaching and student advising awards, and is known to be innovative at integrating research and education. He is currently active with several professional societies, particularly in the thermophysical property research community. Ban has organized international conferences and provided leadership on professional committees. Ph.D. (1994), University of Kentucky.

Ronald E. Barr

Ronald E. Barr is a national leader in engineering education and innovator of the modern 3-D engineering design graphics teaching paradigm. Active in engineering education for 38 years, Barr served as President of the American Society for Engineering Education in 2005-2006. For three decades he has been a leader in transforming the 2-D mechanical drafting course to a modern 3-D solid modeling design course. This work has benefited countless mechanical engineering students. For these activities, he has been recognized with numerous educational awards and received the Orthogonal Medal for contributions in graphic science. Ph.D. (1975) Marquette University.

Dean L. Bartles

Dean Bartles has made contributions in advancing manufacturing technology and public policy. He's also been an advocate of the importance of manufacturing in the United States. His work on modernizing ammunition production has enabled the U.S. to effectively ensure the security of the nation. Simultaneously, his leadership in advancing the state-of-the-art in manufacturing technology, related to adaptive control in machining, has the potential to significantly reduce the amount of energy used in machining. This will help reduce the negative environmental consequences of burning fossil fuels to produce electricity. Ph.D. (2000), Nova Southeastern University.

Javid Bayandor

Javid Bayandor has made significant contributions to the engineering profession. His involvement during the Technology Readiness Phases of A-380, B-747X, and STS-114 investigations with international research teams has led to noteworthy advancements in modern aerospace designs and the development of state-of-

the-art damage analysis and detection techniques for advanced composite aerostructures. Bayandor is the developer of a unique unsteady propulsion system, HYPS. He has been an ASME international leader since 1999, involved in organizing and chairing FED symposia for ten years, and serving as vice-chair and chair of the Fluid Mechanics TC for four years. He's also been track co-chair for the AMD for two years. Ph.D. (2000), Royal Melbourne Institute of Technology.

Joseph Bentsman

Joseph Bentsman is one of the top contributors to dynamics and control for impact modeling superseding Newton and Lagrange formalisms, nonlinear vibrational control theory development, laying adaptive control foundation for systems governed by partial differential equations, bumpless transfer development under uncertainty, dynamic wavelet network-based identification, PDE-based adaptive multi-agent control, power plant control, the first steel casting spray cooling loop closure, the first tight gas-particle flow control, and the first demonstration of non-ionizing radiation effect on lipid-modeling substances. Bentsman is also known as a leading-edge educator, having introduced a sequence of courses in control of systems governed by PDE's. Ph.D (1984) Illinois Institute of Technology.

Delfo Bianchini

Delfo Bianchini has managed large projects and teams of engineers performing extensive nuclear plant work. He was selected by the engineering managers of major US and international corporations to lead the Engineering Management Organization for the entire South Texas Project, Units 3&4 (new generation). Bianchini has managed several large recovery and restart efforts for nuclear power generating units, including Independent Safety Inspection and Appendix R reconstitution efforts. He contributed significantly to the LaSalle station restart efforts and was the responsible director for the restart of both units at the D. C. Cook Plant. All units were successfully restarted. MBA (1989), University of Chicago.

Kristen L. Billiar

Kristen Billiar's contributions are in the fields of biomechanics and mechanobiology. In particular he has contributed to an understanding of the physical properties of biological tissues. and the way in which mechanical forces regulate the development and healing of tissues and the pathogenesis of disease. Billiar's lab engineered two- and three-dimensional tissue mimicking constructs as model systems to study the effects of multiaxial mechanical stimulation on cell physiology, matrix biochemistry, and biomechanics of soft tissues and biomaterials. This work has increased the understanding of the mechanisms by which cardiovascular and skin related diseases affect people from a mechanical perspective. Ph.D. (1998), University of Pennsylvania.

Jeffrey Peter Bons

Jeffrey Peter Bons is an internationally recognized researcher and engineer in the areas of roughness in gas turbine engines with regard to its characterization, the evolution of particulate deposition, and its influence on heat transfer and aerodynamics. He has also conducted seminal research in low pressure turbine separation control, the influence of high intensity turbulence on film cooling and the acquisition of flow and heat transfer data in rotating turbine passages. Six of his papers have won best paper awards in IGTI's Gas Turbine Heat Transfer Committee and one in ASME's Heat Transfer Committee. Bons has won a number of other awards in teaching and research and he has maintained a high level of professional involvement in ASME. Ph.D. (1997), Massachusetts Institute of Technology.

Kenneth S. Breuer

Kenneth S. Breuer is recognized for his innovative research on active flow control, the mechanics of animal flight, and micro- and nano-scale fluid mechanics. Breuer's also known for education leadership via multimedia content delivery, and for his service in nurturing the new field of microfluidics in ASME. Ph.D. (1988), Massachusetts Institute of Technology.

Ronald B. Bucinell

Ronald B. Bucinell is an educator, researcher, and practicing engineer. He is recognized for his expertise in the development, evaluation, and design of advanced composite materials. His contributions include developing and experimental verification of models related to the formation and propagation of damage that results from impact and fatigue loading in composites. As an educator he has been at the forefront of developing international experiences for engineering students, integrating the entrepreneurial mindset in engineering students, and creating laboratory facilities where undergraduates can experience the physical phenomenon they are studying in the classroom. Ph.D. (1987), Drexel University.

Jen-Yuan Chang

A recipient of the ISPS Outstanding Contribution Award, Jen-Yuan Chang is internationally recognized for his seminal contributions to R&D and leadership of precision information storage and processing systems. His notable research contributions in rotating and transporting structure vibrations and mechatronics led to recognitions including Visiting Scholarship/Professorship by NRC-USAF, ASEE and overseas institutions. Chang has been Associate/Technical Editor of two leading journals and has provided outstanding professional service, including Chair of the ISPS Division and Member-at-Large of S&G Group. Currently with National Tsing Hua University, Taiwan, Chang has authored over 100 original papers, 22 patents and applications, and organized many ASME and IEEE conferences. Ph.D. (2001), Carnegie Mellon University.

Junhong Chen

Junhong Chen has made seminal contributions to the general areas of hybrid nanomaterials and their device applications (e.g., sensors, solar cells, lithium-ion batteries), and corona discharge-induced chemical reactions (e.g., ozone production). His research program has attracted nearly $5M in research funding from the NSF (with over 10 grants), DOE, various industries, the State of Wisconsin, and internal sources. Chen's research results have led to eight U.S. patents (three issued and five pending) and nearly 100 papers in high-impact journals. He has been co-organizing a symposium on "Nanomaterials for Energy Applications" at the ASME IMECE since 2007. Ph.D. (2002), University of Minnesota, Twin Cities.

Gary J. Cheng

Gary J. Cheng has advanced the knowledge of advanced materials manufacturing, specifically in laser based micro/nano manufacturing, nanomaterials integrated laser shock peening, and additive manufacturing of functional nanomaterials. His group studied the relationship of processing, structure and the properties of many new techniques. They have been awarded six U.S. patents and have filed for nine. His work has led to important applications in the aerospace, naval, energy and biomedical industries. Cheng has earned many awards, including the NSF CAREER, ONR Young Investigator award, the SME Outstanding Young Manufacturing Engineer award, the ASME Chao and the Trigger Young Manufacturing Engineer award. He is also a Purdue University Faculty Scholar. Ph.D. (2002), Columbia University.

Naomi C. Chesler

Naomi C. Chesler's research seeks to improve cardiovascular health through the integration of mechanical engineering, vascular biology and imaging tools. Her work has advanced knowledge in these fields, and she has educated the next generation of leaders in cardiovascular engineering. Her lab strives to better understand and prevent ventricular failure by focusing on three aspects of physiology and pathophysiology: mechanical properties of large and small arteries, blood flow dynamics and ventricular function. Chesler also conducts assessment-based research on engineer-

ing education to help institutions of higher education create a larger and more diverse pool of future leaders in engineering. Ph.D. (1996), Harvard-MIT.

George T. C. Chiu

George T.C. Chiu is an active researcher in mechatronics, dynamic systems and control. He is well-known for his contributions in motion and vibration control. He was elected a Fellow of the Society for Imaging Science and Technology for innovative research in applying advanced system and control techniques to digital printing and imaging systems. Chiu received the 2010 IEEE Transactions on Control Systems Technology Outstanding Paper Award. He has co-authored over 120 archival journal and refereed conference articles and is the co-inventor of three US patents and six U.S. and international patent applications. He has advised 12 Ph.D. and 24 MS students. Ph.D. (1994), University of California, Berkeley.

Wilson K.S. Chiu

Wilson K.S. Chiu has made contributions to the fundamental understanding and control of new materials created for advanced engineering applications (e.g. fuel cells, batteries, photonics). His research was funded by ARO, DOE, NSF, ONR, and industry, resulting in the publication of 77 journal articles and 123 conference articles and abstracts. Chiu has received prestigious honors such as the ASME Bergles-Rohsenow Young Investigator Award in Heat Transfer, the NSF CAREER Award, and the ONR and ARO Young Investigator Awards. He has been a leader in and energetic contributor to ASME, both through the Advanced Energy Systems Division and the Heat Transfer Division. Ph.D. (1999), Rutgers University.

Kenneth T. Christensen

Kenneth T. Christensen has made noteworthy contributions in fluid mechanics, including uncovering important phenomena associated with turbulent flow over complex roughness and discovering strong consistencies between macroscale flow and thermal transport and microfluidic systems across the laminar, transitional and turbulent flow regimes. He has co-authored nearly 100 archival publications and is the recipient of many national and international awards. Christensen provides leadership in professional societies and service on editorial boards. He is an award-winning educator, having instructed over 1000 students and supervised the research of over 30 students and postdocs. Ph.D. (2001), University of Illinois at Urbana-Champaign.

