



ASME 2022

HONORS  
& AWARDS

## KATEPALLI R. SREENIVASAN

ASME MEDAL

**T**HE ASME MEDAL IS AWARDED for eminently distinguished engineering achievement. Established in 1920, it is the highest award bestowed by the society.

Katepalli R. Sreenivasan, Ph.D., dean emeritus of New York University Tandon School of Engineering, the university's Eugene Kleiner chair for innovation, and ASME Fellow, is honored for exceptional fundamental and applied contributions to experimental, theoretical, and computational fluid dynamics, and for outstanding service as a leader in the engineering profession.

Dr. Sreenivasan's pioneering research focuses on fluid dynamics and heat transfer in turbulent flows. An author of more than a dozen influential papers, some of his pioneering work explored the scaling of the turbulence

energy dissipation rate, a simple multifractal cascade model for fully developed turbulence, and circulation in high Reynolds number isotropic turbulence.

Dr. Sreenivasan has distinguished himself in various leadership roles, including chair of the Yale mechanical engineering department and as its acting dean. He served as director of the International Center for Theoretical Physics in Trieste, Italy, where he mentored hundreds of students and helped establish centers of excellence in several parts of the world. In various provostial roles at NYU, he established research centers at its Abu Dhabi campus. He led efforts to merge Brooklyn Polytechnic with NYU



to create NYU's School of Engineering.

Dr. Sreenivasan has been an active board member and chair of many organizations, including ASME, AIAA, Tau Beta Pi, the National Society of Black Engineers, NACME, the National Academy of Engineering, the National

Academy of Sciences, and the American Physical Society.

Dr. Sreenivasan received his B.E. in mechanical engineering from Bangalore University in 1968. He earned an M.E. in 1970 and a Ph.D. in 1975, both in aeronautical engineering, from Indian Institute of Science. He was a Postdoctoral Fellow at the University of Sydney and Newcastle and a research associate at Johns Hopkins University before joining Yale.

## DAISIE D. BOETTNER

KATE GLEASON AWARD

**T**HE KATE GLEASON AWARD, ESTABLISHED in 2011, recognizes outstanding achievements by a female engineer. It honors the legacy of the first woman to be welcomed into ASME as a member.

Retired Brigadier General Daisie D. Boettner, Ph.D., P.E., is honored for outstanding contributions as a mechanical engineer, military officer, role model, and mentor, and for the educational development of students pursuing military and mechanical engineering careers.

Graduating in 1981 as a member of the second class of women to attend West Point, Dr. Boettner served for 36 years in the U.S. Army as a logistician and engineering educator. Upon assignment to the faculty at the United States Military Academy, she progressed from aero-thermo group director to mechanical engineering program director

to professor and deputy head, culminating her career as professor and head of the department of civil and mechanical engineering.

Dr. Boettner is co-author of "Fundamentals of Engineering Thermodynamics." She has written numerous journal articles on heat transfer and fuel cell systems and contributed to more than three dozen articles for several national and international engineering and educational organizations, including ASME.

Dr. Boettner serves on the mechanical engineering group of the National Council of Examiners for Engineering and Surveying Fundamentals of Engineering Committee. She also served as a commissioner of the engineering



accreditation commission and executive committee member of the Accreditation Board for Engineering and Technology.

An active member of ASME, Dr. Boettner has served on the society's ethics,

Edward F. Obert award, Edwin F. Church Medal, and engineering accreditation committees.

Her many awards include the Ohio State University department of mechanical engineering Bertha Lamme Feicht Award and the West Point Chapter of Phi Kappa Phi Scholastic Achievement Award.

Dr. Boettner earned her M.S. engineering at the University of Michigan and her Ph.D. in mechanical engineering at Ohio State University.

## TSU-WEI CHOU

## HONORARY MEMBERSHIP

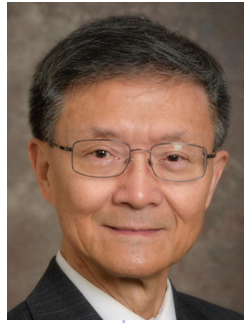
**T**SU-WEI CHOU, PH.D., THE PIERRE S. du Pont chair of engineering at the University of Delaware, is honored for pioneering and formative research in functional composite materials for energy storage, electromagnetic wave interference shielding, and 4D-printing, as well as contributions to mechanical engineering education, mentoring, and sustained service to the international composite community.

Dr. Chou's recent work, particularly in carbon nanotube- and graphene-based continuous fibers and films, and nanocarbon-based supercapacitors as flexible energy storage devices, has established him as a world leader in his fields.

Dr. Chou has received three ASME awards: the Charles Russ Richards Memorial Award in 1996, the Worcester Reed Warner Medal in 2002, and the

Nadai Medal in 2013. He was named an ASME Fellow in 1998.

A prolific author, Dr. Chou's pivotal paper, published in *Advanced Energy Materials* in 2014, was the first to demonstrate that a stretchable wire-shaped supercapacitor based on continuous carbon nanotube fibers offers a unique combination of electrochemical performance and mechanical durability. His paper in *Carbon* on electromagnetic wave interference shielding verifies the superb potential of nanocarbon materials for EM wave absorption and protection of portable electronics and wireless devices. His formative paper in *Composites Science and Technology* on additive manufacturing demonstrates



comprehensive design and additive manufacturing of 3D orthogonal fiber preforms for composites.

Dr. Chou was among the first to recognize the opportunities of the strength and damage tolerance of laminates in the through-thickness direction. This

led to his pioneering contributions to the engineering science of textile structural composites.

He was named 34th among the top 100 materials scientists in the world between 2000-2010 by Times Higher Education. Dr. Chou has received numerous other awards. He received a B.S. from National Taiwan University in 1963, an M.S. from Northwestern University in 1966, and a Ph.D. from Stanford University in 1969.

## MICHAEL F. MOLNAR

## HONORARY MEMBERSHIP

**M**ICHAEL F. MOLNAR, P.E., WHO currently serves as director of the NIST Office of Advanced Manufacturing, director of the Manufacturing USA program, and chair of the National Science and Technology Council Subcommittee on Advanced Manufacturing, is honored for sustained contributions to manufacturing technology and leadership in strengthening U.S. technological competitiveness. He led the development of the first quadrennial National Strategic Plan for Advanced Manufacturing, which has become the blueprint for the federal government's manufacturing R&D effort.

Before joining public service, Mr. Molnar had a prolific industry career, including 25 years at Cummins where he led advanced manufacturing, environmental policy, and sustainable

development.

In 2003, Mr. Molnar became ASME's Federal Fellow at the White House Office of Science and Technology Policy, serving as the first policy fellow for manufacturing. In 2011, he returned to federal service as the first chief manufacturing officer for NIST. He led the White House initiative on the President's Advanced Manufacturing Partnership to create the National Network for Manufacturing Innovation. He became the founding director of the NIST Office of Advanced Manufacturing and established the interagency Advanced Manufacturing National Program Office, as well as the Manufacturing USA Network.

An ASME Fellow since 2005, Mr.



Molnar received ASME's Dedicated Service Awards (Society Level in 2003, Technical Communities in 2008), the Roy V. Wright Public Policy Award in 2015, and the M. Eugene Merchant Manufacturing Medal in 2017. Mike

credits his skills in

collaborative engineering with volunteer organizations, in particular with ASME with over 50 leadership positions over the last 40 years.

Mr. Molnar received a B.S. in mechanical engineering in 1985 and a M.S. in manufacturing systems engineering in 1987, both from the University of Wisconsin-Madison. He earned an MBA from the University of Notre Dame in 2002 and is a member of the Senior Executive Service.

## SINGIRESU S. RAO

## HONORARY MEMBERSHIP

**S**INGIRESU S. RAO, PH.D., A PROFESSOR IN the department of mechanical and aerospace engineering at the University of Miami, is honored for developments of uncertainty-based methods for solving a number of engineering problems, including those in theory-based models, nondeterministic finite elements, and cooperative game theory. He extended concepts of deterministic cooperative game theory to imprecisely defined systems to develop a cooperative fuzzy game theory.

His publications on single and multi-objective optimization of fuzzy engineering systems were the first to appear in the literature. He introduced new fields of research known as “fuzzy finite element analysis” and “fuzzy boundary element analysis.”

Dr. Rao has published seven textbooks and has a long history of industry

collaboration, including partnerships with General Motors, General Electric, International Paper Co., NASA Ames, and Bell Helicopter.

Dr. Rao has been an active participant in ASME, mostly through the IDETC Design Automation Conference. He served as chair of the committee in 1987 and 1988. He also served as an associate editor of the *Journal of Mechanical Design*. He has authored over 100 papers, including 55 for ASME journals, related to uncertainty in engineering, recently ranking third in the world for citations in aerospace engineering.

An ASME Fellow, Dr. Rao has also received the society’s Worcester Reed Warner Medal and the J.P. Den Hartog Award. He also received the Distinguished



Probabilistic Methods Educator Award from SAE and the Design Automation Award from the Design Automation Technical Committee, among others. He has been active in ASME’s design automation and vibrations committees.

Dr. Rao received his B.E. in mechanical engineering from Andhra University (Waltair, India) in 1965; he was honored with the Vepa Krishna Murthy Gold Medal for highest GPA among graduates in all branches of engineering and the Lazarus Prize for ranking first among graduating mechanical engineering students. Dr. Rao earned his master’s degree in mechanical engineering from the Indian Institute of Technology, Kanpur, in 1968; and his Ph.D. in engineering mechanics and design from Case Western Reserve University, Cleveland, in 1972.

## HUSEYIN SEHITOGLU

## HONORARY MEMBERSHIP

**H**USEYIN SEHITOGLU, PH.D., THE John, Alice, and Sarah Nyquist Endowed chair at the department of mechanical engineering at the University of Illinois Urbana-Champaign, is honored for prolific contributions in mechanical engineering and materials science, particularly in the area of fatigue of materials, and for lifelong engagement with ASME and the mechanical engineering community.

