

A Celebration of Engineering

ASME 2011 *Honors*

A commemoration of individual and professional contributions toward the advancement of technology.

Thad W. Allen

Semper Paratus—Always Ready. Adm. Thad W. Allen was familiar with that motto and standard of excellence as a young boy. As the son of Wilma and Clyde Allen, a retired Coast Guard chief damage controlman and World War II veteran, he basically grew up in the United States Coast Guard.

When it came time to pursue his undergraduate education, Adm. Allen had applied to several universities and had appointments to both the Naval Academy and the Coast Guard Academy. Thinking he was too small to play Division I football and would have a better chance to play in a Division III school, he chose the Coast Guard Academy. It worked: He was on the varsity team as a freshman and was captain his

Deepwater Horizon oil spill in the Gulf of Mexico. Established in 1998, the award recognizes significant achievements and contributions in the broad field of environmental protection.

Adm. Allen completed his distinguished Coast Guard career as its 23rd commandant, retiring from that position in June 2010. In May 2010, President Barack Obama selected him to serve as the national incident commander for the unified response to the *Deepwater Horizon* oil spill in the Gulf of Mexico—a position he held concurrently while finishing his tenure as commandant of the Coast Guard. Adm. Allen was charged with oversight of all response efforts to cease the flow of oil and mitigate the effects of the disaster. Working closely with the federal coordinator, the U.S. Environmental Protec-

and Maritime Defense Zone Atlantic—where, in 2001, he led the Coast Guard's Atlantic Area forces following the September 11 attacks. He previously served as commander, Seventh Coast Guard District, where he oversaw all operations in the southeastern United States and in the Caribbean.

After more than 39 years of service with the Coast Guard, Adm. Allen joined RAND Corporation as a senior fellow in October 2010. At RAND, a nonprofit institution that helps improve policy and decision making through research and analysis, his focus is on disaster recovery operations and emergency preparedness.

Allen is a Fellow of the National Academy of Public Administration, and a member of the American Society of Public Administration, the Council on Foreign Relations, and the Partnership for Public Service.

His numerous awards and decorations include the Homeland Security Distinguished Service Medal with gold star, the Defense Distinguished Service Medal, the Coast Guard Distinguished Service Medal with two gold stars, and the Legion of Merit, as well as The George Washington University's Alumni Achievement Award (2006) and the Colin Powell Public Service Award (2010).

Adm. Allen received his bachelor's degree at the U.S. Coast Guard Academy in New London, Conn., in 1971. He earned a master's in public administration at The George Washington University in 1986; and a master's in management at the Sloan School of Management at the Massachusetts Institute of Technology in 1989. In 2011, Adm. Allen received honorary doctorates from George Mason University in Fairfax, Va., and the National Defense University in Washington, D.C. ■

As commandant of the Coast Guard, he oversaw the response efforts to the Deepwater Horizon oil spill.

tion Agency, and the U.S. departments of Homeland Security, Defense, Interior, Commerce, and Health and Human Services, he sought to bring a global effort to response endeavors.

Prior to his assignment as commandant, Adm. Allen served as Coast Guard chief of staff. In 2005, during his service in that position, he was designated principal federal official for the U.S. government's response and recovery operations throughout the Gulf Coast region in the aftermath of hurricanes Katrina and Rita.

Other Coast Guard assignments included commander, Atlantic Area



senior year. And the rest is history.

The retired admiral is being honored with the Dixy Lee Ray Award for a lifetime of high-impact and distinguished accomplishments in environmental protection, including the outstanding management of the

Adrian Bejan

Adrian Bejan looks at his work in science as a mechanical engineer for 40 years as “a natural outcome of one lucky break after another.” His luck began when he left communist Romania during a tiny window of liberalism after winning a national contest for scholarships to study engineering abroad. “I came to America as one of six lucky boys and girls, and was the only one handed an application for MIT; the other five were given applications to Berkeley.”

After earning his bachelor’s, master’s, and Ph.D. degrees in mechanical engineering at the Massachusetts Institute of Technology in 1971, 1972, and 1975, Dr. Bejan was a Postdoctoral Fellow at the University of California, Berkeley, in the Miller Institute of Basic Research in Science. “I was hosted by a very famous professor, Chang-Lin Tien. At Berkeley I got the green light to do basic science in engineering. It’s OK to be a scientist in engineering.”

From 1978 to 1984, Dr. Bejan was an assistant and associate professor at the University of Colorado at Boulder. He joined Duke University in Durham, N.C., as a full professor of mechanical engineering with tenure in 1984 and was appointed J.A. Jones Distinguished Professor of Mechanical Engineering in 1989.