Emmanuel G. Collins

Emmanuel G. Collins has made significant contributions in two areas of research. First, he has been a leader in the development of numerical algorithms that enable the synthesis of fixed-order, robust controllers using mixed-structured value and maximum entropy theories and the application of these tools to the vibration control of flexible structures. Collins has also been a leader in the development of the perception, control, and planning technologies needed to allow autonomous mobile robots to navigate safely and efficiently in environments with challenging terrains such as sand, snow, mud, loose rocks, thick vegetation, and steep hills. Ph.D. (1987), Purdue University.

Joseph H. Cook, Jr.

Joseph Hank Cook, Jr. is a respected and accomplished Project Manager and Plant Engineer. He has made innovative and cost savings improvements in equipment design and project execution in the manufacturing and design/construction industries. Currently on assignment with Fluor Enterprises at the Savannah River Site in South Carolina, he is focused on nuclear quality and safety for a multimillion dollar waste processing project. Cook has also made significant contributions and provided leadership to ASME for over 35 years. Active since his student years, he later chaired the Northwest Florida Section, and then progressed to Regional (District) and Society-wide leadership roles. As Vice President of the Board on Member Interests and Development, many of his accomplishments were made in student and early career programs. He is currently Chair of the 2013 Nominating Committee. BS (1976), North Carolina State University, PE and PMP.

Marcelo Dapino

Marcelo Dapino is an internationally recognized leader in the area of smart materials with a focus on magnetostrictive materials, dynamic smart systems, and additive manufacturing of adaptive structures. As the first Honda R&D Americas Designated Chair in Engineering and as Associate Director of the NSF I/UCRC on Smart Vehicle Concepts, he has made extensive contributions to research and education in collaboration with industry and government agencies. Dapino is recipient of the ASME Gary Anderson Early Career Award and, along with his students, is recipient of two ASME best paper awards. He serves on the Executive Committee of the ASME Aerospace Division and has served as chair of the ASME Adaptive Structures and Material Systems Branch. Ph.D. (1999), Iowa State University.

Richard Debski

Richard Debski is widely recognized for his contributions to the field of shoulder biomechanics, including: the elucidation of the structure and function of the ligaments, tendons and capsule at the glenohumeral and acromioclavicular joints; and the effects of injuries and repair procedures on joint motion to improve diagnostic, repair and rehabilitation protocols. He is a significant contributor to ASME as an Associate Editor of an ASME journal, and as the current Vice-Chair of the Bioengineering Division of the ASME Biosolids Technical Committee. Debski received the Y.C. Fung Young Investigator Award and the Richard S. Skalak Best Paper Award, both from ASME. Ph.D. (1997), University of Pittsburgh.

Dennis Demoss

Dennis Demoss is the Project Director of seven major projects and engineering teams performing extensive nuclear services work. He served as Project Director (Owner's Engineer) for NRG's STP Units 3 & 4, and Exelon's Project Victoria. He led engineering teams in mechanical calculation and vertical slice design verification programs for TVA's Watts Bar station. Demoss completed projects for balance draft conversions, auxiliary steam boilers, fire protection, and chemical cleaning systems. He was instrumental in development of Sargent & Lundy design standards for fire pumps, diesel generators, and piping specialties. Mr. Demoss is a registered professional engineer in ten states. M.S. (1981), University of Illinois.

Dawn M. Elliott

Dawn M. Elliott has been successful in developing a research program that seeks to understand the mechanisms of structure-function relationships in load-bearing fiber-reinforced tissues and joints, and the associated changes that occur during development, with degeneration and injury, and following therapeutic intervention. Elliott's focus is on determining mechanical factors that contribute to the pathogenesis and progression of intervertebral disc degeneration, and extend to the structure-function of all musculoskeletal fibrocartilages and to tissue engineered constructs. Throughout, her approach has been to develop and apply innovative, cutting edge technologies, including novel mechanical tests, rigorous mathematical models, and state-of-the-art magnetic resonance imaging and analyses. Ph.D. (1999), Duke University.

Gregory Elliott

Gregory Elliott has made noteworthy contributions in fluid mechanics, particularly by advancing innovative experimental diagnostics for capturing important flow and thermodynamic details of high-speed flows and by developing plasma-based methods to control such

flows. He has co-authored over 50 journal and 100 conference publications, and his accomplishments and impact have been widely recognized as evidenced by his receipt of awards, leadership in professional societies and service on editorial boards. Elliott is an award-winning educator, having instructed over 1,000 students and supervised the research of over 50 undergraduate and graduate students, and transformed the laboratory experiences for Aerospace Engineering undergraduates at Illinois. Ph.D. (1993), The Ohio State University.

Hurlel G. Elliot

Hurlel G. Elliot is known for his contributions to the revamp and design of steam turbine and centrifugal compressors. He contributed to diagnosing failure causes of stationary parts in mechanical drive steam turbines and centrifugal compressors and worked to define and implement remedial action. Elliot has also contributed in the field of compressor-frame loading. He was instrumental in assisting industry in formulating an overall parameter, "Frame Loading," to determine the true upgrade potential of compressor trains. He also developed algorithms for partial arc admission on radial bearings loads, especially for extraction turbines which enable calculation of load vectors to validate a vendor's prediction for pressures and forces acting in partial arc admission steam turbines. B.Sc. (1971), University of West Indies.

William Emrich

When William Emrich came to NASA's Marshall Space Flight Center, management discounted nuclear propulsion. His expertise identifying and translating technical needs into operational options was crucial in moving the agency towards nuclear thermal propulsion as an option for future space travel. As principal investigator for the Nuclear Thermal Rocket Fuel Element Environmental Simulator, he has kept nuclear options viable for space endeavors. Emrich's work on the Gasdynamic Mirror Fusion Propulsion Experiment; and the General Purpose Heat Source Simulator educated NASA in applications of nuclear thermal engineering, expanding propulsion options as space exploration advances to Mars and beyond. Ph.D. (2003), University of Alabama in Huntsville.

Andrew M. Erdman

Andrew M. Erdman has made major contributions in research and development and leadership in the engineering profession. He has been dedicated to furthering the state-of-the-art in fluid dynamics and two-phase flow. His contributions include developing advanced thermal performance and flow stability technology for naval reactor applications and leading the development of automated experimental methods, including instrumentation, control, and chemical species identification. Associated publications are classified. He is a qualified instructor in several personality assessment instruments and currently serves as the Walter L. Robb Director of Engineering Leadership Development and Instructor of Engineering Science at The Pennsylvania State University. B.S. (1969), The Pennsylvania State University.

Azim Eskandarian

Azim Eskandarian is known for pioneering contributions to the area of intelligent vehicles and transportation systems to improve vehicle safety. He has developed advanced dynamics modeling methods, signal processing, control systems, and testing for collision avoidance, driver assistance, and semi-autonomous driving. Eskandarian has also made seminal contributions to crashworthiness computational research and post-accident reconstruction directed towards improving vehicle safety. He has also created innovative intelligent transportation and automotive safety engineering academic programs at both the undergraduate and graduate levels. D.Sc. (1991), The George Washington University.

Jinghong Fan

Jinghong Fan is the co-founder and co-chair of the International Conference on Heterogeneous Materials Mechanics. He has developed the multiscale generalized particle method by which molecular dynamics can be extended to the micrometer domain. Fan has done pioneering experimental work to show the quantitative size effects of microstructures on ratcheting (cycle creep), and he developed a hierarchical multiscale method to describe the discovered size effects by linking variables at micro, meso, and macroscopic scales of continuum and the nanoscale through dislocations. Publications include the book *Multiscale Analysis of Deformation and Failure of Materials*. Ph.D. (1983), University of Cincinnati.

Matthew R. Feldman

Matthew R. Feldman has over 25 years experience in the packaging and transportation of radioactive material field. He has led package development, certification, procurement and testing activities and also has experience in the development of used fuel transportation systems. He is currently Chair of the ANSI Accredited Standards Committee N14 Packaging and Transport of Radioactive and Non-Nuclear Hazardous Materials and is also the editor-in-chief of the international journal *Packaging, Transport, Storage and Security of Radioactive Material*. Feldman works at Oak Ridge National Laboratory where he currently serves as the Transportation Control Account Manager for the U.S. DOE-NE Nuclear Fuel Storage and Transportation Project. He has over forty publications and presentations, has been active in the ASME PVP Division for over 15 years and is vice chairman of the OAC Committee. MS (1988), University of Illinois.

Placid M. Ferreira

Placid M. Ferreira has made noteworthy and innovative contributions in multiple areas of manufacturing research, including precision engineering and machine tools, nanoscale manufacturing and flexible automation. He has coauthored more than 100 journal publications, directed a major NSF-sponsored Nanoscale Science and Engineering Center and is currently the Head of a leading mechanical science and engineering department. He has supervised about 20 Ph.D. students and around 50 M.S. students. His contributions and leadership have been recognized by prestigious awards for both research and education. Ph.D. (1987), Purdue University.

Amy S. Fleischer

Amy S. Fleischer is a Professor of Mechanical Engineering at Villanova University and Director of the NovaTherm Research Laboratory. She is recognized as a world-wide expert in thermal-fluid system design. She served as chair of the ASME HTD K-16 Technical Committee and served on the Executive Committee of the ASME EPPD. Fleischer was recognized as the EPPD 2010 Woman Engineer of the Year and was awarded the 2011 ASME K-16/EPPD Clock Award in recognition of her outstanding and continuing contributions to the science and engineering of heat transfer in electronics. She is an Associate Editor of the *Journal of Electronic Packaging*. Fleischer has supported 13 graduate students to degree completion and is the author of more than 60 technical peer reviewed papers. She frequently participates in the organization of leading conferences and workshops. She has chaired more than 20 sessions at conferences and presented more than 40 invited lectures. Ph.D. (2000), University of Minnesota.

Paul L. Flynn

In his more than 35 year engineering career, Paul Flynn has accomplished many significant achievements. In the area of design, his most noted contributions lie in the field of large, medium-speed diesel engines, specifically for use on locomotive, marine, or stationary power generation equipment. He designed and implemented improvements to the GE FDL engine. He led the designs of the first 6000hp NA diesel engine, the first 4500hp Tier 2 emissions compliant NA engine, a 6000hp engine for China, and a 2700hp engine for Europe and Asia, all for GE locomotives. Flynn Established a Mechanical Engineering MSME program between GE Transportation and Case Western Reserve University. Ph.D. (1975), Case Western Reserve University.