Throughout his career, Dr. Sehitoglu has made vital scientific contributions to thermo-mechanical fatigue. The model he developed for thermo-mechanical fatigue is used in a variety of real-world applications. During the past 15 years, his research has focused on shape memory alloys. He showed how atomic shuffle can play an important role in the

calculation of twinning stress, and he indicated a complex twinning mechanism in austenite structure.

Dr. Sehitoglu, an ASME Fellow, wrote a landmark chapter in the ASME Handbook, Vol. 19, on thermo-mechanical fatigue and has researched persistent slip bands and fatigue crack nucleation modeling culminating in a fatigue crack nucleation criterion.

He has served in several leadership roles, including director of NSF’s Mechanics of Materials and Structures program. He was editor of the ASME *Journal of Engineering Materials and Technology* and founding chief editor of *Shape Memory and Superelasticity*.



Dr. Sehitoglu’s work has received numerous awards, including the Institution of Mechanical Engineers Award from City University of London and an NSF Research Initiation Award. He also received ASME’s Nadai Medal

in 2007 for outstanding contributions to materials science and mechanics, the Khan International Award in the field of plasticity, and the TMS Morris Cohen Award for fundamental understanding of fatigue of metallic materials.

Dr. Sehitoglu received a B.Sc. in mechanical engineering from City, University of London, in 1979, and a M.S. and Ph.D. in theoretical and applied mechanics from UIUC in 1981 and 1983, respectively.

## SAVIO L-Y. WOO

## HONORARY MEMBERSHIP

**S**AVIO L-Y. WOO, PH.D., A DISTINGUISHED university professor (emeritus) of bioengineering in the Swanson School of Engineering at the University of Pittsburgh and the founder and director of the Musculoskeletal Research Center, is honored for a career dedicated to advancing biomechanics of synovial joints in applications including bioengineering, orthopaedic surgery, and sports medicine, as well as for excellence in mentoring and being the inspirational namesake of the ASME medal for translational biomechanics.

Dr. Woo pioneered studies of the nonlinear viscoelasticity and mechanical properties and the investigation of the complex function of the knee for more than 50 years. The translational research on ligament and tendon healing repair and regeneration performed by his team

have led to a change in the clinical management of these injuries.

Dr. Woo also pioneered the use of computer modeling and robotic technology to study ligament injury. He recently made major advances in functional tissue engineering and the use of degradable biometallic materials to regenerate torn ligaments and tendons.

Dr. Woo has served as chair for ASME's bioengineering division. He founded the International Symposium on Ligaments and Tendons and the World Association for Chinese Biomedical Engineers. He was elected to the National Academy of Medicine, the National Academy of Engineering, and the Academia Sinica, one of only five people to be elected to all three.



In 1998, he won the IOC Olympic Prize for Sports Science and the first Olympic Gold Medal in Nagano, Japan. He has also received the International Society of Biomechanics Muybridge Medal, the ASME H.R. Lissner Medal, the IEEE

Gold Medal for Innovation in Health Care Technology, and many others. He has served on the editorial boards of 39 scientific journals including the ASME *Journal of Biomechanical Engineering*.

Dr. Woo received his B.S. from Chico State College in 1965, his M.S. and Ph.D. degrees (1966, 1971) from the University of Washington, an honorary D.Sc. from the California State University System in 1998, and an honorary D.Eng. from the Hong Kong Polytechnic University in 2008.

## APRILLE J. ERICSSON

## RALPH COATS ROE MEDAL

**T**HE RALPH COATS ROE MEDAL, ESTABLISHED in 1972, recognizes an outstanding contribution toward a better public understanding and appreciation of the engineer's worth to contemporary society.

Aprille J. Ericsson, Ph.D., the new business lead in the instrument systems and technology division at NASA Goddard Space Flight Center, is honored for diligent efforts in explaining the nature, challenges, and personal satisfaction of engineering to encourage young people, women, and other underrepresented groups to pursue STEM careers.

Dr. Ericsson is the first African American woman to receive a Ph.D. in mechanical engineering from Howard University. During her 30 years at NASA, she worked as an aerospace engineer, technologist, project and program manager, and executive. She has spent most of her career at the NASA Goddard Space

Flight Center, where she has worked on astrophysics, heliophysics, planetary and earth science, the James Webb telescope, lunar orbiters, and the SCIM Mars mission.

Dr. Ericsson is known as an eloquent and tireless advocate for inclusivity among young people across the STEM disciplines and related careers.

She leads the Dynamic Mathematical Visionary NSBE, Jr. chapter at Howard University and is lead coach of its FIRST Lego League robotics team. She has served on numerous boards, including Howard University Trustees; International Black Aerospace Council; MIT's Industry Advisory Council for Minority Education; the National Academies of Science, Engineering and Medicine Board of Higher



Education and Workforce; and the advisory council of the Organization of Black Aerospace Professionals.

Dr. Ericsson received the Tau Beta Pi Distinguished Alumni Award and the Tuskegee Airmen Scholarship Foundation Spitfire Woman of the Year in 2018, among many other awards, and was inducted in the Organization of Black Aerospace Professionals Hall of Fame in 2017. Dr. Ericsson has authored many papers and earned a patent for an integrated satellite platform.

Dr. Ericsson received her Bachelor of Science in aeronautical/astronautical engineering from MIT in 1986 and her Ph.D. in mechanical engineering from Howard University in 1995. She received an honorary degree from Rutgers University in 2022.

# ASME 2022 HONORS & AWARDS

## Adaptive Structures and Material Systems Award

**JAMES E. HUBBARD JR.**



The Adaptive Structures and Material Systems Award recognizes a senior researcher for a lifetime of significant contributions to the sciences and technologies associated with adaptive structures and/or material systems. Established by the Aerospace Division in 1993, it was elevated to a Society award in 2014.

James E. Hubbard Jr., Ph.D., the Oscar S. Wyatt Jr., Chair I professor at Texas A&M University, is honored for outstanding contributions to the development of field adaptive structures, specifically in large spacecraft structures, such as telescopes and satellites, where mechanical vibrations can affect their precision and performance.

Dr. Hubbard is widely viewed as one of the founding fathers of the field of smart and adaptive structures. An ASME Fellow, he is the recipient of the SPIE Lifetime Achievement and the Innovative Product of the Year awards. Dr. Hubbard holds 24 patents and has founded four companies. He has published several books and more than 150 technical articles in peer-reviewed journals.

## Bergles-Rohsenow Young Investigator Award in Heat Transfer

**ASHUTOSH GIRI**



The Bergles-Rohsenow Young Investigator Award in Heat Transfer, established in 2003, recognizes an engineer who is committed to pursuing research in heat transfer and demonstrates the potential to make significant contributions in the field.

Ashutosh Giri, Ph.D., assistant professor in the mechanical, systems and industrial engineering

department at the University of Rhode Island, where he heads the Energy Transport and Ultrafast Spectroscopy Lab, is honored for significant research contributions to heat transfer consisting of experimental and computational advancements in areas including interfacial thermal transport, electron-phonon coupling, and thermal conductivity engineering in nanomaterials.

Dr. Giri's unique multiphysics approach to understanding nanoscale heat transfer processes has helped to plot a new path forward in understanding nanoscale phenomena.

He recently won the ONR Young Investigator Program Award. He has authored more than 77 peer-reviewed journal publications. Dr. Giri has helped organize and chair several tracks on nanoscale heat transfer in ASME conferences.

## Blackall Machine Tool & Gage Award

**PABLO HERNÁNDEZ BECERRO**

**JOEL PURTSCHERT**

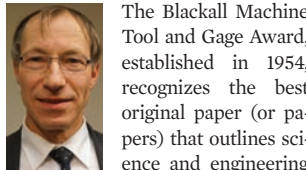
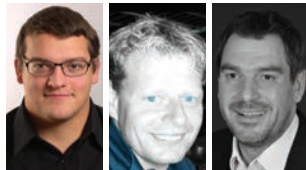
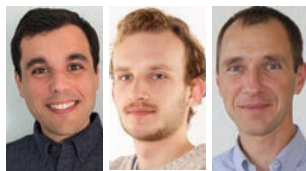
**JAN KONVICKA**

**CHRISTIAN BUESSER**

**DAVID SCHRANZ**

**JOSEF MAYR**

**KONRAD WEGENER**



The Blackall Machine Tool and Gage Award, established in 1954, recognizes the best original paper (or papers) that outlines science and engineering

technologies that resulted in a significant contribution to the manufacturing processes and systems for the design or application of machine tools, gauges or dimensional measuring instruments; or new manufacturing technologies and metrology approaches.

Pablo Hernández Becerro, Joel Purtschert, Jan Konvicka, Christian Buesser, David Schranz, Josef Mayr, and Konrad Wegener are recognized for the paper, "Reduced-Order Model of the Environmental Variation Error of a Precision Five-Axis Machine Tool."

Dr. Pablo Hernández Becerro, a senior R&D engineer at Helbling USA in Cambridge, Ma., received his Ph.D. in mechanical engineering at ETH Zurich. The results of his Ph.D. research were incorporated in a simulation software called MORE, which is now part of inspire AG, a strategic partner of ETH Zurich.

Joel Purtschert earned his B.S. and M.S. in mechanical engineering from ETH Zurich in 2016 and 2019, respectively. He had worked on marketing, software development, and education aspects of MORE.

Jan Konvicka is a senior development engineer at Mikron Agie Charmilles AG, and a consultant and design specialist at Drivetec AG. He earned an engineering degree at Technische Universität Chemnitz in 1997.

Christian Buesser, a lab engineer at GF Machining Solutions, earned his B.S. in mechanical engineering from ZHAW School of Engineering in 2014.

David Schranz, a senior research engineer at GF Machining Solutions, earned a B.S. in mechanical engineering from Bern University of Applied Sciences in 1993. He has received patents for a kinematic calibration method and a crash prevention device.

Dr. Josef Mayr is a group leader at the inspire AG, where he oversees a team working on the thermal errors of production machines. He has authored more than 50 publications

and teaches manufacturing at ETH Zurich, where he received his Ph.D. in 2009. He has several patents for his co-inventions including a monomaleimide-functionalized platinum compound for cancer therapy, a drive train, and a trap circuit arrangement.