Dr. Bejan is recognized with Honorary Membership in ASME for an extraordinary record of creative work, including the unification of thermodynamics and heat transfer; the conceptual development of design as a science that unites all fields; legendary contributions to engineering education; and, since 1996, the discovery and continued development of the constructal law.

He has pioneered numerous original methods in thermodynamics, such as entropy generation minimization, scale analysis of convection, heatlines and masslines, and the constructal law of design and evolution in nature.

Dr. Bejan is the author of more than 530 peer-reviewed journal articles, and 25 books including *Design in Nature* with J. Peder Zane (Doubleday, 2012), *Shape and Structure, From Engineering to Nature* (Cambridge University Press, 2000), *Constructal*

Analysis Technical Committee. Dr. Bejan was honored with the Society’s Gustus L. Larson Memorial Award (1988), the James Harry Potter Gold Medal (1990), the Heat Transfer Memorial Award—Science (1994), the Worcester Reed Warner Medal (1996), the Charles Russ Richards Memorial Award (2001), and the Edward F. Obert Award (2004).

He is a member of the American Society for Engineering Education (ASEE).

Dr. Bejan received the Max Jakob

“At Berkeley I got the green light to do basic science in engineering. It’s OK to be a scientist in engineering.”

Theory of Social Dynamics with Gilbert W. Merkx (Springer, 2007), and *Design with Constructal Theory* with Sylvie Lorente (Wiley, 2008). Three of his books, used as textbooks in universities around the world, are in their third edition—*Advanced Engineering Thermodynamics* (Wiley, 2006), *Convection Heat Transfer* (Wiley, 2004), and *Convection in Porous Media* with Donald Nield (Springer, 2006). Dr. Bejan is ranked by Thomson Reuters (formerly ISI) among the hundred most-cited authors in all engineering.

A Fellow of ASME, Dr. Bejan has presented papers, organized and chaired numerous conference sessions, edited several proceedings, and was associate editor of the *Journal of Heat Transfer*. He served on a number of Heat Transfer Division committees and was a member of the Advanced Energy Systems Division’s Systems



Memorial Award (1999) from ASME and the American Institute of Chemical Engineers (AIChE), ASEE’s Ralph Coats Roe Award (2000), the Luikov Medal (2006) and James P. Harnett Memorial Award (2007) from the International Centre for Heat and Mass Transfer, and the Donald Q. Kern Award (2008) from AIChE.

He holds 16 honorary doctorates from universities in 11 countries including the Swiss Federal Institute of Technology in Zurich (2003) and the Sapienza University of Rome (2009). ■

Yvonne C. Brill

She can look back on 65 years as a rocket engine specialist, with roles in a number of firms ranging from mathematician doing trajectory calculations, research analyst working on rocket propellants and turbojet studies, and propulsion engineer and manager of propulsion. When she does that, Yvonne Brill will tell you, "It was fun. I've always felt that I had contributed something to each of the places, something that they did not have before. It's exciting to think that the work you've done has a useful end result."

Now a consultant specializing in space propulsion systems and



satellite technology, Ms. Brill is receiving the Kate Gleason Award for expanding the frontiers of space through innovations in rocket and jet propulsion, including the invention of the hydrazine resisto-jet engine used for geosynchronous and low-earth-orbit communication satellites; and for having the foresight to champion the hybrid

electric mono-propellant rocket engine.

Established in 2011, the award honors the legacy of Kate Gleason, the first woman to be welcomed into ASME as a full member, and recognizes a female engineer who is a highly successful entrepreneur in a field of engineering or who has had a lifetime of achievement in the engineering profession. "I'm excited to receive this inaugural award," says Ms. Brill. "Kate Gleason was truly a pioneer. She just went about and did what she had to do. I've always felt that way too. I think I have her spirit."

Ms. Brill began her career at Douglas Aircraft on the West Coast in

the NRC Space Studies Board.

Her patented invention while at RCA, the electrothermal hydrazine thruster manufactured by the Aerojet Redmond Division, was initially flight proven in 1983 and is currently an industry standard. While at RCA she also managed the build, integration, and test of a Teflon solid propellant propulsion system for the RCA/Navy Nova spacecraft. Successful launch and utilization of the Nova satellite in May 1981 brought electric propulsion to an operational status in the United States.

Ms. Brill is the author or co-author of a number of publications and has provided numerous advanced technical seminars for various professional groups. She has encouraged young people to enter the engineering profession and has mentored women at all stages in their careers.

Among her many honors, Ms. Brill was elected to the National Academy of Engineering. She is an Honorary Fellow of the American Institute of Aeronautics and Astronautics, and a Fellow of the Society of Women Engineers. She was inducted into the National Inventors Hall of Fame in 2010 for her invention of the electrothermal hydrazine thruster and other space propulsion innovations.