Daniel Frey

Daniel Frey has been a member of ASME for 13 years, and is a dynamic hands-on researcher and teacher who has helped bring rigor, without sacrificing creativity, to the field of design. He has made significant contributions to the one-factor-at-a-time approach to robust design. Frey has also made great advances in the study of the cognitive implications of experimental strategies. He is widely recognized for his work in K-12 outreach, and, with David Wallace, played major roles in designing the WGBH television program "Design Squad" which attracts middle-school aged children to study engineering and which was awarded a George Foster Peabody Award. Ph.D. (1997), Massachusetts Institute of Technology.

Xiaosheng Gao

Xiaosheng Gao is a Professor of Mechanical Engineering at the University of Akron. He has made outstanding contributions in developing constitutive models for engineering materials and micromechanics models for ductile and brittle fracture. He is a well-recognized expert in nonlinear fracture mechanics. His research addresses the transferability of fracture criteria from laboratory specimens to structural components. Gao's contributions have received wide attention in the international computational/solid mechanics, materials science and structural integrity research communities. Ph.D. (1998), Brown University.

Jaal B. Ghandhi

Jaal B. Ghandhi has conducted extensive and fundamental research on methods to control emissions and improve combustion in spark-ignition and diesel engines. He has developed a number of sophisticated and advanced laser-based diagnostics for measuring the concentration and temperature fields inside the combustion chamber of operating engines. Ghandhi has advanced the understanding of the physics of the complicated turbulent combustion process, providing a solid basis for the development of new engines with improved efficiency and reduced emissions. The techniques he has developed, and the results of his experiments, are crucial to the generation of new and improved internal combustion engines. Ph.D. (1995), Princeton University.

Urmila Ghia

Urmila Ghia is the most distinguished female Mechanical Engineering faculty member in the history of the Engineering College at the University of Cincinnati. She has excelled in education, research, and professional leadership. She has been teaching for 44 years and has graduated 23 M.S. and 17 Ph.D. students. Ghia has received 82 research grants and contracts providing $28.6 million in support. She has written 400 papers and has been a prominent leader in the ASME For 20 years, having chaired committees and 32 conference sessions. She has received numerous awards and recognitions, including being named fellow of AIAA. Ph.D. (1971), Illinois Institute of Technology.

Amos Gilat

Amos Gilat is an internationally recognized pioneer in the development of novel experimental methodologies in mechanics with a focus on plasticity. He is a leader in the area of experimental mechanics and its applications for investigating material behavior over a wide range of strain rates and temperatures. His texts on MATLAB and numerical methods are among the most popular for undergraduate teaching. He is an excellent instructor mentor. Gilat has served ASME by organizing symposia for several congresses, and presenting invited papers. The experimental techniques he has developed, and his research results are recognized by aerospace and automotive researchers. Ph.D. (1982), Brown University.

Axel J. Glahn

Axel J. Glahn has made and led significant advances to high-temperature, bearing-chamber oil lubrication technology and applications for gas turbine engines. His research began with the development of a laboratory at University of Karlsruhe. He continued research on aircraft bearing-compartment heat transfer, oil distribution and oil recovery at the University of Karls–ruhe and at the United Technologies Research Center. Bearing-chamber lubrication, oil recovery and cooling technology from Glahn's research was shared with the gas turbine industry through technical presentations and was applied at the Pratt & Whitney division of United Technologies Corporation with the updating of standard design procedures and design innovations. Dr. Ing. (1995), Universität Karlsruhe.

Marcelino Guedes Ferreira Mosqueira Gomes

Marcelino Guedes Ferreira Mosqueira Gomes has held high-ranking, responsible positions within Petrobras, the state controlled oil company in Brazil. He is currently president of the Abreu e Lima Refinery. Owned by Petrobras and located in northeast Brazil, it is the largest greenfield industrial project in South America. Gomes has authored and presented numerous papers on subjects in the oil and pipeline engineering fields, holding patents with the company. An early member and Chair of the ASME Pipeline Systems Division, he has held several positions helping PSD and initiating the Global Pipeline Award and participation in the Rio Pipeline Conference. MBA (2000), Catholic University of Parana.

Ambarish Goswami

Ambarish Goswami has made seminal contributions in the field of humanoid robots and to the understanding of bipedal gait. He is an originator of the widely used Compass Gait Model which he has used to elucidate gait stability, period-doubling and chaos. Goswami has contributed richly to the understanding of humanoid robot balance and has introduced the Foot Rotation Indicator point. He has addressed topics such as push recovery and fall control. His work is highly cited and has led to several patents. He has been active as a student mentor, a journal editor and a seminar speaker. Ph.D. (1993), Northwestern University

Ian R. Grosse

Ian R. Grosse has established a well-funded, multidisciplinary research program in the general area of mechanical design with recent contributions in the areas of finite element modeling of biological systems and information modeling to support engineering design in a distributed environment. He has served as co-Director for the NSF Center for e-Design for four years and has secured over $5 million dollars of research funding from federal institutions and industry. Grosse has mentored 34 graduate students and published in over 90 journal articles and refereed conferences papers, including 33 ASME conference papers. Ph.D. (1987), Virginia Tech.

Stephen Hambric

Stephen Hambric has directed flow and structural acoustics R&D programs for the Navy, NASA, US industry, and USNRC. He has authored or co-authored over 70 conference papers and 27 journal articles. Hambric teaches at Penn State University. He is a Fellow of the Institute for Noise Control Engineering and currently serves as vice president of Technical Conferences. Hambric recently served on the ExComm of ASME Noise Control and Acoustics Division, as Associate Editor of the ASME *Journal of Vibration and Acoustics*. He is General Chair of the Internoise 2012 conference in New York. Ph.D. (1995), George Washington University.

William R. Hamel

William R. Hamel is recognized for his leadership, research and development related to telerobotics and for his educational contributions in mechanical engineering. His role in the NASA Flight Telerobotics Servicer and the DOE Decontamination and Dismantlement Programs promoted safe operations in hazardous environments. This, and other research, has been generously shared in numerous publications. His leadership in the profession includes

editorial, organizational and technical posts in professional societies and advisory boards. As educator and administrator Hamel has guided numerous graduate and undergraduate students who study in his technical field and the broader field of mechanical engineering. Ph.D. (1981), The University of Tennessee.

David E. Hardt

Dave E. Hardt has been internationally recognized as an innovator in manufacturing process control. His contributions to the fields of manufacturing process control include breakthrough "firsts" that have enabled large-scale and practical implementation and application of these technologies. His research and development has been on flexible automation and process control, with an emphasis on welding and forming processes. Hardt has also been a leader and an innovator in MIT's undergraduate and graduate education. He has developed numerous courses in manufacturing process control. He is currently Associate Department Head, overseeing undergraduate and graduate education in the mechanical engineering department. Ph.D. (1978), Massachusetts Institute of Technology, Cambridge.

Allan H. Harvey

Allan H. Harvey's expertise comprises chemical thermodynamics, molecular science, and frontier areas of computing and molecular simulation. He has deepened the understanding of near- and supercritical solutions, leading to predictive estimations of properties for practical applications. He has initiated international collaborations on ab-initio calculations of non-ideality of vapors when needed data are scarce or inaccurate. At NIST and within ASME, Harvey plays a central role in disseminating standard reference data for thermophysical properties of water and steam. In IAPWS, he leads global collaborations on property standards for the steam power industry and for aqueous systems. Ph.D. (1998), University of California at Berkeley.

Kunio Hasegawa

Kunio Hasegawa has made numerous contributions to flaw evaluation of nuclear components over 30 years. He has been a member of the ASME Boiler & Pressure Vessel Code Section XI, and he currently serves at Working Group, Subgroup and Standard Committee of Section XI. In addition, he has been committed to the ASME Pressure Vessel & Piping Conference as Technical Program Representative, chair of Codes and Standards Technical committee and associate editor of *Journal of Pressure Vessel Technology*. Hasegawa has received a number of awards. Ph.D. (1973), Tohoku University, Sendai Japan.

Caroline C. Hayes

Caroline Hayes has earned an outstanding reputation in scholarship, education and leadership while providing exemplary service within and outside her institutions, both nationally and internationally. She has given significant service to her institution in creating and leading a new interdisciplinary graduate major in human factors geared towards product design. She has shown leadership in the profession through conference organization, journal editing, and diversifying the student body. She also serves as a role model and mentor for women in engineering. As a department chair Hayes is actively involved with the Society of Women Engineers and Engineers without Borders. Ph.D. (1990), Carnegie Mellon University.

Gregory Holbrook

Gregory Holbrook was awarded the Theodore von Karman Award for the top student in the 1980 von Karman Institute Diploma class. Subsequently, he worked in compressor aerodynamics at Allison Gas Turbine, Indianapolis, Indiana, and Carrier Research Center, Syracuse, New York. In 1988 he joined Honeywell in Phoenix, Arizona, where he is now a staff engineer in compressor aerodynamics. He has been involved in the design, development, and test of gas turbine compressors for aircraft, both fixed wing and helicopters, auxiliary power units, industrial derivatives, and vehicular applications. Holbrook has been active in the IGTI Turbo Expo conferences, serving as author, reviewer, session organizer, session Chair and Co-Chair, and Vanguard Chair of Radial Turbomachinery in 2004. MSME (1978), Iowa State University.

Che-Wun Hong

Che-Wun Hong is currently the director of Green Energy/Molecular Engineering Lab at National Tsing-Hua University. His notable research contributions on fuel cells, solar cells, LEDs, and combustion engines/automotive engineering led to distinguished research awards from the National Science Council and various institutes. He has been actively conducting research with industry to design green energy products. Hong was the general-chairman of International Symposium on Advanced Vehicle Control (AVEC2006) and organizer or co-organizer of many international conferences. Currently, he serves as scientific committee member and editor for many organizations and academic journals. He has authored over 180 technical papers and graduated 81 Ph.D./MSc students. Ph.D. (1987), Imperial College, London, United Kingdom.