Dr. Konrad Wegener is a professor and head of the Institute of Machine Tools and Manufacturing at ETH Zurich and leads the manufacturing section of the inspire AG. He has authored numerous papers and received his Ph.D. from Technical University of Braunschweig in 1990. He has been awarded patents for systems used for forming workpieces and for punching metal sheets, and a stretch-forming process.

## Thomas K. Caughey Dynamics Medal

**EARL DOWELL**



The Thomas K. Caughey Dynamics Medal recognizes an individual who has made significant contributions to the field of nonlinear dynamics through practice, research, teaching and/or outstanding leadership. Established in 2008 by the Applied Mechanics Division, it was elevated to a Society award in 2020.

Earl Dowell, D.Sc., William Holland Hall professor of mechanical engineering and materials science and dean emeritus at Duke University, is recognized for contributions through research, teaching, and leadership of nonlinear dynamics in fluid-structure interactions, aeroelasticity, and structural vibrations.

Dr. Dowell's research defines the field of modern aeroelasticity, especially in advancing aerospace technology. He was the first to recognize the importance of modern geometric methods in nonlinear dynamics to structural dynamics problems, and has made pivotal contributions to the field of nonlinear and chaotic dynamics in engineer-

ing structures. As a former dean of Duke's School of Engineering, he increased the school's growth and quality through research volume and teaching activities.

**Edwin F. Church Medal**

**SUVRANU DE**



The Edwin F. Church Medal, established in 1972, is awarded to an individual who has rendered eminent service that has increased the value, importance and attractiveness of mechanical engineering education.

Suvranu De, Sc.D., J. Erik Jonsen distinguished professor of engineering; head of the mechanical, aerospace and nuclear engineering department, and founding director of the Center for Modeling, Simulation, and Imaging in Medicine at Rensselaer Polytechnic Institute; is honored for sustained and innovative mechanical engineering academic leadership with an emphasis on industry and academic collaboration, as well as technological innovation leading to entrepreneurship.

Dr. De, an ASME Fellow, also developed a hands-on control laboratory, spearheaded computational modeling and simulation curriculum, and launched a B.S. to Ph.D. program. In addition to his contributions to education, Dr. De developed virtual training tools that provide surgeons with low-cost and effective ways of learning. He also contributed generously of his time to the ASME Mechanical Engineering Department Heads Committee, serving on its executive council.

**Daniel C. Drucker Medal**

**HORACIO D. ESPINOSA**



The Daniel C. Drucker Medal, established in 1997, recognizes distinguished contributions to the field of applied mechanics and mechanical engineering through research, teaching, and service to the community.

Horacio D. Espinosa, Ph.D., the James and Nancy Farley professor of mechanical engineering at Northwestern University, is honored for pivotal contributions to in-situ characterization and modeling of nano and meta materials, and for the cre-

ation of robust nanoelectromechanical systems.

Throughout his career, Dr. Espinosa has made important contributions to solving problems of dynamic fractures and failures in ceramics, crushable panel cores, and other materials. His mastery of MEMS fabrication and testing techniques has earned him the reputation as one of the world's leading nanoscale mechanical experimentalists.

Dr. Espinosa is the director of the Theoretical and Applied Mechanics Program and the Institute for Cellular Engineering Technologies at Northwestern University. He has authored and co-authored more than a dozen journal papers and has received two patents.

**Thomas A. Edison Patent Award**

**ROBERT O. AMBROSE**



The Thomas A. Edison Patent Award, established in 1997, recognizes creativity of a patented device or process that has the potential of significantly enhancing some aspect of mechanical engineering.

Robert O. Ambrose, Ph.D., the J. Mike Walker '66 chair in mechanical engineering at Texas A&M University, is honored for the invention of the rotary series elastic actuator, which enabled the first robot in space to work safely with astronauts, and is now applied to robots in automobile manufacturing, vehicle suspension, prosthetics, and other applications. The invention led to 67 other patents.

Dr. Ambrose retired in 2021 from NASA as division chief for the software, robotics and simulation division. He led the design of futuristic machines like Robonaut, as well as the Chariot, VIPER, and LTV rovers. He also serves as the TEES Director for Space and Robotics Initiatives at the Bush Combat Development Complex at Texas A&M.

**William T. Ennor Manufacturing Technology Award**

**XIAOCHUN LI**



The William T. Ennor Manufacturing Technology Award was established in 1990 by the ASME Manufacturing Engineering Division

and the Alcoa Company to recognize an individual or team for developing or contributing significantly to an innovative manufacturing technology, the implementation of which has resulted in substantial economic or societal benefits.

Xiaochun Li, Ph.D., the Raytheon endowed chair in manufacturing in departments of mechanical and aerospace engineering and materials science and engineering at the University of California, Los Angeles, is honored for significant contributions to solidification processing, scalable manufacturing, and successful commercialization of nanoparticle-reinforced metal matrix composites.

Dr. Li is a pioneer in commercial applications of nanotechnology-enabled metals manufacturing. An ASME Fellow, he was elected a fellow of National Academy of Inventors and has received the NSF Career award, among others.

Dr. Li holds 22 patents and has published more than 270 papers and five book chapters. He serves as director for UCLA's Clean Energy Smart Manufacturing Innovation Institute.

**Fluids Engineering Award**

**YASSIN A. HASSAN**



The Fluids Engineering Award was established by the Fluids Engineering Division in 1968. Elevated to a Society award in 1978, it recognizes outstanding contributions to the field over a period of years through research, practice and/or teaching.

Yassin A. Hassan, Ph.D., P.E., the L.F. Peterson chair professor and director of the Center for Advanced Small Modular Microreactors at Texas A&M University, is recognized for exceptional and sustained contributions to the fluids engineering profession through education and ground-breaking experimental and numerical work, especially as applied to nuclear systems.

Dr. Hassan is a member of the National Academy of Engineering; the Academy of Medicine, Engineering and Science of Texas; and the Civil Nuclear Trade Advisory Committee. He has co-authored with his students over 600 conference and journal papers, including seven in the ASME *Journal of Fluids Engineering* and at nine ASME conferences.

An ASME Fellow and a recipi-

ent of the society's James N. Landis Medal in 2017. Dr. Hassan has seven patents. He serves as editor-in-chief of the *Journal of Nuclear Engineering and Design* and as associate editor of the *Journal of Verification, Validation and Uncertainty Quantification*.

**Freeman Scholar Award**

**TIM COLONIUS**



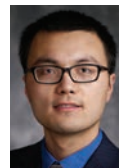
The Freeman Scholar Award, established in 1970, is bestowed upon a person of wide experience in fluids engineering. The recipient is expected to review a topic in his or her specialty, including a comprehensive statement of the state of the art, and suggest future research needs.

Tim Colonius, Ph.D., professor of mechanical engineering at the California Institute of Technology, is honored for his paper titled "Simulations and Modeling of Cavitating Flows."

A leading expert in his field, Dr. Colonius has authored more than 300 papers. Several of his articles, including those on modeling clusters, the dynamics of a non-spherically collapsing bubble, and a new method for simulating collapsing bubbles, are considered the standard in the field of fluids engineering. He has also applied his expertise to solving long-standing problems related to acoustic cavitation and medical ultrasound.

**Y.C. Fung Early Career Award**

**ZHENPENG QIN**



The Y.C. Fung Young Investigator Award was established by the Bioengineering Division in 1985, elevated to a Society award in 1998 and renamed in 2017. The award recognizes an individual who is committed to pursuing research in bioengineering and has demonstrated significant potential to make substantial contributions to the field.

Zhenpeng Qin, Ph.D., associate professor in the mechanical engineering and bioengineering departments at University of Texas Dallas, is honored for outstanding contributions to advance the understanding of biotransport issues and the development of transformative nanotechnologies to better understand

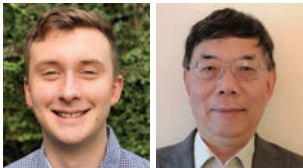
the brain, and for revolutionizing point-of-care infectious disease diagnosis.

He serves on the adjunct faculty of surgery at University of Texas Southwestern Medical Center, directs the NanoThermal Bioengineering Laboratory, and is a founding member of the Center for Advanced Pain Studies at UT Dallas. Dr. Qin paved frontiers in bio-transport and pioneered a new area called molecular hyperthermia.

An active ASME member, Dr. Qin organizes conference tracks and journal reviewers, and has served as a communication specialist, chair, and competition judge for various committees.

### Gas Turbine Award

**TOM HICKLING**  
**LI HE**



Established in 1963, the Gas Turbine Award recognizes outstanding contributions to the literature of combustion gas turbines or gas turbines thermally combined with nuclear or steam power plants. The award is sponsored by the ASME International Gas Turbine Institute.

Oxford University's Tom Hickling and Professor Li He, Ph.D, chair of computational aerothermal engineering, are recognized for the paper titled, "Some Observations on the Computational Sensitivity of Rotating Cavity Flows."

Hickling, a DPhil candidate, focuses his research on the computational prediction of flows in rotating cavities. He is also developing multi-scale approaches for LES conjugate heat transfer.

Dr. He's main area of research involves computational fluid dynamics with an emphasis on unsteady aerodynamic/aeroelastic and heat transfer in turbomachinery. He also works on validating advanced computational methods and understanding complex flow physics and modeling requirements.

Dr. He, a Fellow of ASME, was the head of the Oxford Thermo-fluids Institute from 2008 to 2011 and the acting director of Rolls-Royce University Technology Center in Heat Transfer and Aerodynamics from 2008 to 2010. Dr. He is the Oxford co-director of the Centre for

Doctoral Training in Gas Turbine Aerodynamics and serves as associate editor of ASME's *Journal of Turbomachinery*.

### Melvin R. Green Codes and Standards Medal

**RICHARD W. SWAYNE**



The Melvin R. Green Codes and Standards Medal was established in 1976 as the Codes and Standards Medal and renamed in 1996 to honor the memory and extraordinary contributions of an ardent supporter of industrial standards.

Richard W. Swayne, president of Reedy Engineering, is honored for more than 40 years of dedicated leadership and professionalism in the advancement of ASME codes and standards, and for outstanding contributions to the promotion and global acceptance of ASME codes, standards, and certification programs.