"I now spend a good deal of my time nominating women for awards for which they're qualified, because they often get passed over," Ms. Brill says. "I encourage women to pursue engineering careers, because of the flexibility. There are just so many different fields of engineering than when I went to school."

Ms. Brill received her bachelor's degree in mathematics from the University of Manitoba in 1945 and her master's degree in chemistry from the University of Southern California in 1951. ■

***"It's exciting
to think that
the work
you've done
has a useful
end result."***

the mid-1940s. In those days there weren't many women working in rocketry for any corporation and, it is believed, she was the only woman in the United States who was actually doing rocket science. Eventually, she joined RCA Astro Electronics in the East. She also spent time at NASA Headquarters in Washington, D.C., and was

with the International Maritime Satellite Organization (INMARSAT) in London from 1986 until her retirement in 1991. Since retiring from INMARSAT, she has served as a member of many U.S. National Research Council committees that provide science and technology policy advice to the federal government. She is presently a member of

Joseph A. Falcon

Joseph A. Falcon has a lot to reminisce about. His winning a science fair as a senior in high school enabled him to be an exhibitor at the Westinghouse Pavilion at the 1939 World's Fair in New York. He served as an aide at ASME's Winter Annual Meeting at the start of his 72 years as an active member of the Society. He had parallel industrial and academic careers, and, subsequently, ran his own company.

Mr. Falcon is recognized by ASME with Honorary Membership for distinguished contributions to engineering practice including service as ASME president, and an initiator and member of ASME's Board on Minorities and Women, and the Leadership Intern Program; more than four decades of leadership in the international power industry; and service as an engineering, science, and technology educator.

His six decades of experience in the energy field have encompassed nuclear power, geothermal facilities, fossil fuel-fired plants, alternative energy sources, the geopolitics of oil, and energy economics. In 1987, he founded and is currently the senior partner of J.A. Falcon & Associates, a firm consulting in energy systems. Located in Los Angeles, the firm's activities have been primarily in the area of cogeneration and independent power production. Between 1994 and 2006, Mr. Falcon was engaged by Westinghouse (three years) and General Electric (nine years) as an expert witness on power plants for the multitude of asbestos litigation suits throughout the country.

Previously, Mr. Falcon was employed by Bechtel Power Corp. as a project engineering manager (1970-87). He worked on a variety of projects, including international assignments in 10 different countries,

ranging from nuclear power facilities to technology transfer. Earlier, he worked for Atomics International Division and Fluor Corp.

As part of his academic career, he was designated a distinguished lecturer at the University of California, Los Angeles, School of Engineering

Winning a science fair in high school enabled him to be an exhibitor at the Westinghouse Pavilion at the 1939 World's Fair.

Extension Division, where he served from 1953 to 1984. In 1973, he helped to develop and was appointed the administrator of the Power Engineering Program. He was also a lecturer at the University of Southern California (1982-84) in a program to introduce selected business school students to technology.

He has published a number of papers and has given presentations on a variety of topics throughout his career including, most recently, the consequences of the Fukushima meltdown and its impact on nuclear energy globally.

An ASME Fellow, Mr. Falcon has been active at all levels of the Society since joining as a Student Section member in 1939. He served on the Board of Governors (1986-90); and, while president of ASME (1992-93), he signed technology transfer agreements with the leading engineering societies in Spain, Portugal, Turkey, and Mexico. He was also an initiator and member of the International Gas Turbine Institute; vice president of the Energy Conversion Group; chair of the Mexico Section; and member

of the Executive Committee and the ASME representative to UPADI, the Pan American Federation of Engineering Societies. He is currently active on the Energy Committee and recently authored the ethanol fuels section for the ASME publication titled *Energy Choices—A Guide to Facts*



and Perspectives. In 1991, Mr. Falcon received the Edwin F. Church Medal.

He is also a Fellow of the Institute for the Advancement of Engineering. He served a four-year term (1994-97) on the Energy Training Program of the U.S. Agency for International Development.

Mr. Falcon earned his bachelor's degree in mechanical engineering from Polytechnic Institute of Brooklyn (now part of New York University) in 1943, and his master's in mechanical engineering from Stevens Institute of Technology in 1947. He received a certificate in business management from UCLA in 1955. Mr. Falcon is a registered Professional Engineer in California and New York. ■

Nathan H. Hurt

Nate Hurt grew up during the age when teenagers were modifying cars into hot rods, and he was right there among them. That hands-on experience—modifying engines and carburetors, shaving heads down, and changing muffler and spring support systems—got him interested in doing more mechanical work. After initially working toward becoming a journeyman machinist, Mr. Hurt enlisted in the Navy, where his mechanical background was put to use in the back engine room of a destroyer.