Michelle S. Hoo Fatt

Michelle S. Hoo Fatt is recognized for her seminal contributions to research and education in two key areas. The first is blast and impact mechanics of composite structures including low and high velocity impact modeling, blast analysis of composite and sandwich panels, and shells in air and underwater. The second is the mechanics of elastomers and elastomeric foams including dynamic constitutive models and fracture criteria and experimental validation of analysis via high rate testing. Hoo Fatt demonstrates leadership in her profession by serving extensively on the editorial boards of journals, organizing international conferences, and serving as an officer of professional societies. Ph.D. (1993), Massachusetts Institute of Technology.

Roberto Horowitz

Roberto Horowitz is an exemplary scholar and educator. His innovative research in adaptive and nonlinear control, mechatronics, micro- and nanosystems, and intelligent vehicle and highway systems has advanced the state of the art in robotic manipulators, hard disk drives, automobile braking systems, automated vehicle platoons and traffic modeling and control systems. Horowitz has served as Chair of the ASME Dynamic Systems and Control Division. He is an award-winning undergraduate educator, and almost half of his 30 graduated Ph.D. students have gone on to tenured or tenure-track faculty positions. Ph.D. (1983), University of California, Berkeley.

Mahesh Hosur

Mahesh Hosur has an international reputation for his contributions to material science and engineering. He serves as the Director of the Alabama NSF EPSCoR under which he oversees collaborations from all doctoral granting institutions in Alabama. He is also the Director of NSF-CREST, a center for reserach in nanobiomaterials derived from waste and renewable resources. He has been the Principal Investigator on a large number of projects over the last 15 years, which are indicative of his leadership and mentorship skills. Hosur is active in hosting sessions at international conferences, and serves as the main organizer at several conferences at Tuskegee or involving Tuskegee University. He has published over 250 papers in peer-reviewed journals and conferences. Ph.D. (1996), Indian Institute of Science.

Robert Ivester

Robert Ivester has consistently demonstrated research and development leadership skills through his roles as Deputy Program Manager, Executive Secretary, and Project Leader in his 16 years of public service in the Federal government. Through these roles, Ivester has led and managed complex multidisciplinary research and development programs. These programs have resulted in a high return on investment for over $75 million of Federal

resources in advanced manufacturing research and development through substantial improvements in the national competitiveness of mechanical engineers. Ph.D. (1996), University of Massachusetts, Amherst.

Jiin-Yuh Jang

Jiin-Yuh Jang has more than 29 years of experience on research, education, and consulting in the field of mechanical engineering. He has made significant contributions to the areas of heat transfer and fluid mechanics, including flow stability, heat transfer enhancement and heat exchanger design. He has published more than 110 Journal articles and 80 conference papers and has graduated 13 Ph. D. and 95 M.S. students. Jang is currently Distinguished University Professor of National Cheng-Kung University, Taiwan, and has served in several administrative positions. He is on the editorial board of four journals and is a Fellow of ASHRAE. Ph.D. (1983), State University of New York at Buffalo.

Badih Jawad

Badih Jawad has earned an outstanding reputation for his leadership and devotion to academic achievement and education, serving at local community schools. He has received numerous teaching awards and honors. He developed Master's and Doctorate programs in Mechanical Engineering at Lawrence Technological University. He has advised over a hundred undergraduate students and graduated several doctoral students. To date the Master's program is the most successful and fastest growing program in the school. In addition to his academic achievements, Jawad worked in the automotive industry as a research and development engineer earlier in his career. Ph.D. (1988), Wayne State University.

Sankar Jayaram

Sankar Jayaram has made outstanding accomplishments in three distinct fields. First, he is a world renowned expert and pioneer in virtual assembly and virtual reality technologies for engineering design and assembly. Second, he has made a distinct contribution to new consumer media; his team created a technology and brought to market a highly innovative new media experience product that is futuristic and immersive. Third, Jayaram has made seminal contributions to the field of CAD and CAM and interoperability. He was the lead architect on a method, and a product for feature-based CAD translation that enables inter-operability. It is now sold world-wide. Ph.D. (1989), Virginia Tech.

Jionghua J. Jin

Jionghua J. Jin has made outstanding contributions to manufacturing research and education, especially in the area of quality engineering and manufacturing systems. Her research is widely published and cited in leading journals with broad applications in the metal forming and automotive industries. The impact and innovation of Jin's research have been recognized by numerous awards including nine Best Paper Awards, the Forging Industry Achievements Award, and the prestigious NSF CAREER and PECASE Awards. She has also contributed significantly to education, actively advising graduate and undergraduate students, developing new manufacturing courses, and taking leadership positions in manufacturing education programs. Ph.D. (1999), University of Michigan.

Conor Johnson

Conor Johnson is a leader in the field of structural analysis and the use of passive damping treatments for applications in aerospace, civil structures, automotive, and precision machines. He co-invented the SoftRide system that vibration-isolates satellites from launch vehicles, with 28 successful flights to date and eight upcoming launches. Since 1982 he has served as President of CSA Engineering, Inc., now a Moog Company. CSA has won numerous awards, including the National Small Business Administration Prime Contractor of the Year for 2002. Johnson was instrumental in the development of the modal strain energy method for finite element design of damping treatments, a method used world-wide, and was the co-recipient of the 1981 ASME Structures and Materials Award for this work. Ph.D. (1969), Clemson University.

Harley T. Johnson

Harley T. Johnson is a professor in mechanical science and engineering at the University of Illinois at Urbana-Champaign. His research, in mechanics of electronic and optical materials, has applications in microelectronics, photonics, MEMS, and photovoltaics, and is published in more than 60 journal articles and book chapters. Johnson received the 2011 Xerox Award for Faculty Research at UIUC, the 2010 ASME Thomas J.R. Hughes Young Investigator Award for Special Achievement in Applied Mechanics, the 2001 NSF Career Award, and numerous awards for teaching at the graduate and undergraduate level. He is active in ASME, MRS and SES. Ph.D. (1999), Brown University.

Stanley E. Jones

Stanley E. Jones has made outstanding research contributions in mechanics. He made fundamental contributions in hydraulic surge control and pressure generation plus analytical viscoplastic material response, necking in bars and plates, and prediction of forming limits. He has made fundamental contributions to Taylor Impact Testing, penetration mechanics, and interpretation of Taylor test data. Jones chaired both the Mechanics Department and the combined Aerospace and Mechanics Department at The University of Alabama. He made pioneering contributions in the development of online distance learning, writing two books and developing companion interactive courses in linear and nonlinear partial differential equations. Ph.D. (1967), University of Delaware

Shin Hyoung Kang

For the past 30 years, Shin-Hyoung Kang has made key contributions to the global mechanical engineering community as an educator, researcher, government advisor, society leader, and turbomachinery designer. He has served as president of the Korean Society of Mechanical Engineers (KSME), The Society of Air-conditioning and Refrigerating Engineers of Korea (SAREK), Korea Fluid Machinery Association (KFMA), and also as chairman of Asian Fluid Machinery Committee (AFMC). The Korean Government awarded Kang "The Changjo Jang (1st Level)," The Order of Science and Technology Merit on his lifetime achievement and contribution to Korean mechanical engineering. Ph.D. (1978), University of Iowa.

Ann Karagozian

Ann Karagozian is a prominent scientist of international renown who has provided inspiration and leadership in the fields of fluid mechanics and combustion for 30 years. She is author of over 150 archival publications and has made many ground breaking contributions in thermal-fluid sciences. Karagozian has guided a number of graduate students in mechanical aerospace engineering who are now prominent members of the worldwide engineering community. She is a Fellow of the AIAA and the American Physical Society, and is the recipient of the US Air Force Decoration for Exceptional Civilian Service. Ph.D. (1982), Caltech.

Sidney S. Keywood

Sidney S. Keywood, Jr. has made significant contributions to the engineering profession both as a practicing engineer and as an active ASME volunteer. Most of his engineering career was spent with the Monsanto Company in Pensacola, Florida, where, as a Senior Engineering Specialist he led the site's design efforts in pressure vessels, heat exchangers and bolted joints. More significantly, he established site standards for gasket materials which were used throughout the company. Later he worked as a consultiant and developed a software application package for industrial gasket design. He is a licensed PE in Florida and Alabama. MSME (1972), Auburn University.

Brad Lee Kinsey

Brad Lee Kinsey has excelled as a faculty member. In research, he has published over 80 peer reviewed journal and conference pa-

pers, co-edited one book, and mentored 23 graduate students. He received an NSF CAREER award, an ASEE best paper award, and numerous other honors. For his teaching, he received the SAE Teetor Educational Award. With respect to service, Kinsey has volunteered for many ASME positions and is currently on the Executive Committee for the Manufacturing Engineering Division. Finally, he received the UNH Outstanding Assistant Professor Award in 2007 based on his efforts in all of these areas. Ph.D. (2001), Northwestern University.

Melissa Knothe Tate

Melissa Knothe Tate's contributions are in the fields of musculoskeletal biomechanics and mechanobiology. She has provided insight to the mechanisms by which the complex fluid flow patterns in bone tissue affect the resident cells. Tate has also unified computational and experimental modalities across multiple size scales to explain repair and adaptation of biological systems at the cell, tissue and organ levels. These contributions generated translational impact by developing mechano-active bio-inspired materials, implants and therapies for salvaging limbs and extremities damaged by trauma and disease. Ph.D. (1998), Swiss Federal Institute of Technology.

Umesh Korde

Umesh Korde has made contributions to sevearl areas. He implemented an actively controlled reaction mass to provide a stationary onboard/internal reference inertia for efficient wave energy conversion on floating devices. He made future-velocity estimates based on time series analysis for real-time reactive control of wave energy devices in irregular waves. Korde developed 'latching' control from an internal reference on a deep-water floating wave energy device. He controlled submerged inertias to hold a submerged disc stationary for wave energy focusing and conversion in deep water. Korde introduced area-controlled and gap-controlled actuation for stable trajectory control of deformable mirrors for laser focusing and steering. Ph.D. (1993), University of Notre Dame.