He has been an active member of ASME nuclear and nonnuclear codes and standards committees since 1977. He is the author of several sections of the Companion Guide to ASME Boiler and Pressure Vessel Code and has co-authored a summary of all changes made to the ASME Boiler and Pressure Vessel Code, and the ASME B31.1 and B31.3 piping codes.

He has received ASME's Dedicated Service and the Bernard F. Langer Nuclear Codes and Standards awards.

### Heat Transfer Memorial Awards

The Heat Transfer Memorial Award, established in 1959 by the Heat Transfer Division and elevated to a Society award in 1974, recognizes outstanding contributions to the field through teaching, research, practice and/or design.

**SRINATH V. EKKAD - GENERAL**



Srinath V. Ekkad, Ph.D., department head of mechanical and aerospace engineering and the R.J. Reynolds Professor at North Carolina State University, is honored for outstanding contributions to the field of heat transfer, particularly for promotion of community education and engagement through the co-authoring of a textbook, conference

organization, and journal editing, and for pioneering applications of experimental methods in gas turbine heat transfer.

An ASME Fellow, Dr. Ekkad has received the society's Bergles-Rohsenow Young Investigator in Heat Transfer Award and was named Journal of Heat Transfer Outstanding Reviewer. He served as editor-in-chief of ASME's *Journal for Thermal Science and Engineering Application*.

Dr. Ekkad has published more than 250 journal and conference articles and co-authored a book and three book chapters. He holds three patents.

**RAVI SHANKAR PRASHER - SCIENCE**



Ravi Shankar Prasher, Ph.D., the associate lab director of energy technology area at Lawrence Berkeley National Laboratory and an adjunct professor in mechanical engineering at UC Berkeley, is recognized for fundamental contributions to the science of heat transfer, phase transitions, and chemical reactions, and for engineering novel technologies for thermal management of electronic systems and decarbonize energy systems.

An ASME Fellow, Dr. Prasher has published more than 120 archival journal papers and holds more than 35 patents. He has given several keynotes and invited addresses and lectures at industry and academic conferences worldwide on thermal management of microelectronics and batteries, nanotechnology, energy systems, and decarbonization technologies.

**KAREN A. THOLE - ART**



Karen A. Thole, Ph.D., university distinguished professor of mechanical engineering at Penn State, is recognized for exemplary contributions in developing innovative cooling designs for various gas turbine components using metal additive manufacturing.

Dr. Thole, an ASME Fellow, is also director of the Steady Thermal Aero Research Turbine (START) Lab, which was awarded a center of excellence in turbine heat transfer by two major turbine manufacturers. Her research, which includes the use of 3D metal printing, has taken innovative cooling technologies from theory to application in various gas turbine components.

A co-author of many influential journal papers, she received ASME's Best Heat Transfer Paper awards four times, as well as the society's Dedicated Service Award, the Edwin F. Church Medal and the George Westinghouse Gold Medal.

### Mayo D. Hersey Award

**CHRISTOPHER DELLACORTE**



The Mayo D. Hersey Award, established in 1965, is bestowed for distinguished and continued contributions to the advancement of the science and engineering of tribology. Contributions may result from original research in one of the many scientific disciplines related to lubrication.

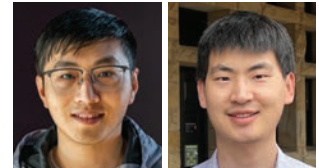
Christopher DellaCorte, Ph.D., the Timken Endowed chair and professor of mechanical engineering at the University of Akron is honored for significant contributions to space tribology, solid lubrication, and rotating turbomachinery, including pioneering research on longstanding tribology and lubrication challenges in extreme temperatures and conditions in spacecraft and aircraft mechanisms.

Prior to joining academia in 2022, Dr. DellaCorte worked as NASA's senior technologist for tribology and rotating machinery.

An ASME Fellow and member of the Tribology Division, Dr. DellaCorte received the society's Old Guard Paper Presentation Award and the Newkirk Award. He holds 12 patents and has authored five journal papers.

### Henry Hess Early Career Publication Award

**RUNDONG ZHANG**  
**SHUAI WU**  
**QIJI ZE**  
**R. RENEE ZHAO**



The Henry Hess Early Career Publication Award was established in 1914 to recognize the best original



technical paper presented to or published by the Society during the past two years.

Rundong Zhang, Shuai Wu, Qiji Ze and R. Renee Zhao are recognized for the paper titled “Micromechanics Study on Actuation Efficiency of Hard-Magnetic Soft Active Materials.”

Rundong Zhang is earning a master’s degree at Eindhoven University of Technology.

Shuai Wu, currently a Ph.D. candidate in mechanical engineering at Stanford University, focuses his research on magnetically responsive soft materials, soft robotics, and active metamaterials.

Qiji Ze, Ph.D., is currently working as a postdoctoral researcher at Stanford University and the Soft Intelligent Material Laboratory. He has published over 30 journal and conference papers.

R. Renee Zhao, Ph.D., is an assistant professor of mechanical engineering at Stanford University, where she directs the Soft Intelligent Materials Laboratory. Dr. Zhao has received ASME’s Applied Mechanics Division *Journal of Applied Mechanics* and the Haythornthwaite Research Initiation awards. She is active on several ASME committees.

**Patrick J. Higgins Medal**

**KENNETH BURKHARDT**



The Patrick J. Higgins Medal established in 2007, recognizes an individual who has contributed to the enhancement of standardization of ASME Standards and Engineering Services.

Kenneth Burkhardt, a pump consultant and industry leader, is recognized for outstanding leadership in the development of high-quality ASME B73 chemical pump standards. He retired from DuPont, where he was a Mechanical Engineering Principal Consultant.

Burkhardt has served for many years as the chairman of the committee and is lauded for his technical knowledge and ability as a mentor and leader who inspires other engineers to take on leadership roles in the standards process. Burkhardt has also worked with pump hardware and software suppliers to develop methodology on electronic data exchange to improve data communications within the pump industry.

**Soichiro Honda Medal**

**SUBIR CHOWDHURY**



The Soichiro Honda Medal recognizes an individual for an outstanding achievement or a series of significant engineering contributions in developing improvements in the field of personal transportation.

Subir Chowdhury, Ph.D., chairman and CEO of ASI Consulting Group, is honored for outstanding contributions to the improvement of processes and product quality in the automotive industry through pioneering works on quality engineering, which has helped to save OEMs and suppliers around the world billions of dollars.

Dr. Chowdhury is widely recognized as a quality guru in manufacturing. He is the author and co-author of 15 books, including the highly influential “Design for Six Sigma.” General Motors and Chrysler each distributed 10,000 copies of the best-seller to their engineers and managers. Other clients that have sought Dr. Chowdhury’s expertise include Bosch, Caterpillar, Daewoo, Hyundai, and Volkswagen.

Dr. Chowdhury is a fellow or honorary member of 10 professional societies. He has received numerous awards, including the SME Gold Medal and the SAE International Henry Ford Distinguished Award for Excellence in Automotive Engineering. SAE established the Subir Chowdhury Medal of Quality Leadership Award in 2010.

**Internal Combustion Engine Award**

**ROY J. PRIMUS**



The Internal Combustion Engine Award, established in 1966, is given in recognition of eminent achievement or distinguished contributions over a substantial period of time that have advanced the art of engineering in the field.

Roy J. Primus, is honored for outstanding leadership in advancing the state-of-the-art of internal combustion engines for more than 40 years, including the development of engines, industry-leading analysis techniques, and educating and mentoring engineers.

Mr. Primus started his career at the Cummins Technical Center where he conducted analytical and experimental work on diesel and

natural gas engines. In recognition of his work, Cummins bestowed him with the Dr. Julius P. Perr Innovation Award.

Mr. Primus also worked at the GE Global Research Center, focusing on new challenges with locomotive, marine, and stationary engines. He twice received the GE Dushman Award, as well as the AMTS Tony Nerad Technical Achievement Award. Now retired, Mr. Primus has earned 50 patents and authored 35 technical papers.

**Johnson & Johnson Consumer Companies, Inc. Medal**

**SHERYL SORBY**



The Johnson & Johnson Consumer Companies, Inc. Medal recognizes outstanding contributions by an individual, company, government entity, school or other organization toward developing and implementing practices, processes, and programs that value and strategically manage diversity and inclusiveness. The award was established by the Board on Diversity and Outreach in 2004 through the generous contributions of individual ASME members and Johnson & Johnson Consumer Companies, Inc.

Sheryl Sorby, Ph.D., professor of engineering education at the University of Cincinnati, is honored for innovative and sustained work in developing and implementing spatial skills practices that foster a greater participation of STEM and marginalized students in engineering. She has also worked to modernize engineering education and increase diversity in engineering faculty. Dr. Sorby is also past president of the American Society of Engineering Education.

Her spatial skills intervention course has been implemented in several engineering programs. She has authored and co-authored three textbooks and has published numerous journal papers on the subject.

**Warner T. Koiter Medal**

**VIKAM DESHPANDE**



The Warner T. Koiter Medal was established in 1996 to recognize distinguished contributions to the field of solid mechanics with special

emphasis on the effective blending of theoretical and applied elements, and on a high degree of leadership in the international solid mechanics community. The medal honors the late Dr. Koiter, world-renowned authority in the field.

Vikam Deshpande, Ph.D., professor of materials engineering at University of Cambridge, is recognized for fundamental contributions in the mechanics of materials, ranging from the design of micro-architected materials to the development of blast-resistant structures, which have had a profound impact in engineering science and related technologies.

Dr. Deshpande’s work is characterized by a combination of theoretical understanding and experiments designed to unravel complex phenomena over a wide range of topics. One of his most innovative projects has been the development of laboratory-based simulators for blast loading dynamic events. He has written more than 290 international refereed journal papers.

**Robert E. Koski Medal**

**RUDOLF SCHEIDL**



The Robert E. Koski Medal recognizes an individual who has advanced the art and practice of fluid power motion and control through education and/or innovation. It was established in 2007 by the Fluid Power Systems and Technology Division to honor Mr. Koski’s contributions to the fields of design engineering, and dynamic systems and control.

Rudolf Scheidl, Dipl.-Ing., Ph.D., head of the Institute of Machine Design and Hydraulic Drives and a professor of mechanical engineering at Johannes Kepler University Linz, is honored for contributions to fluid power research, education, and commercialization, especially in establishing digital fluid power as a vibrant research area.

Dr. Scheidl’s research group is considered a world leader in the R&D of digital fluid power technologies. He co-founded the Linz Center of Mechatronics GmbH, an internationally acclaimed R&D company for promoting and commercializing advances in mechatronics and fluid power. He holds more than 25 patents and has authored more than 175 articles.

### Allan Kraus Thermal Management Medal

SAMUEL GRAHAM JR.



The Allan Kraus Thermal Management Medal, established in 2009, recognizes an individual who has demonstrated outstanding achievements in thermal management of electronic systems and their commitment to the field of thermal science and engineering.

Samuel Graham Jr., Ph.D., the Nariman Farvardin Professor and dean of engineering at the University of Maryland, is recognized for expertise in the thermal engineering of wide bandgap semiconductor devices and interfaces, including heterogeneous integration methods for thermal management.

Dr. Graham has pioneered methods to integrate cooling solutions at the die level for wide bandgap and ultrawide bandgap architectures. His group is the field's leading research team in the U.S. and has influenced the direction of this field on an international level. Dr. Graham has authored 200 papers and co-authored six book chapters. He is an ASME Fellow and recipient of the society's K-16 Clock Award. Dr. Graham has received numerous honors, including the U.S. Air Force Commander's Public Service and the NSF Career awards.

### Frank Kreith Energy Award

RANGA PITCHUMANI



The Frank Kreith Energy Award was established in 2005 to honor an individual for significant contributions to a secure energy future with particular emphasis on innovations in conservation and/or renewable energy. The award was established by the Solar Energy and Advanced Energy divisions to honor Dr. Frank Kreith's contributions to solar energy and heat transfer.

Ranga Pitchumani, Ph.D., the George R. Goodson Professor of Mechanical Engineering at Virginia Tech, is recognized for pioneering scientific contributions in the fields of solar engineering, and energy conversion and storage technologies. His visionary stewardship as chief scientist of the SunShot Program at the U.S. Department of Energy has contributed to a pervasive impact on the nation's renewable energy future and leadership in me-

chanical engineering administration and education.

An ASME Fellow, Dr. Pitchumani has received many prestigious honors and awards. He was recognized by the Indian Institute of Technology, Bombay, as a distinguished alumnus in 2016.

### Bernard F. Langer Nuclear Codes and Standards Award

ROBERT I. JETTER



The Bernard F. Langer Nuclear Codes and Standards Award was established in 1977 and is presented to an individual who has contributed to the nuclear power plant industry through the development and promotion of ASME nuclear codes and standards or the ASME Nuclear Certification Program.

Robert I. Jetter is recognized for more than 50 years of dedicated service to ASME's BPVC Section III codes related to elevated temperature design for nuclear power, chairing the subgroup on elevated temperature design, and significantly contributing to the development of Division 5 for high temperature reactors

Mr. Jetter is an ASME Fellow and received the society's Dedicated Service Award in 2011. As an employee of Rockwell/Atomics International, he directed design activities on the early sodium cooled reactors and space power plants through all the U.S. Liquid Metal Fast Breeder Reactor programs. He currently consults on the development and application of elevated temperature design criteria.

### Wilfred C. LaRochelle Conformity Assessment Award

KEN KWOK TAI LAU



The Wilfred C. LaRochelle Conformity Assessment Award, established in 2017, recognizes distinguished service in the area of conformity assessment including, but not limited to, the establishment, advancement, and promotion of the Society's product and personnel certification and accreditation programs.

Dr. Ken Kwok Tai Lau is honored for exceptional leadership in ASME standards and certification, particularly in the development, enforcement, and advancement of

the society's conformity assessment programs and implementation of key initiatives that continue to enhance ASME's Global position.

Dr. Lau, an ASME Fellow and retired chief inspector for the Alberta Government Boilers Branch, was extremely active in supporting ASME conformity assessment programs and spent many years of dedicated service on ASME conformity assessment committees.

He has written more than 10 publications on public safety and conformity assessment compliance. Dr. Lau received the CSA Award of Merit and the National Board Safety Medal, the highest honor bestowed by the National Board of Boiler and Pressure Vessel Inspectors.

### Gustus L. Larson Memorial Award

YIHUI ZHANG



The Gustus L. Larson Memorial Award was established in 1974 to honor an ASME Fellow and founder of Pi Tau Sigma. It is awarded to the engineering graduate who has demonstrated outstanding achievement in mechanical engineering within 10 to 20 years following receipt of their bachelor's degree.

Yihui Zhang, Ph.D., a professor of engineering mechanics at Tsinghua University, is recognized for outstanding achievements in mechanical engineering.

Dr. Zhang is considered one of the top researchers of his generation in the mechanics of materials and structures. His research focuses on mechanically guided 3D assembly, soft network materials, and stretchable electronics. He has published more than 150 peer-reviewed journal papers. Dr. Zhang has received many honors and awards, including ASME's Melville Medal and its Thomas J.R. Hughes Young Investigator and Sia Nemat-Nasser Early Career awards. He was named one of MIT Technology Review's 35 Innovators Under 35 in 2016. Dr. Zhang is an associate editor of the ASME *Journal of Applied Mechanics*.

### H.R. Lissner Medal

LORI A. SETTON



The H.R. Lissner Medal, established by the Bioengineering Division in 1977 and elevated to a Society award in 1987, recognizes out-

standing achievements in the field of bioengineering.

Lori A. Setton, Ph.D., the Lucy and Stanley Lopata distinguished professor and department chair of the department of biomedical engineering at Washington University in St. Louis, is honored for outstanding mechanobiology research related to degenerative cartilage diseases and significant contributions leading to a better understanding of osteoarthritis and intervertebral disc disorders, and for internationally recognized leadership in the bioengineering community.

Dr. Setton, an ASME Fellow, made the first detailed mechanical characterization of the nucleus pulposus and annulus fibrosus and conducted formative research on the response of cells in these structures to mechanical loading. Dr. Setton has developed injectable, tunable, and bioactive material to improve function and relieve pain of people with IVD degeneration. Her work has appeared in more than 180 publications, including 154 journals, three editorials, and 15 book chapters.

### McDonald Mentoring Award

DANIEL R. COOPER



The McDonald Mentoring Award established in 2007 recognizes the outstanding mentoring of other professionals by an engineer in industry, government, education or private practice.

Daniel R. Cooper, Ph.D., an assistant professor at the University of Michigan department of mechanical engineering, is recognized for pioneering leadership in sustainable manufacturing research and for initiating multiple programs and practices for mentoring University of Michigan students.

Dr. Cooper's Resourceful Manufacturing and Design group helps to empower U.S. manufacturers to achieve sustainability through design, process, and supply chain innovations.

Dr. Cooper is chair of ASME's Manufacturing Engineering Division (MED) Life Cycle Engineering Technical Committee and program chair of the Design for Manufacturing and the Life Cycle Technical Committee. He organized three consecutive LCE symposia, oversaw an increase in submissions to LCE, and co-authored an article on industrial sustainability for the MED 100-year celebration.

## Machine Design Award

### DIANN BREI



The Machine Design Award, established in 1958, recognizes eminent achievement or distinguished service in the field of machine design.

Diann Brei, Ph.D., a professor of mechanical engineering at the University of Michigan and chair of Integrative Systems + Design, is honored for outstanding contributions in novel device design and for supporting engineering science, as well as for mentoring and building communities in the field of smart materials and structures.

Dr. Brei's research focuses on design science for device innovation using smart materials. An ASME Fellow, she has received ASME's Adaptive Structures and Material Systems and its Dedicated Service awards. She was recognized for teaching and mentorship with the Ruth and Joel Spira Outstanding Teaching Award and U-M College of Engineering Outstanding Faculty Award for Mechanical Engineering. She holds more than a dozen patents and has authored numerous journal papers.

## Charles T. Main Student Leadership Awards

The Charles T. Main Award was established in 1919 to recognize an undergraduate ASME student member whose leadership and service qualities have contributed, for a period of more than one year, to the programs and operation of a Student Section. In 1983 a second-place award was added.

### MARCUS LANNIE - GOLD



Marcus Lannie, a graduate of Purdue University's college of engineering, is recognized for outstanding leadership as an ASME student chapter president, increasing the number and diversity of student membership, developing successful internship programs, and mentoring dozens of students.

As President of Purdue's ASME chapter in 2021, Mr. Lannie grew the organization from 10 to 300 members. He now serves as chairman of the board, advising the 50-person executive team on effectively leading ASME's current 450 members. Mar-

cus's internship roles have included program management, mechanical engineering, sales and marketing, and management consulting. He plans to pursue a master's degree in ME at UC Berkeley.

### TOUKIR AHMED CHOWDHURY - SILVER



Toukir Ahmed Chowdhury, a final-year undergraduate student in the department of mechanical engineering at Chittagong University of Engineering and Technology (CUET) in Chittagong, Bangladesh, is honored for outstanding service as public relations secretary of the ASME CUET Student Chapter and for increasing activities, membership, and sponsorships as a member of the ASME Student Regional Team, Asia Pacific Region.

An ASME CUET volunteer since 2020, Mr. Chowdhury has played a leadership role in ASME's E-Fest Digital and Student Leader Training Conference.

He received an internship in the R&D department for Unilever, Bangladesh. He also works as a content creator for Shabash Fakibaj and is Chief Operation Officer of Sharpenr, a management consultancy firm.

## Melville Medal

### GLAUCIO H. PAULINO

### KE LIU

### TOMOHIRO TACHI



The Melville Medal was first awarded in 1927 and is the highest honor for the best original technical paper published in the ASME Transactions in the past two years.