Madiha El Mesmelmy Kotb

Madiha El Mesmelmy Kotb heads the Pressure Vessel Technical Division for Regie du Batiment du Quebec. Throughout her career, she has served as a member of numerous ASME Codes and Standards Committees including the Boiler & Pressure Vessel Conference Committee, Committee on Nuclear Certification, Board on Conformity Assessment, Council on Standards & Certification, and Board of Governors. A recognized leader among her peers, she counts among her honors the ASME Dedicated Service Award and the Canadian Standards Association Award of Merritt. Kotb has been elected to the office of ASME Vice President, Conformity Assessment and is the current President of ASME. MS (1981), Concordia University.

Ramprasad S. Krishnamachari

Ramprasad S. Krishnamachari is an expert in Ground Vehicle Mobility and Systems Design. His contributions to engineering design and application include improving mobility and fuel efficiency of ground vehicles and the safety of air transport systems. At General Dynamics, he leads the design and development of automotive systems including powertrains, electric power, suspension, and cooling systems for ground vehicles. Prior to General Dynamics, Krishnamachari worked at the Boeing Company developing simulation models to represent the behavior and functions of aircraft and air transport systems. Ph.D. (1996), University of Michigan, Ann Arbor.

Soundar R.T. Kumara

Soundar R.T. Kumara has made pioneering and innovative contributions in modeling, analysis, and control of intelligent, distributed agent based manufacturing systems and logistics networks. His unique approaches integrate advanced intelligent computational techniques, statistical physics and operations research to solve problems in complex networks, product design and real time monitoring of manufacturing and logistics systems. Kumara's interdisciplinary research in agents, game theory and IT has laid the foundation for DARPA's futuristic information intensive manufacturing systems work currently being done at Penn State University. With an impressive track record of publications, Kumara is also an inspiring teacher and mentor for over 100 doctoral and masters students. Ph.D. (1985), Purdue University.

Wilfred C. LaRochelle

Wilfred C. LaRochelle has over 37 years of experience in ASME BPV Codes activities. Currently he is active in the writing of the drafts relating to Pressure Vessels, Nuclear Components and Conformity Assessment. He actively participates on various C&S committees. He is the Chairman of the Subcommittee on BPV Accreditation and Vice Chairman of the Subcommittee on Nuclear Accreditation. LaRochelle is a member of the Board on Nuclear Codes and Standards as well as the Board on Conformity Assessment. He is active in the promotion of ASME Conformity Assessment Programs worldwide. He has presented the ASME Conformity Assessment process to many international organizations in China, Japan, Korea, France and Czech Republic.

Gina Lee-Glauser

Gina Lee-Glauser has made outstanding contributions in academic and education research management and leadership spanning almost two decades at two different research universities. She pioneered the concept of proactive faculty centered university research services to promote and support research, training and creative activities through sponsored programs. She championed promotion of university-wide multidisciplinary activities; university-industry collaboration to accelerate the transfer of university knowledge to industry to spur innovation and enhance economic impact; programmatic activities to enrich and support underrepresented minority STEM students on campus. Her professional accomplishments are highlighted by her services to engineering educational committees including the ABET Board of Directors. Ph.D. (1994) Clarkson University.

Gwo-Bin Lee

Gwo-Bin Lee is a world-class expert in integrated microfluidic systems and is highly recognized for developing them for a variety of biomedical applications, including fast diagnosis of infectious and genetic diseases. He also plays a leading role in developing microfluidic devices including micropumps, microvalves, microfilters, microswitches and micromixers. His work on combinations of micro- and nano-technology has been recognized worldwide. He is a well-known authority in the interdisciplinary fields of microfluidics and medical electronics. Lee has published 191 SCI journal papers, 320 conference papers and holds 50 patents He has contributed tremendously in educating next-generation engineers in multi-disciplines. Ph.D. (1998), UCLA.

Wallace Woon-Fong Leung

Wallace Woon-Fong Leung has been Chair Professor of Innovative Products and Technologies in Mechanical Engineering at HK PolyU since 2005. Previously, he worked in petroleum and process industries in the United States for 25 years. His research covers nanofiber technologies as applied to filtration of nano-aerosols (e.g. airborne viruses and pollutants); photovoltaics with dye-sensitized solar cells; air and water purification with nano-photocatalysts; wound dressing; rotational microfluidics for micro-mixing and rapid cell culture; and innovative health technologies. He is an authority on centrifugal separation, bioseparation, and fine-particle separation. Leung has developed over 10 new centrifuge technologies and has written two books on centrifugal separation, which are standard references. He holds 41 United States patents that cover various novel technologies. Sc.D. (1981), Massachusetts Institute of Technology.

Winston Lewis

Winston Lewis has an international reputation in engineering, education and innovation; ergonomics; health, safety and the environment; and quality management systems. He has been awarded teaching and distinguished lecture awards and

has authored or coauthored 78 papers, including 40 journal and 38 conference papers. Engineering graduates from the University of the West Indies have benefitted from his supervision of their research projects. These include two Ph.D., three MPhil., and forty-four MSc degrees. In 2008, he was honored by the World Congress of Arts, Sciences, and Communication with the Lifetime Achievement Award for Excellence in Leadership. Ph.D. (1995), Technical University of Nova Scotia.

Wei Li

Wei Li of the Zhejiang University in China has been very active in heat and mass transfer for the last 15 years. His contributions in enhanced heat transfer include thermal systems of high-power electronic devices, nuclear and conventional power plants, refrigeration and air conditioning systems, and petrochemical reboilers. He conducts fundamental research on fouling, supercritical fuel, film evaporation, nanofluid, surface patterning, and wave surfaces of boundary layers. His correlations of micro/mini-scale two-phase heat transfer have been adopted in the *2012 ASHRAE Handbook—Fundamentals*. The results of his fouling research are widely used in the industry. Ph.D. (1998), Pennsylvania State University.

Wei Lu

Wei Lu is an exemplary scholar who has made seminal contributions in mechanics and materials, particularly in the area of behavior of deformation, diffusion and interface motion. He has over 80 archival publications, and 100 presentations at leading institutions and international conferences. His research led to the first integrated analysis of Li-ion battery degradation and a novel mechanism of sequential activation of self-assembly to grow defect-free patterns. He established self-assembly by surface stress, molecular dipoles and double layer charges, and the theory of guided self-assembly. In addition, he has developed a highly visible web-based virtual environment for computational nanotechnology education. Ph.D. (2001), Princeton University.

Richard M. Lueptow

Richard M. Lueptow has founded new academic programs in design, served in major administrative leadership positions, and made significant research contributions related to granular flows, Taylor-Couette flows, filtration, sprays, and physical acoustics. At Northwestern University, he is currently Senior Associate Dean of the McCormick School of Engineering and Applied Science, Co-Director of the Master of Product Design and Development Program, and Professor of Mechanical Engineering. Lueptow held the Charles Deering McCormick Professorship of Teaching Excellence. He has five years of product development experience in the biomedical industry and 23 years of academic experience on the faculty at Northwestern. Sc.D. (1986), Massachusetts Institute of Technology.

Holger Lukas

For 46 years Holger Lukas has contributed to the field of mechanical engineering and applied combustion technology. Since becoming an ASME member in 1971, he has provided service to the Society, including as Past Chair, Board of Directors, ASME International Gas Turbine Institute; Past Chair, ASME Performance Test Committee "3-Fuels"; Professional Development Chair & Secretary, ASME Hudson-Mohawk Section; and Old Guard Competitions Judge, RPI & Union Colleges. Lukas has also served ASME sister-societies, including ASHRAE, AEE, NSPE, SNAME, ASTM and NACE. BS (1966), United States Merchant Marine Academy.

Ramsey Mahadeen

Ramsey Mahadeen has over 40 years of experience working in the shell-and-tube heat exchanger industry. His expertise includes thermal/mechanical design for heat exchangers, software development, and contract and project management. He has been member of the ASME BPV Committee for more than 25 years, is Chairman of the SGHTE, and a member of the BPV VIII Standards Committee. He is a past member of the ANS and the HEI (where he served as President). Mahadeen also was a member of the ASME Committee that published Part 21 for Heat Exchangers in Light-Water Nuclear Reactor Power Plants. BS (1971), University of Michigan.

Michael L. Malito

In a four-decade-long career at Babcock & Wilcox, Michael Malito has contributed to the advancement of design, fabrication, commissioning, testing and servicing of nuclear and fossil power steam generation systems for domestic and international markets. He is a lifetime ASME member and is a strong advocate and supporter of ASME code committee participation. Under his leadership, many engineers have become outstanding steam generation design engineers who continue to serve the power generation industry with a commitment to excellence. MS (1975), University of Akron.

Andreas Mandelis

Andreas Mandelis is an internationally renowned expert in the development of diffusion-wave sciences and associated technologies. He has pioneered and developed numerous theoretical and experimental techniques and devices which are currently being used worldwide for materials research, industrial processes, quality control, dental care diagnostics, and soft/hard tissue imaging. Mandelis has published 328 papers in peer reviewed journals, and he has 29 patents granted or pending. His honors include fellowships in the American Physical Society, the Canadian Academy of Engineering, the Royal Society of Canada, the Society of Photographic and Instrumental Engineers and the American Association for the Advancement of Science. Ph.D. (1979), Princeton University.

Brian P. Mann

Brian P. Mann has earned an outstanding reputation through his excellence in teaching and scholarship, while providing exemplary service to the national and international research communities. His research has uncovered new scientific findings in the fields of energy harvesting and high-speed machining, where he has consulted with many of the top aerospace companies in the world. He has also organized more than 30 conference symposia and received numerous teaching awards, including the SAE Ralph Teetor Award and the Lois and John L. Imhoff Distinguished Teaching Award. D.Sc. (2003), Washington University.

Lance Manuel

Lance Manuel has made significant contributions towards the understanding of flow turbulence, loads, and reliability of wind turbines. He has written 30 journal articles and 80 conference papers, and this work has been adopted in international design standards. Manuel has served on Federal and international committees dealing with wind energy. He is an Associate Editor of the ASME *Journal of Offshore Mechanics and Arctic Engineering*. He has received Best Paper Awards in the areas of wind energy (from ASME's Solar Energy Division) and ocean renewable energy (from ASME's Offshore, Ocean, and Arctic Engineering Division). Ph.D. (1993), Stanford University.