Glaucio H. Paulino, Ph.D., a professor of civil and environmental engineering and the Princeton Institute of Materials; Ke Liu, Ph.D., an assistant professor in the department of advanced manufacturing and robotics at Peking University; and Tomohiro Tachi, Ph.D., a professor in arts and sciences at the University of Tokyo; are recognized for the paper titled "Bio-Inspired Origami Metamaterials With Metastable Phases Through Mechanical Phase Transitions."

Dr. Paulino, an expert in com-

putational mechanics and topology optimization, focuses his research on the design of robotic systems that fold like origami and behave like natural organisms. He's an associate editor of ASME's *Journal of Applied Mechanics*. He received ASME's Daniel C. Drucker Medal in 2020 and the Ted Belytschko Applied Mechanics Division Award in 2014. He was also the co-recipient, along with Dr. Tachi, of the National Academy of Sciences 2015 Cozzarelli Prize.

Dr. Liu's work focuses on the mechanics of morphing structures, including design, analysis, and synthesis of soft robotics, metamaterials, and deployable structures. He's a reviewer for ASME's *Journal of Mechanisms and Robotics*. Dr. Liu received the 2020 Sigma Xi Research Award, Best Ph.D. Thesis, and the 2018 7OSME Gabriella & Paul Rosenbaum Foundation Travel Award.

Dr. Tachi has been designing origami since 2002 and continues to explore three-dimensional and kinematic forms through computation. In 2016 he was a corecipient of ASME's A. T. Yang Memorial Award and winner of the Young Scientist's Prize for the Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science, and Technology, Japan. He was also the co-recipient of the International Association for Shell and Spatial Structures Tsuboi Award in 2013.

## M. Eugene Merchant Manufacturing Medal

### BRIAN J. PAPKE



The M. Eugene Merchant Manufacturing Medal was established in 1986 by ASME and SME to honor an exceptional individual who has had significant influence and responsibility for improving the productivity and efficiency of the manufacturing operation.

Brian J. Papke, retired CEO of Mazak Corp., a leading machine tool builder, is recognized for leadership and investment in research that led to advances in machine tool and factory technologies that set the stage for digital manufacturing, drove standardization for manufacturing interconnectivity, and improved the competitiveness of U.S. manufacturers.

At Mazak, Papke oversaw an expansion of plants and technology centers in North America and helped to lead the company in its commitment of new technologies.

He was named to the Northern Kentucky Business Hall of Fame and received the AMT's Al Moore Award of Lifetime Industry Dedication Award.

## Van C. Mow Medal

### ROBERT LEON MAUCK



The Van C. Mow Medal, established by the ASME Bioengineering Division in 2004, is presented for significant contributions to the field of bioengineering through research, education, professional development, leadership in the development of the profession, mentoring of young bioengineers, and service to the bioengineering community.

Robert Leon Mauck, Ph.D., the Mary Black Ralston professor of education and research in orthopedic surgery and professor of bioengineering at the University of Pennsylvania, is recognized for contributions to bioengineering, musculoskeletal tissue engineering, and mechanobiology, as well as contributions to the education, mentorship, and professional development of young engineers.

Dr. Mauck serves as the director of the University of Pennsylvania's McKay Orthopedic Research Laboratory, the co-director of musculoskeletal regeneration at the Institute for Regenerative Medicine, and the director of the Biomechanics Core of the Penn Center for Musculoskeletal Disorders. He is a founding member of the school's Center for Engineering Mechanobiology and a co-director of the Translational Musculoskeletal Research Center at the Crescenzo VA Medical Center.

## Nadai Medal

### GEORGE Z. VOYIADJIS



The Nadai Medal was established in 1975 to recognize significant contributions and outstanding achievements that broaden the field of materials engineering.

George Z. Voyiadjis, D.Eng.Sc., the Boyd professor in the department of civil and environmental engineering at Louisiana State University, is recognized for outstanding achievements in micro-mechanical characterization of plasticity and damage in materials, and for pioneering contributions to multiscale

modeling and localization problems.

Dr. Voyiadjis is an expert in multi-scale modelling of size effects in materials with different methods of atomistic simulation and continuum enhanced models. His research encompasses macro-mechanical and micro-mechanical constitutive modelling, experimental procedures for quantification of crack densities, thermal effects, interfaces, failure, fracture, impact, and defect nucleation.

An ASME Fellow, he has served as chair of the society's Executive Committee of the Materials Division. Dr. Voyiadjis received the American Society of Civil Engineers Nathan M. Newmark Medal and Educator of the Year awards, among others.

His book, "Advances in Damage Mechanics: Metals and Metal Matrix Composites," is used by researchers and students worldwide. He has authored or edited 21 other books and 356 referred journal articles. He holds two patents.

#### **Sia Nemat-Nasser Early Career Award**

##### **ANKIT SRIVASTAVA**



The Sia Nemat-Nasser Early Career Award recognizes research excellence in experimental, computational or theoretical aspects of mechanics of materials by an individual within 10 years following receipt of their Ph.D. degree. Established by the Materials Division in 2008, it was elevated to a Society award in 2012.

Ankit Srivastava, an associate professor in the department of materials science and engineering at Texas A&M University, is honored for innovative research on micro-mechanisms of deformation and failure of advanced structural materials, as well as enabling material design by combining fundamental theories, small-scale experiments, and microstructural mechanics.

Dr. Srivastava's research focuses on mechanics of materials and materials design. He combines the experimental and computational tools to unravel the micro-mechanisms of deformation and failure of structural materials.

He has published over 50 peer-reviewed journal articles in major journals. He is a co-organizer of the Computational Materials Science Summer School at Texas A&M University Campus. Dr. Srivastava has organized multiple symposia

at the yearly ASME International Mechanical Engineering Congress & Exposition.

#### **Robert M. Nerem Education and Mentorship Medal**

##### **MICHELE J. GRIMM**



The Robert M. Nerem Education and Mentorship Medal, established by the Bioengineering Division in 2017, recognizes an individual who has demonstrated a sustained level of outstanding achievement in education and mentoring of trainees.

Michele J. Grimm, Ph.D., the Wielenga Creative Engineering Endowed professor in the departments of mechanical engineering and biomedical engineering at Michigan State University, is honored for leadership in mentoring hundreds of faculty members through stewardship at the National Science Foundation (NSF), establishing a cutting-edge biomedical engineering department, including undergraduate and graduate programs, and supporting high-quality biomedical engineering across the United States.

An ASME Fellow, Dr. Grimm has played an active role in ASME's Bioengineering Division, especially in her mentorship and support of female and student engineers. Dr. Grimm continued being a strong mentor at the NSF, which she joined in 2016 as program director, helping engineers find programs that fit their research and obtain funding.

Prior to joining MSU in 2019, Dr. Grimm had taught for 25 years at Wayne State University. This fall, she is transitioning to the role of dean of the College of Engineering and Applied Sciences at the University at Albany, part of the SUNY system.

#### **Burt L. Newkirk Award**

##### **FILIPPO MANGOLINI**



The Burt L. Newkirk Award was established in 1976 and is presented to an individual who has made a notable contribution in tribology research or development, as evidenced by important tribology publications prior to his or her 40th birthday.

Filippo Mangolini, Ph.D., an assistant professor in the department of mechanical engineering at the University of Texas at Austin, is honored for outstanding contributions

in advancing the understanding of tribological behavior of liquid and solid lubricants through the development of novel surface-analytical and in-situ approaches.

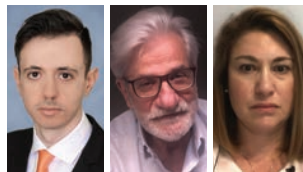
Dr. Mangolini is credited with uncovering new insights into the mechanisms by which ultralow friction materials work under harsh conditions, establishing methods for characterizing surfaces and interfaces, and discovering relationships that control friction and wear in different environments. He has produced dozens of peer-reviewed articles and has received a number of awards for research and teaching achievements. He holds two patents related to thin film metal silicides.

#### **Edward F. Obert Award**

##### **GEORGE-RAFAEL DOMENIKOS**

##### **EMMANUEL ROGDAKIS**

##### **IRENE KORONAKI**



The Edward F. Obert Award was established in 1987 by the Advanced Energy Systems Division to recognize an outstanding paper on thermodynamics. It was elevated to a Society award in 1996.

George-Rafael Domenikos, Emmanuel Rogdakis, and Irene Koronaki, all professors at the School of Mechanical Engineering of the National Technical University of Athens, where they received their Ph.D.s, are honored for their paper titled "Studying the Superfluid Transformation in Helium 4 Through the Partition Function and Entropic Behavior."

Dr. Domenikos is the lead researcher at NTUA, where he works on the development of thermophysical models of cryogenic helium and the design and simulation of ultra-low temperature cryocoolers. He has published several papers on helium models and cryocooler design, having presented many of them at major conferences.

Dr. Rogdakis, now retired, had served as the former director of NTUA's Applied Thermodynamics Laboratory, where he founded the Stirling technology, absorption cooling, and evaporation cooling departments. He served as chair of NTUA's school of mechanical engineering from 2005 to 2007. He has published over 150 articles, co-authored two books on thermodynamics, and co-edited "Handbook Recent Advances in Renewable En-

ergy, Volume 3."

Dr. Koronaki is a professor of thermodynamics of refrigeration systems, heat pumps, and power cycles, and their applications in buildings. She has been director of NTUA's Applied Thermodynamics Lab since 2018. She is a chartered mechanical engineer.

#### **Rufus Oldenburger Medal**

##### **WAYNE J. BOOK**



The Rufus Oldenburger Medal was established in 1968 and is given in recognition of significant contributions and outstanding achievement in the field of automatic control.

Wayne J. Book, Ph.D., the HUSCO/Ramirez chair in fluid power and motion control and professor emeritus at the Georgia Institute of Technology, is honored for pioneering and fundamental contributions to the analysis, control, and deployment of lightweight, flexible manipulators in space, defense, and industry, as well as contributions to control and robotics education.

Dr. Book's research contributions in the modeling and control of flexible manipulator arms, including his many papers, have greatly impacted the field. He has also made significant contributions to the fields of haptics.

An ASME Fellow, Dr. Book has served on numerous ASME committees and has received the society's Dedicated Service, Control Leadership, Robert Koski and IMECE Fluid Power Systems and Technology Division Best Paper awards. He's known for bridging the control and robotics groups of ASME, IEEE and international control communities.