Fujimitsu Masuyama

Fugimitsu Masuyama has earned an outstanding reputation in research and development in materials technology for boilers and pressure vessels. He is the inventor of Grades 23, 122, HCM9M, and HCM12, and has been instrumental in the commercial application of Grades 91 and 92 in ultra-super critical power plants. He is a 25-year member of the ASME Boiler & Pressure Vessel Code Committee, the longest of any member outside the United States and Canada. His leadership in the engineering profession is also recognized by his organization and chairmanship of a number of technical committees for government and professional societies in Japan. Ph.D. (1988), Osaka University.

Karel Matous

Karel Matous has made major contributions to computational mechanics. He has developed new computational methods and pioneered their use in industrial applications. His work on multiscale cohesive modeling of interfaces has led to a fundamental understanding and defined the current state of the art. His research on data-driven modeling with co-designed simulations and experiments has provided new insights into the complex interactions between mechanics and materials science. Matous has organized numerous conference symposia and is an active participant of the ASME Committee on Computing in Applied Mechanics. Ph.D. (2000), Czech Technical University in Prague.

Feroze J. Meher-Homji

Feroze J. Meher-Homji is an expert in the area of gas turbine and compressor engineering. His 37 year career has focused on the design and packaging of rotating machinery, condition monitoring, turbine vibration and diagnostics, design of servo hydraulic auxiliary systems and the engineering, selection and testing of large-scale LNG gas turbine driven compressor strings. He is currently a principal engineer in the Turbomachinery Group at Bechtel Corporation. BS (1975), University of Poona.

Eckart H. Meiburg

Eckart H. Meiburg is recognized for his outstanding leadership and contributions in the area of fluid mechanics, in particular in the areas of vortex dynamics, wake flows, multiphase flows, turbidity currents and the physics of a variety of hydrodynamic instabilities. Ph.D. (1985), University of Karlsruhe.

Matthew Mench

Matthew Mench is internationally known for his research in the field of electrochemical power storage and conversion, including fuel cells and flow batteries. He is the author of a textbook, over 100 publications, and several patents. Mench serves as the Executive Vice President of the International Association for Hydrogen Energy and as an Associate Editor for the *International Journal of Hydrogen Energy*. He is a recipient of an NSF Early Career Development Award, a Research Fellow Award from the University of Tennessee and the Outstanding and Premier Teacher award from the Penn State Engineering Society. Ph.D. (2000), Penn State University.

Patrick F. Mensah

Patrick F. Mensah is a Professor of Mechanical Engineering at Southern University and A&M College. He holds a Formosa Endowed Professorship and is currently the Director of the Advanced Materials Research Laboratory. He has won many awards for his research and teaching. He has made outstanding contributions in thermomechanical characterization and performance modeling of polymeric and ceramic thermal barrier coating materials for high temperature applications with an international reputation in publication, teaching and research. Mensah has made contributions to the engineering profession, including leadership in ASME at the local, regional and national committee level. Ph.D. (1998), Louisiana State University.

John Michopoulos

John Michopoulos has earned international acclaim for research and leadership in many multidisciplinary areas of engineering, science, and technology. His innovative leadership has resulted in the development of the first recursive 6-DoF robotic testing system for the data-driven constitutive characterization of materials. His significant contributions on computational modeling and simulation have been applied to many applications, including data-driven environments for multiphysics applications, optical methods for strain measurement, and electromagnetic launching systems. Michopoulos has served many national and international organizations including the executive committee of the CIE division of the ASME. Ph.D. (1983), National Technical University of Athens.

Ram Mohan

Ram Mohan's 17 years of research and teaching have advanced the state-of-the-art of compact separation technology and process control. He has 219 journal and conference publications, 177 presentations, and one patent. His research is sponsored by major petroleum companies in North America, South America, Europe, Asia, and the Middle East. Mohan has pioneered the development of new standards for compact separation control used by oil the industry with more than 4000 field applications. He is a Professor of Mechanical Engineering at the University of Tulsa and is a recipient of several research and teaching awards. Ph.D. (1996), University of Kentucky.

Zissimos Mourelatos

Zissimos P. Mourelatos is the John F. Dodge Professor of Engineering at Oakland University and the Chair of the Mechanical Engineering Department. He is an expert in engineering design and dynamics, recognized internationally for his contributions in scholarship, education, professional service, and leadership. Mourelatos has made contributions to reliability-based design optimization, uncertainty quantification, decision modeling in design, design optimization of complex structures, structural dynamics, engine dynamics, and bearing lubrication. His combination of industrial and academic experience bridges the gap between industrial relevance and academic rigor. He has received numerous awards and is a Fellow of SAE. Ph.D. (1985), University of Michigan.

Patrick J. Natale

Patrick J. Natale, P.E., CAE, is recognized around the world as one of the leaders in engineering association management. As Executive Director of the American Society of Civil Engineers, he is the chief staff officer for one of the world's largest engineering organizations. Bachelor of Science, Civil Engineering (1970), Newark College of Engineering. Masters in Engineering Management (1975), New Jersey Institute of Technology. Executive Management Program, (1991) Yale University.

David A. Nelson

David A. Nelson has been an outstanding teacher of Mechanical and Biomedical Engineering and has chaired departments in both disciplines. At Michigan Technological University he led the establishment of the Biomedical Engineering Department and degree program. Nelson currently serves as the Chairman of Mechanical Engineering at the University of South Alabama, while directing the USA Ph.D. program in Biomedical Engineering. His research in bio-heat transfer and radio frequency radiation effects has yielded numerous publications and led to the invention of a novel skin blood flow sensor. He also serves as President of Milli–therm Inc., which he founded to commercialize that technology. Ph.D. (1984), Duke University.

Efstratios Nikolaidis

Efstratios Nikolaidis is recognized as an international expert on modeling uncertainties and assessing the reliability of structures under random loads. He has developed novel methods for making design decisions when there is limited information using a structured, risk-based approach. Nikolaidis co-authored the *Engineering Design Reliability Handbook*, as well as *Design Decisions under Uncertainty with Limited Information*. These books explain theories and tools to represent uncertainty and demonstrate real applications for managing uncertainty in product design to achieve significant cost savings and quality improvement. Ph.D. (1985), The University of Michigan.

Muthukumaran Packirisamy

Muthukumaran Packirisamy is a Professor of Mechanical Engineering at Concordia University, Montreal, Canada. His contributions to education and research in Mechanical Engineering in the

areas of turbomachines, microsystems and nano technologies are enormous. They include the design of BioMEMS devices for pathogen detection, cancer detection, detection of growth hormones in milk, and the morphogenesis of plant cells. Packirisamy has more than 300 research publications and 10 patents and has developed and taught many basic and applied engineering courses. He was the treasurer of the ASME Quebec section for many years. He is a fellow of the Canadian Society for Mechanical Engineering, India's Institution of Engineers, and a Professional Engineer of Ontario. Ph.D. (2000), Concordia University.

George Papadopoulos

George Papadopoulos has made outstanding contributions to the engineering profession. In R&D his contributions to the field of fluid mechanics include the development of novel sensors and measurement techniques leveraging Micro-Electro-Mechanical Systems technology and unique implementations of Doppler-shifted Rayleigh light scattering, Laser-Doppler Anemometry, and Particle Image Velocimetry. In leadership, he has made the largest impact within ASME. He has served on many ASME committees since graduate school, including four years on the Fluid Mechanics Technical Committee and five years on the Fluids Engineering Division Executive Committee. For six years now Papadopoulos has served on the Technical Communities Operating Board as the Technical Group Leader for the Basic Engineering Technical Group. Ph.D. (1994), Polytechnic University.

Dmitry Paramonov

Dmitry Paramonov has led the development of a new nuclear core design system for an advanced pressurized water reactor. He was responsible for coordination of multifaceted teams in the U.S., Sweden, and China regarding all aspects of the development including nuclear engineering research, software, development, licensing, and customer delivery in the areas of neutron physics, computational fluid dynamics and fuel rod design. Paramonov successfully led teams through resolution of challenging technology, business, and regulatory issues related to the new product development and maintenance of the current Westinghouse core design system. He has 3 U.S. patents. MBA (2001), University of Pittsburgh.

Toby Kim Parnell

Toby Kim Parnell is Principal and Founder of Parnell Engineering and Consulting. He has provided excellent service within the ASME Santa Clara Valley Section community in technical and leadership capacities. He stresses multidisciplinary collaboration between ASME, IEEE, and other technical groups and he is a Senior Member of IEEE, and a Member of SAE. Parnell was 2011 Chair of the IEEE Santa Clara Valley Section, which has over 12,000 members, and 2008-2009 Chair of the IEEE Consultants' Network of Silicon Valley. He lectures in the Stanford Composites Design Program and works extensively in damage of composite materials. He served as Faculty Advisor for the 2012 Santa Clara University Formula Hybrid Team and taught in Mechanical Engineering at SCU. Ph.D. (1984), Stanford University.

Marc Polanka

Marc Polanka is an Associate Professor at the Air Force Institute of Technology. He previously served as the Director of the Turbine Research Facility at the Air Force Research Laboratory. With over 60 publications in the gas turbine area, Polanka has made a significant impact on heat transfer and cooling in the combustor and turbine sections. He has developed one of the most advanced facilities for testing full scale, rotating turbine sections. His current work in Ultra-Compact Combustors is revolutionary in the integration of the combustor and turbine. Ph.D. (1999), University of Texas-Austin.

Glen Prater, Jr.

In his 29 year career Glen Prater has established a local, national, and international reputation as an engineering educator who has made lasting contributions in teaching, curriculum enhancement, new program development, and scholarship. He has authored more than 50 journal conference papers and served as principal investigator on more than $5 million in externally funded research projects. Prater is primary inventor on three U.S. patents and several pending intellectual property disclosures. He continues to serve the profession through the work of his undergraduate and graduate students, as well as junior faculty members he has mentored. He has been, and remains, a conscientious supporter of his local and student ASME Chapters. Ph.D. (1987), Ohio State University.