#### **Old Guard Early Career Award**

##### **BRYAN MALDONADO**



The Old Guard Early Career Award was established in 1994 to help the young engineer bridge the gap between college and professional life. It recognizes an individual who has advanced quickly in their professional career, is continuing their education, has shown leadership in ASME activities, and is an active volunteer in their community.

Bryan Maldonado, Ph.D., R&D associate research staff member at Oak Ridge National Laboratory, is recognized for leadership in bridg-

ing ASME's Internal Combustion Engine and Dynamic Systems & Control divisions, mentoring STEM students, and improving science communication and outreach.

Dr. Maldonado's research interests include model-based optimal control, statistical signal processing, stochastic dynamic systems, propulsion systems, integrated energy systems, and advanced building construction. He has co-authored more than 25 publications.

Dr. Maldonado has been heavily involved in ASME's Dynamic Systems and Control Division, co-hosting its podcast and serving as session organizer for its automotive and transportation systems technical committee.

**Performance Test Codes Medal**

**TINA L. TOBUREN**



The Performance Test Codes Medal, established in 1981, is awarded for outstanding contributions to the development and promotion of ASME Performance Test Codes, including the supplements on instruments and apparatus.

Tina L. Toburen, P.E., is recognized for outstanding leadership and contributions in ASME Performance Test Codes, notably in the testing of combined cycle power plants, as well as performance monitoring and testing of gas turbine inlet air and combustion turbine inlet air conditioning equipment.

Ms. Toburen is president and principal engineer of T2E3 (Tina Toburen's Energy Efficiency Enterprises), which provides services in support of performance testing, monitoring, and reporting at power generation facilities, with a focus on gas turbine and combined cycle facilities.

Ms. Toburen has extensive experience with ASME standards and is active in many Performance Test Code and Reliability-Availability-Performance committees. She was chair of the Power Division in 2021-2022, where she helped organize the 2022 Power Conference.

**Pi Tau Sigma Gold Medal**

**R. RENEE ZHAO**



The Pi Tau Sigma Gold Medal was established in 1938 by Pi Tau Sigma in coordination with ASME to recognize outstanding achieve-

ment in mechanical engineering by an engineering graduate within 10 years following receipt of their bachelor's degree.

R. Renee Zhao, Ph.D., an assistant professor of mechanical engineering at Stanford University, where she directs the Soft Intelligent Materials Laboratory, is recognized for outstanding achievement in mechanical engineering.

Both a Terman and Gabilan faculty fellow at Stanford, Dr. Zhao is known for making extraordinary contributions to the mechanics of soft active materials. Her research focuses on multifunctional robotic systems with integrated shape-changing, assembling, sensing, and navigation. She has received the Journal of Applied Mechanics and the Haythornthwaite Foundation Research Initiation awards, both from ASME's Applied Mechanics Division, as well as an NSF Career Award.

Dr. Zhao is currently vice chair of the Nanomaterials for Biology and Medicine Technical Committee of ASME IMECE Materials Division. She has published extensively in many prestigious journals.

**James Harry Potter Gold Medal**

**KAI HONG LUO**



The James Harry Potter Gold Medal was established in 1980 to recognize eminent achievement or distinguished service in the science of thermodynamics and its applications in mechanical engineering.

Kai Hong Luo, Ph.D., P.E., a professor, chair of energy systems, and head of energy and the environment research division in the department of mechanical engineering at the University College London, is recognized for exceptional achievements in advancing the science of nonequilibrium thermodynamics across nanoscales, mesoscales, and macroscales, as well as the development of cutting-edge and widely used physical and numerical models embodying thermodynamic principles that have transformed energy system prediction, design, and optimization.

Dr. Luo is a leader in the decarbonization of the energy and power sectors through low- and zero-carbon technologies. An ASME Fellow, he has contributed to the journals and conferences of the society's

UK and Ireland Section. Dr. Luo has published 223 journal articles, 25 articles and book chapters, 220 conference papers, and numerous technical reports.

**Dixy Lee Ray Award**

**HAROON S. KHESHGI**



The Dixy Lee Ray Award, established in 1998, recognizes significant achievements and contributions in the broad field of environmental protection. It honors not only those who have contributed to the enhancement of environmental protection and engineer, but also those who have contributed to other disciplines where accomplishments have indirectly impacted environmental protection.

Haroon S. Khesghi, Ph.D., adjunct professor in the department of atmospheric sciences at the University of Illinois at Urbana-Champaign, is honored for significant achievements and contributions to the science, technology, and policies of global climate change.

Dr. Khesghi spent the bulk of his career in ExxonMobil's Corporate Strategic Research, retiring in 2021. He continues his collaborative research at the University of Illinois.

Dr. Khesghi has held leadership positions at the American Institute of Chemical Engineers, the Society of Petroleum Engineers, and on the Engineering Founder Societies Carbon Management Technologies Project. He has authored many journal articles and other notable content.

**Charles Russ Richards Memorial Award**

**NORMAN A. FLECK**



The Charles Russ Richards Memorial Award, established in 1944, was named in honor of a founder of Pi Tau Sigma. It is presented to an engineering graduate who has demonstrated outstanding achievement in mechanical engineering for 20 years or more following receipt of their bachelor's degree.

Norman A. Fleck, Ph.D., a professor of mechanics of materials and director of the Cambridge Centre for Micromechanics at Cambridge University, is honored for outstand-

ing achievements in mechanical engineering.

Dr. Fleck, recognized as a world leader in micromechanics, has made major contributions in the fields of metallic foams, lattice materials and sandwich panels, advanced plasticity theories, fiber composites, ductile and brittle damage and fracture, fatigue, contact mechanics, ferro-electrics, and powder compaction. He has published more than 300 papers.

Dr. Fleck received the ASME Koiter Medal for International Leadership in Mechanics in 2013. He is currently president of the International Union of Theoretical and Applied Mechanics.

**Safety Codes and Standards Medal**

**DAVIS L. TURNER**



The Safety Codes and Standards Medal was established in 1986 to recognize contributions to the enhancement of public safety through the development and promotion of ASME safety codes and standards or through ASME safety accreditation activities.

Davis L. Turner, president of Davis L. Turner & Associates, is recognized for more than 25 years of service in providing excellent leadership, support, and technical expertise in the A17 code development process, including helping to expand the stopping safety requirements and performance-based codes to include escalators and moving walks.

Having worked in the elevator industry for more than 60 years, Mr. Turner in 1996 started Davis L. Turner & Associates, which supports diversified markets in the vertical transportation industry and the legal profession focusing on safety, codes, standards, technology, and engineering.

A valuable contributor to ASME A17 development activities, Mr. Turner received the ASME Dedicated Service Award in 2017.

**R. Tom Sawyer Award**

**TIMOTHY C. LIEUWEN**



The R. Tom Sawyer Award, established in 1972, is bestowed upon an individual who has made important contributions toward the ad-

vancement of the gas turbine industry, as well as the ASME International Gas Turbine Institute, over a substantial period of time.

Timothy C. Lieuwen, Ph.D., P.E., regents professor and the David S. Lewis, Jr. chair and executive director of Georgia Tech's Strategic Energy Institute, is honored for outstanding contributions to the development of gas turbine combustion systems and service to the gas turbine community.

Dr. Lieuwen contributed to the formation of ASME's Gas Turbine Segment by driving essential initiatives and providing invaluable advice to the leadership team. He is also recognized for his work with GE, Pratt & Whitney, Siemens, Mitsubishi Heavy Industry, NSF, and others to secure funding for research. A well-respected author, Dr. Lieuwen has written a textbook titled "Unsteady Combustor Physics" and many highly cited papers considered the standard that academia, federal agencies, and industry follow.

#### **Milton C. Shaw Manufacturing Research Medal**

**GARY J. CHENG**



The Milton C. Shaw Manufacturing Research Medal established in 2009, recognizes significant fundamental contributions to the science and technology of manufacturing processes.

Gary J. Cheng, Ph.D., a professor in the school of industrial engineering at Purdue University, is recognized for significant contributions to manufacturing science in laser-based scalable nanomanufacturing processes, publishing high-quality journal papers and patents, and advancing the understanding of laser-matter interactions, including laser-induced shock deformation, additive processing, and phase transformation.

Dr. Cheng's work in scalable nanomanufacturing has led to important applications in aerospace, automobile, energy, environment, and opto-electronics industry. One of his major contributions is a nanomanufacturing platform based on laser shock induced high strain rate in materials. He has published more than 200 articles in peer reviewed journals and holds 13 patents and provisional applications.

An ASME Fellow and active member, Dr. Cheng has twice received the society's Manufacturing

Science and Engineering Conference Best Paper award. He also earned the Chao Trigger Young Investigator award.

#### **Lakshmi Singh Early Career Leadership Award**

**JENNIFER JEWERS BOWLIN**



The Lakshmi Singh Early Career Leadership Award, established in 2020, recognizes a female engineer who has demonstrated considerable leadership in, commitment to, and continued service with ASME.

Jennifer Jewers Bowlin, P.E., a client practice director and principal at Henderson Engineers, is honored for exemplary dedication, enthusiasm, and service to ASME early in a career, particularly as chair of the Nominating Committee, director of the ASME Foundation Board, and chair of the E-Test Committee.

Ms. Jewers Bowlin, who currently serves on the ASME Philanthropy Committee, has received the society's Dedicated Service and the Old Guard Early Career awards, as well as being nominated for E-Week New Faces of Engineering. Ms. Jewers Bowlin focuses on cold storage and warehouse system design. Throughout her professional career, she has been instrumental in supporting and advancing the careers of female engineers.

#### **Ben C. Sparks Medal**

**ARUN SRINIVASA**



The Ben C. Sparks Medal, established in 1990, recognizes eminent service by an individual or collaborative team in promoting innovative, authentic, practice-based, engineering design/build experiences in undergraduate mechanical engineering or mechanical engineering technology education.

Arun R. Srinivasa, Ph.D., the Holdredge/Paul professor of mechanical engineering at Texas A&M University, is recognized for contributions to integrating technology to enhance the classroom learning experience and efforts to propagate design-thinking and decision-making as an integral part of an inclusive mechanical engineering curriculum.