Donald D. Quinn

Donald D. Quinn is an expert in nonlinear dynamics and vibrations. He is widely recognized for his use of fundamental principles and creativity in the analysis of engineering systems. He has made important contributions to numerous applications, including resonance capture, vibrational energy harvesting, and passive vibration control. Quinn also serves the professional community with editorial work for four archival journals, active membership on several technical committees, and key organizational roles for several ASME Design Division conferences. Ph.D. (1995), Cornell University.

Veera P. Rajendran

Veera P. Rajendran is an accomplished engineer and technology strategy manager with over 16 years of experience in research, analysis, design, technology development and technology strategy in aero gas turbines, land based gas turbines, novel energy conversion systems and solar power. As Chief of Research and Technology strategy at Rolls-Royce Corporation he leads the development of future gas turbine technologies in multi-disciplinary, cross-functional areas covering all aspects of gas turbine aero engines. His expertise includes experimental fluid mechanics, flow and thermal diagnostics, gas turbine cooling design and energy systems analysis. Ph.D. (1998), University of Iowa.

Bassem H. Ramadan

Bassem H. Ramadan has contributed to the application of computational fluid dynamics to internal combustion engines and to the understanding of the interactions between fluid flow, fuel-air mixing, combustion, and emissions. He has developed computer programs that simplify the meshing process in complicated and novel engine geometries. He has also made significant contributions in modeling and understanding fluid flow in exhaust after-treatment systems. Ramadan has developed several graduate courses, and specialized advanced courses to industry. He co-authored a textbook on fluid mechanics, advised graduate students theses, and is the recipient of outstanding teacher and researcher awards from Kettering University. Ph.D. (1991), Michigan State University.

Eric D. Roll

Eric D. Roll is a highly respected engineer, known for his prowess in high pressure technology. He is an established leader in the area of ASME Codes and Standards development and R&D in the waterjet industry. He has served both as a member on C&S Committees and in leadership positions, including the Vice Chairman of a BPTCS Standards Committee. Roll is a recognized expert in the applications of fatigue and fracture mechanics in high pressure design. He has been active in the ASME PVP Division and was Technical Paper Representative in 1999. He has received several awards for his service. Ph.D. (1993), The Pennsylvania State University.

Thomas P. Ruggiero

During Thomas P. Ruggiero's thirty nine year career, he obtained extensive experience in fluid systems design and retrofit, as well as mechanical component selection, sizing and specification. He has worked as a mechanical engineer for a design organization and for electric utilities. His responsibilities require an in-depth knowledge of the ASME Codes and Standards. Ruggiero is a recognized industry

Code and Standards expert having participated in ASME Codes and Standards for over thirty six years. BS (1974), Pratt Institute.

Mauricio A. Salinas

Mauricio A. Salinas joined the Mechanical Analysis Group of Raytheon's Space & Airborne Systems in 1998. His responsibilities include thermal analysis, design and testing of military electronics. His experience includes the thermal design of night vision cameras, advanced airborne electro-optics, radar systems, and anti-iced radomes. Salinas is an expert in fluid flow simulation via Computational Fluid Dynamic Analysis. He has 15 technical publications in the areas of heat transfer and numerical analysis, and has one patent pending. Salinas also teaches graduate thermofluid courses at Southern Methodist University as an Adjunct Instructor. Ph.D. (2008), University of Texas at Arlington.

Ronald N. Salzman

Ronald N. Salzman's career is bookended with national projects. Salzman started with the Apollo moon landing and recently consulted on the 2010 BP oil spill. Other professional activities have included work as a research engineer and R&D manager, development of a laser velocity mixing lab, the creation of new products (with eight patents and several national product awards), and now consulting with a focus on the power industry. He has authored and presented more than 20 technical papers. Salzman's most recent publications have been on steam turbine corrosion-fatigue. ASME activities have been in the Rochester Section, District A, and the Power Division. Ph.D. (1973), West Virginia University.

Peter Sandborn

Peter Sandborn is a respected researcher in the field of life-cycle cost modeling for systems and he is the preeminent authority on electronic part obsolescence. His contributions have been instrumental in refocusing significant portions of the systems community to include a view of the system life cycle within their design and strategic planning activities. Sandborn has advised 37 graduate students and taught over 40 short courses on cost modeling and obsolescence management to commercial and governmental organizations around the world. Ph.D. (1987), University of Michigan, Ann Arbor.

Juan Gabriel Santiago

Juan G. Santiago has made significant contributions in the areas of microfluidics and fundamental micron-scale flow phenomena. He co-developed micron-resolution particle image velocimetry, a widely used and accurate method of quantifying micro-fluid velocities. He provided a theoretical and experimental framework, drawing from electrohydrodynamics, electroosmosis, and normal-mode stability analysis, to explain the physics behind commonly seen electrokinetic flow instabilities. Santiago pioneered the use of isotachophoresis to extract and analyze DNA and RNA from complex samples including blood, urine, and cell cultures. He has also trained future leaders in microfluidics, including 15 former students and postdocs who are now faculty at major research universities. Ph.D. (1995), University of Illinois at Urbana-Champaign.

James P. Schmiedeler

James P. Schmiedeler is a faculty member in Aerospace and Mechanical Engineering at the University of Notre Dame. He previously served on the faculties of Ohio State and the University of Iowa. His research interests lie in applying kinematics, dynamics, and machine design to develop robotic systems and to understand human motor coordination. Schmiedeler's current work focuses on biped locomotion, human recovery from stroke and spinal-cord-injury, robot-assisted rehabilitation, prostheses, and shape-changing mechanisms. He has provided extensive professional service within ASME and other engineering organizations. Ph.D. (2001), The Ohio State University.

Nariman Sepehri

Nariman Sepehri has earned excellent reputations in both scholarship and education, while providing service at national and international levels. He is internationally recognized for his research in fluid power related aspects of actuation, diagnosis and control, covering a wide range of applications such as mining, underwater exploration, aerospace and off-highway. His scholarly contributions include supervision of over 50 post-graduate students and publication of over 90 journal articles. Sepehri holds five patents. He is currently the chair of ASME Fluid Power Systems and Technology, and an Associate Editor/Editorial Board Member for seven scientific journals, including the ASME *Journal of Dynamic Systems, Measurement and Control*. Ph.D. (1990), University of British Columbia, Canada.

Pradeep Sharma

Pradeep Sharma is known for his contributions to understanding size-effects of coupled mechanical and physical phenomena in materials, establishing the mechanics theory of flexoelectricity, and elucidating the coupling between quantum mechanical phenomena and elasticity of nanostructures. Ph.D. (2000), University of Maryland, College Park.

Li Shi

Li Shi has established himself as a leader in nanoscale thermal transport research through pioneering innovative thermal measurements of individual nanostructures, including carbon nanotubes, semiconductor nanowires, and graphene. These ground-breaking works are distinguished by careful experimental methodology and rigorous theoretical interpretation. The findings from his basic research have resulted in better understanding of thermal transport and thermoelectric energy conversion processes in nanomaterials and nanoelectronic devices, which are valuable for the development of high-performance thermal management materials and thermoelectric vehicle waste heat recovery devices. Ph.D. (2001), University of California, Berkeley.

Sunil Sinha

Sunil Sinha has made significant engineering contributions to the aircraft engine industry. Most notably is his pioneering safety related work for in-flight events such as fan blade detachmetns and bird impact on fan blades. Sinha has authored several cutting-edge published papers. He has also contributed significantly to the engineering education of young engineers working in his industry. MBA (1988), University of Louisville.

David Sinton

David Sinton has made outstanding contributions in the area of microfluidics with applications in energy and analysis. His contributions in this area include microfluidic fuel cells with class-leading power densities, sensing methods leveraging both photonic and fluidic properties of plasmonic nanostructures, lab-on-chip processes for energy and carbon management applications, and high density photobioreactors for solar fuel generation. He has co-authored 90 journal publications with 34 past and present research personnel, including three Ph.D. alumni who are now professors. Sinton has also made important contributions within the ASME. He is the current Chair of the Micro- and Nano- Fluid Dynamics Technical Committee. Ph.D. (2003), University of Toronto.

Barton L. Smith

Barton L. Smith is an experimental fluid dynamics researcher and has made significant contributions in several areas, including seminal work on synthetic jets and PIV uncertainty and contributions to the field of oscillatory flows. He has also recently developed new methodology for CFD validation experiments. In his 11 years at Utah State University, Smith has been awarded over $4

million in research funds. He has received several awards from the USU College of Engineering, including Teacher of the Year in 2012, Advisor of the year in 2009, Research Excellence in 2006, and Undergraduate Research Mentor of the Year in 2004. Ph.D. (1999), Georgia Institute of Technology.

Charles E. Smith

Charles Smith has been an engineering leader in the area of offshore technology for the U.S. federal government. He led the Technology Assessment and Research program in conducting studies with universities, private companies and government laboratories that included the assessment of structural integrity of offshore platforms and pipelines, well control methods, and oil-spill containment and cleanup procedures. Smith's contributions in codes and standards, and federal regulations to ensure safe, pollution-free development of offshore resources are well recognized. His efforts have advanced structural and fracture mechanics applications in extreme environments such as deep underwater oil production and arctic ice situations. D.Sc. (1994), George Washington University.

Bharat K. Soni

Bharat K. Soni is recognized for his outstanding contributions to the development of computational fluid dynamics methods and industrial grade codes for aerospace, mechanical, and biomedical engineering applications. Ph.D. (1978), University of Texas at Arlington.

Gwidon W. Stachowiak

Gwidon W. Stachowiak is Founding Director of the Tribology Laboratory at the Department of Mechanical Engineering, Curtin University, Western Australia. His research includes fundamental and applied science covering wear studies of engineering and biological materials. His current work is focused on the development of methods for the characterization of multiscale 3-D surface topographies, prediction of osteoarthritis in knee joints based on x-ray images and tribocorrosion. He has published more than 300 journal and conference papers and has authored or coauthored several books and book chapters. Stachowiak's contribution and eminent services to science and education have been recognized by prestigious awards including the George Julius Medal awarded twice by the Institution of Engineers and Doctor Honoris Causa from the Ecole Centrale de Lyon, France. Ph.D. (1981), Imperial College of London.

Joshua D. Summers

Joshua D. Summers has earned an outstanding reputation in both scholarship and education, while providing dedicated service at the national and international levels. He has received numerous awards in the area of engineering design research and education. He has supervised over three dozen graduate theses and published nearly two hundred peer-reviewed publications. His work has been supported by industry and government, resulting in four patent applications and over six million dollars of funding. Most importantly, he has dedicated himself to education, developing new undergraduate offerings in the form of service engineering projects, international projects, and entrepreneurial projects. Ph.D. (2004), Arizona State University.

Chih-Jen Sung

Chih-Jen Sung is an international leader in fundamental and applied combustion research and technology, with an outstanding reputation in the areas of dynamics of flames, the chemistry of fuel oxidation—particularly those relevant to aeropropulsion—computational simulation of complex combustion processes, and the development of novel experimental techniques for combustion investigation. He has published extensively in high impact journals, with impressive citation statistics. Sung has provided strong dedication and leadership through technical committee participation and conference organization. His enlightened mentorship to both undergraduate and graduate students has been recognized with various educational awards. Ph.D. (1994), Princeton University.

Flint O. Thomas

Flint O. Thomas has made major contributions in experimental fluid and aero dynamics, including turbulent shear flows, flow stability and transition, compressible shear layers, flow control, as well as measurement techniques. He has contributed to our current understanding of the large-scale flow structures of jets, wakes and boundary layers including the evolution of the eigenmodes obtained by proper orthogonal decomposition. Thomas has developed and applied dielectric barrier discharge plasma actuators for separation and noise control in a variety of aerodynamic applications. His studies span fundamental aspects and applications and have been funded by both federal agencies and industry. Ph.D. (1983), Purdue University.

Charlie C.L. Wang

Charlie C.L. Wang is internationally recognized in the community of computer-aided design for his work in the geometric modeling of human-centered freeform products. His significant contributions in the area of computer-aided product and process development solve many difficult design problems relating to discrete geometric modeling and processing. He has received numerous best paper awards from ASME and has provided professional leadership in the ASME CAPPD Technical Committee. He is also a consistent and superb teacher and has received his university's highest teaching award. Ph.D. (2002), The Hong Kong University of Science and Technology.

Quan Wang

Quan Wang is a Professor and Canada Research Chair of Mechanical Engineering at the University of Manitoba. He has made outstanding contributions to the application of carbon nanotubes and graphenes as nano-sensors, as applied to biodevices. He is also an expert in atomic and molecular transportation with carbon nanotubes. His research findings on smart materials and structures also have led to applications in structural health monitoring and repair. Wang has pioneered various benchmark solutions for piezoelectric materials in vibration and control. He has played various active roles in, and contributed to, the smart materials research and education. Ph.D. (1994) Peking University.

Gerald E. Weber

Gerald E. Weber is currently Director of Operations Technical Support for Edison Mission Energy. Weber developed EME's first online performance monitoring programs including models for the turbine and boiler cycle, boiler cleanliness models, and system training for plant operators. He has managed 20 successful FWH replacement projects. He is a member of the ASME Power Test Codes and Standards Committee and Chairman of the ASME Power Test Code 12.1 Committee. Weber was Past Chair and active member of ASME Heat Exchangers Committee. He is a co-instructor of the ASME FWH Operations and Maintenance course. He is author of 20 power industry publications, including three journal articles. BSME (1985), and MSME (1993), University of Illinois at Chicago.

Francis Wessling

Francis Wessling has made seminal contributions to space-related research on materials in microgravity and the use of research-grade sounding rockets. He was the project manager for the first commercially licensed rocket launch—Consort 1—in the United States. He also served as project manager on several other rockets launched from White Sands Missile Range and Kennedy Space Center. As the Associate Director of the Consortium of Materials Development in Space at the University of Alabama at Huntsville, he made substantial contributions to understanding the advantages and challenges of materials handling and growth in microgravity environments. Wessling has also made a number of contributions to the application of solar thermal en-

ergy systems. He was a director of the New Mexico Solar Energy Association, and Wessling collaborated in the development of testing standards for assessing the performance of solar domestic water heating systems. He also established a test laboratory for solar energy products for a major electric utility in Tennessee. Ph.D. (1968), University of Minnesota.

Tse Eric Wong

Tse Eric Wong is a recognized international leader in durability and reliability and the manufacturability of electronic interconnects, packages, and assemblies. He is an Engineering Fellow for Raytheon Company. During his 30-year industrial career, he has focused on application-oriented technology. He has published over 40 technical journals and conference articles, and received five U.S. patents. With his leadership contributions, Wong has elected, organized and chaired numerous technical sessions in ASME conferences since 1996. He has served as a judge in a student paper competition, as well as a reviewer for ASME and IEEE conferences and journals since 1995. Ph.D. (1987), University of California, Berkeley.

Xiaoping Yang

Xiaoping Yang has received numerous manufacturing-related recognitions for his outstanding contributions, including the 6 Sigma Chairman's Quality Award, Cummins' highest award of its kind. He has also been one of the most important leaders and experts of the award winning Cummins Next Generation Manufacturing Execution System program, which has demonstrated extraordinary throughput and quality improvements since 2006. In addition, Yang is a renowned surface integrity expert. His innovation has significantly advanced the knowledge of machining process effects on fatigue life variance, and opened new perspectives on design, manufacturing and maintenance of fatigue critical products, enabling cost reduction while improving reliability. Ph.D. (2001), Purdue University.

Bin Yao

Bin Yao has earned an outstanding reputation in the ASME dynamics and control community both nationally and internationally, through his research contributions as well as his service to the community. He is a leading expert in the field of adaptive robust control with application to various mechanical systems. He is a recipient of the NSF Career Award in 1998, the O. Hugo Shuck Best Paper Award from the American Automatic Control Council in 2004, the Outstanding Young Investigator Award from the ASME Dynamic Systems and Control Division in 2007, and the ASME DSCD Best Conference Paper on Mechatronics from the DSCD Mechatronics Technical Committee in 2012. Ph.D. (1996), University of California at Berkeley.

Pui-Kuen Yeung

Pui-Kuen Yeung is a Professor of Aerospace and Mechanical Engineering at Georgia Tech. He is recognized internationally for his fundamental contributions to the field of turbulence through the use of direct numerical simulations at high resolution, conducted on some of the most powerful computers in the world. Yeung has also made significant contributions in teaching. He has provided service to the fluid dynamics and computational science and engineering communities. Ph.D (1989), Cornell University.

Mike S. Yoon

Mike S. Yoon has over 37 years of experience as a practitioner and Senior Manager in the pipeline industry. He was responsible for the development of supervisory control and data acquisition systems on pipeline systems and personally developed hydraulic simulators and real time modeling and leak detection and control strategies for a number of major North American pipelines. Yoon has been the primary author on several papers written on pipeline leak detection technology. He initiated, and is the Senior Editor of, the ASME Monograph series on pipelines, for which he has co-authored two books. He is a former Chair of the Pipeline Systems Division. Ph.D. (1974), University of Oregon.

Kamal Youcef-Toumi

Kamal Youcef-Toumi has made outstanding contributions to modeling, analysis, and the design of dynamic control systems. He has earned national and international acclaim in both academia and industry through numerous technical publications, patents, and industrial consultations. Youcef-Toumi pioneered time-delay control using function estimation, bond graph-based zero-dynamics analysis and synthesis, as well as high-speed atomic resolution systems. He has successfully applied his novel theory and technologies to diverse systems and machines, ranging from magnetic bearings, linear and direct-drive actuators, and automobiles to Atomic Force Microscopes, data storage devices, high speed and high precision robots, and manufacturing automation equipment. Sc.D. (1985), Massachusetts Institute of Technology.

Wenbin Yu

Wenbin Yu has made significant contributions in the field of multiphysics modeling of composites. He developed many efficient high-fidelity theories for composite structures featuring the most rigor and simplicity. Yu pioneered the variational asymptotic method for unit cell homogenization for modeling heterogeneous materials. He invented the representative structural element concept to unify structural mechanics and micromechanics and solve the challenging problem of heterogeneous structures. His theories are implemented in several commercial computer codes, and extensively used around the world in companies, government labs, and universities. Particularly, his code, VABS, is the tool of choice in the rotorcraft and wind turbine industries for design and analysis of composite blades. Ph.D. (2002), Georgia Institute of Technology.

Alan T. Zehnder

Alan T. Zehnder has spent a lifetime advancing the field of mechanical engineering education through his contributions to teaching, research and service. His research work has focused on experimental mechanics with applications to fracture mechanics, composite structures and nonlinear vibrations of micro-electrical-mechanical systems. Zehnder has propagated his research work by authoring a text on Fracture Mechanics, by publishing some 87 papers, and by launching the careers of a dozen Ph.D. researchers in applied mechanics. He has served as Chair of both the Theoretical and Applied Mechanics and Mechanical and Aerospace Engineering Departments, and currently serves as the Associate Dean for Diversity and Faculty Development in the Cornell College of Engineering. Ph.D. (1987), California Institute of Technology.

Gilbert Zigler

Gilbert Zigler has over 40 years of experience in the field of nuclear engineering. His accomplishments include development of the diagnostic systems for the Tokamak Fusion Test Reactor and becoming a world expert in evaluating the post-LOCA performance of ECCS systems. He provided on-site reactor vessel water level indication and core configuration analysis during the TMI accident and traveled to Japan to provide indication of water level within the reactor vessels after the failure of the installed instrumentation at Fukushima Daiichi Units 1, 2, and 3. Zigler is a member of the ASME Board of Nuclear Codes and Standards, Operations and Maintenance Committee, and Committee on Nuclear Risk Management. MS (1969), Air Force Institute of Technology.

Jonathan Zimmerman

Jonathan Zimmerman is recognized for his contributions to the development of multiscale modeling methods and their use in understanding material behavior. Ph.D. (1999), Stanford University.

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