Dr. Srinivasa began incorporat-

ing novel teaching methods long before they became popular. Those include introducing design as an integral part of mechanics classes, using in-class and video demonstrations to illustrate concepts, advocating interactive learning strategies, and enhancing active design decision-making through. Several universities have adopted the techniques he presented at the ASME Mechanical Engineering Education Leadership Summit in 2018.

A pioneer in the use of advanced thermodynamic and continuum mechanics, Dr. Srinivasa has written several landmark papers on the dissipative behavior of materials.

#### **Ruth & Joel Spira Outstanding Design Educator Award**

**KAMRAN BEHDINAN**



The Ruth & Joel Spira Outstanding Design Educator Award was established as a division award in 1998. Elevated to a Society award in 2001, it recognizes a person who exemplifies the best in furthering engineering design education.

Kamran Behdinan, P.Eng., Ph.D., a professor in the University of Toronto's department of mechanical and industrial engineering, is honored for developing world-class multidisciplinary engineering design programs and courses in conjunction with industries and international institutes for students around the world.

Dr. Behdinan is design chair and founding director of the UofT Multidisciplinary Design and Innovation and founding director and principal investigator of its Advanced Research Laboratory for Multifunctional Lightweight Structures. He's also past president of the Canadian Society of Mechanical Engineering.

An ASME Fellow, he has published more than 400 peer-reviewed journal and conference papers, one book, and 20 book chapters.

#### **Spirit of St. Louis Medal**

**GEORGE A. KARDOMATEAS**



The Spirit of St. Louis Medal was established in 1929 by Philip D. Ball, ASME members and citizens of St. Louis. It is awarded for meritorious service in the advancement of aeronautics and astronautics.

George Kardomateas, Ph.D., a professor of aerospace engineering at the Georgia Institute of Technology is recognized for significant contributions to damage tolerance of aircraft structures through the development of a novel nonlinear sandwich structural theory, fatigue crack growth experiments and prediction approaches, and efficient computational approaches

Dr. Kardomateas's novel contributions includes a highly accurate nonlinear structural theory called the Extended High Order Sandwich Panel Theory for the static and dynamic analysis of sandwich aerostuctures; a mixed-mode fatigue growth law for delaminations in layered composites; and an inelastic discrete asperities closure model for fatigue crack growth.

Dr. Kardomateas, an ASME Fellow, co-authored three books, authored about 200 journal papers, edited six volumes on failure mechanics, and is an associate editor of ASME's *Journal of Applied Mechanics*, among others.

#### **J. Hall Taylor Medal**

**RICHARD D. CAMPBELL**



The J. Hall Taylor Medal was established in 1965 by the ASME Codes and Standards Board as a gift from Taylor Forge and Pipe

Works to commemorate the pioneering work of J. Hall Taylor in the standardization of industrial products and safety codes for their usage. It is awarded for distinguished service or eminent achievement in the codes and standards area pertaining to the broad fields of piping and pressure vessels.

Richard D. Campbell, Ph.D., P.E., a welding technical specialist at Bechtel, is honored for distinguished service and leadership to ASME's Bioprocess Equipment Standard Committee and various subcommittees, as well as contributions to welding technology. Dr. Campbell was selected a Bechtel Fellow in 2011. An ASME Fellow, he represents Bechtel on many ASME and American Welding Society's code committees.

Dr. Campbell has authored more than 30 technical articles on welding or metallurgy, as well as AWS's The Professional's Advisor on Welding of Stainless Steels and the Stainless Q&A column in the *AWS Welding Journal*.

**Robert Henry Thurston  
Lecture Award**

**ROBERT O. RITCHIE**



The Robert Henry Thurston Lecture Award, established in 1925 in honor of ASME's first president, provided an opportunity for a leader in pure and/or applied science or engineering to present to the Society a lecture on a subject of broad interest to engineers. The Thurston Lecture was elevated to a Society award in 2000.

Robert O. Ritchie, Ph.D., CEng, the H.T. & Jessie Chua Distinguished Professor in Engineering at UC Berkeley and a faculty senior scientist at the Lawrence Berkeley National Laboratory, is honored for pioneering contributions to the understanding of the mechanics and mechanisms of the deformation and fracture properties of biological and engineering materials, and how those can be used to enhance the damage tolerance of structural materials.

An ASME Fellow and winner of the society's Nadai Medal, Dr. Ritchie holds four patents, has written the textbook "Introduction to Fracture Mechanics" and has published more than 800 papers.

**Timoshenko Medal**

**MICHAEL A. SUTTON**



The Timoshenko Medal is conferred in recognition of distinguished contributions to the field of applied mechanics. Established by the Applied Mechanics Division in 1957, it honors Stephen P. Timoshenko, world-renowned authority.

Michael A. Sutton, Ph.D., Carolina distinguished research professor in the department of mechanical engineering at University of South Carolina and chief science officer of Correlated Solutions, is honored for contributions in the creation and development of fundamental theory, dissemination, and application of digital image correlation measurement methods in solid mechanics, providing unprecedented measurement capabilities to the field of applied mechanics.

A member of the National Academy of Engineering and an ASME Fellow, Dr. Sutton has received numerous international awards for his research on the development of DIC

and its application to a variety of applications, ranging from nanomaterials and microelectronics to aerospace and infrastructure. NASA and companies such as Apple, Boeing, General Motors, and Intel routinely use the technique. Dr. Sutton co-wrote "Image Correlation for Shape, Motion and Deformation Measurement," the only textbook about DIC measurement.

**Worcester Reed Warner Medal**

**KUMBAKONAM RAMAMANI  
RAJAGOPAL**



The Worcester Reed Warner Medal, established in 1930, is awarded for outstanding contributions to the permanent literature of engineering.

Kumbakonam Ramamani Rajagopal, Ph.D., a distinguished professor, regents professor, and Forsyth chair professor in the department of mechanical engineering at Texas A&M University, is honored for pioneering contributions through a series of papers on continuum mechanics in the field of mixtures.

Dr. Rajagopal's papers have been cited hundreds of times and have provided a lasting contribution to the literature in continuum mechanics. He has recognized common features in much of his work and has produced a cross-reference between models of materials that few others have. His publications are regarded as formative contributions to engineering literature. Dr. Rajagopal is a reviewer for the society's *Journal of Lubrication Technology*.

**Arthur L. Williston Medal**

**RADHIKA DHARMADHIKARI**



The Arthur L. Williston Medal, established in 1954, recognizes an engineering student or recent graduate for fostering civic service.

Radhika Dharmadhikari, a design engineer at Becton Dickinson Technology Campus India, Bangalore, India, is honored for involvement as a student leader in ASME committees and initiatives, and as a community and social service volunteer.

Ms. Dharmadhikari, an ASME

early career engineer member, volunteered at the society's India Program Development group and served as chair of its Cummins College student section. She won the society's Elevator Pitch Competition at the society's E-Fest Asia Pacific in 2020. Ms. Dharmadhikari graduated in 2020 from MKSSS's Cummins College Of Engineering for Women.

**Savio L-Y. Woo Translational  
Biomechanics Medal**

**ZONG-MING LI**



The Savio L-Y. Woo Translational Biomechanics Medal, established in 2015, recognizes an individual who has translated meritorious bioengineering science to clinical practice through research, education, professional development, and with service to the bioengineering community.

Zong-Ming Li, Ph.D., William and Sylvia Rubin chair of orthopaedic research and a professor of orthopaedic surgery and biomedical engineering at the University of Arizona, is recognized for the formative discovery of sensorimotor control function and biomechanics of the human hand, and for translating knowledge into innovative clinical solutions, including relieving the symptoms of carpal tunnel syndrome.

Dr. Li also serves as the university's vice chair for research in the department of orthopedic surgery, director of the Robert G. Volz Orthopedic Research Laboratories, associate director of the Arthritis Center, and director of the Hand Research Laboratory.

Dr. Li was associate editor of ASME's *Journal of Biomechanical Engineering* and has edited many other publications. He has published more than 120 peer-reviewed articles in 51 journals.

**Henry R. Worthington Medal**

**PAUL UWE THAMSEN**



The Henry R. Worthington Medal, established in 1980, is bestowed for eminent achievement in the field of pumping machinery.

Paul Uwe Thamsen, Dr.-Ing., professor and chair of fluid system

dynamics at Technical University of Berlin, Germany, is recognized for leadership and teaching roles in the research, optimization, and improvement of pumps and related systems, including the transport and management of supply and wastewater.

As managing director of Pleuger Worthington GmbH Unterwasser-pumpen plant from 1992 to 2003, Dr. Thamsen designed state-of-the-art pumps and motors for water, mining and offshore application. He co-authored two papers on submersible screw pumps. At Technical University, he expanded his research to pumping stations, water and wind turbines and the complete fluid dynamic system. Dr. Thamsen has co-authored three textbooks and more than 200 papers. He helped establish the Nordic Water Network, which earned him the chair for water and wastewater transport at Norwegian University of Science and Technology. He co-founded the certified pump engineer training course and has been a key organizer of ASME Pumping Machinery Symposia.

**S.Y. Zamrik PVP Medal**

**HARDAYAL S. MEHTA**



The Pressure Vessel and Piping Medal was established in 1980. Renamed in 2010, it is bestowed for outstanding contributions in the field of pressure vessel and piping technology.

Hardayal S. Mehta, Ph.D., a chief consulting engineer at GE-Hitachi Nuclear, is honored for expertise in flaw assessment and environmental fatigue of nuclear pressure vessels and piping, and for dedicated service to the ASME PVP Division, and the Codes and Standards and Materials and Fabrication Technical committees.

An ASME Fellow, Dr. Mehta has been the associate editor of the ASME *Journal of Pressure Vessel Technology* since 2012. He has published technical papers on topics such as fatigue, fracture mechanics, and material degradation at the ASME PVP conference and in associated journals since the late 1960s. Dr. Mehta also edited/coedited several ASME PVP conference volumes and has served as session developer and chair on multiple topics in both the C&S and M&F committees.