He earned his bachelor's degree in mechanical engineering after leaving the Navy, and a job offer from the Goodyear Tire and Rubber Co. led Mr. Hurt on a 64-year

industry, particularly the field of uranium enrichment, and in the broader mechanical engineering profession as an active member and distinguished past president of ASME.

Mr. Hurt began his career at Goodyear in 1947. During his 40 years with the company, he was involved in the construction and operation of plants for the production of polyvinyls, polyesters, rubber chemicals, and synthetic rubber. He held several engineering and plant management positions, and served as program director for the design, construction, and training of operating management for a synthetic rubber plant in Brazil for Petrobras, the Brazilian government-owned petroleum company. He also was assigned to programs in France and Luxembourg.

When Goodyear formed a sub-

projects. His responsibilities included managing an office in Oak Ridge, Tenn., and projects at several other U.S. Department of Energy nuclear sites. He later joined IDM Environmental Corp.'s Oak Ridge office as vice president, Southeast region, and was responsible for the decontamination and demolition of facility projects at several DOE sites.

Now a senior consultant, Mr. Hurt currently provides consulting services on uranium enrichment and radioactive cleanup to companies with DOE contracts.

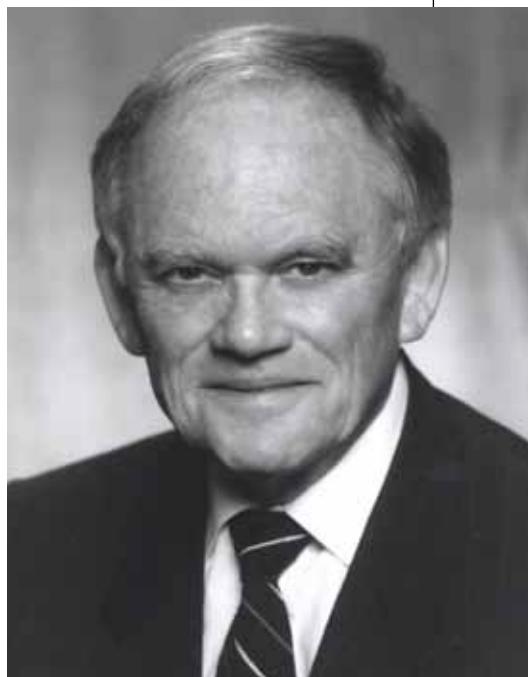
Mr. Hurt co-authored the chapter on uranium enrichment that was published in the *Nuclear Engineering Handbook* edited by Kenneth D. Kok (CRC Press, 2009).

An ASME Fellow, Mr. Hurt has been a member of ASME since 1946.

Initially a member of a Student Section, he went on to serve as chair of the Management Division (1981), vice president of the General Engineering Group (1984-88), member of the Board of Governors (1988-90), and ASME president (1991-92). During his year of presidency, he promoted the awareness of contributions of engineers to society and stressed the importance of precollege preparation for entering the profession. Mr. Hurt continues to serve on the Committee of Past Presidents as well as the Committee on Organization and Rules and the Energy Committee. He received a Dedicated Service Award in 1994.

He is also a Fellow of the Institution of Engineers, Australia; and a member of the American Nuclear Society and the American Society for Engineering Management.

Mr. Hurt earned his bachelor's degree in mechanical engineering at the University of Colorado, Boulder, in 1947. ■



His early experience with hot rods led him first to the back engine of a destroyer, and eventually to the design and operation of chemical and nuclear plants.

sidiary, Goodyear Atomic Corp., to fulfill a contract with the U.S. Atomic Energy Commission for the operation of a new uranium enrichment facility, Mr. Hurt was manager of engineering during the facility design and construction.

Later he was deputy general manager and, subsequently, Goodyear Atomic's president and general manager.

After retiring from Goodyear in 1987, Mr. Hurt joined the Denver office of Los Alamos Technical Associates as director of marketing and

career path devoted to managing the design, construction, and operation of chemical and nuclear facilities. Forty-seven of those years have been dedicated to the nuclear field.

He is recognized by ASME with Honorary Membership for significant contributions in the nuclear

**M. Eugene Merchant
Manufacturing
Medal of ASME/SME**

Ranga Komanduri

Ranga Komanduri pushed himself as a high school student in India. Although he originally wanted to be a medical doctor, his choices led to mechanical engineering because he was curious about how things work. He continues to challenge himself and the graduate students and young faculty he mentors through research on advanced manufacturing processes and materials. “I’m able to influence their work ethic and the quality of their work, and since our research involves interdisciplinary activities, they become more versatile,” he said.

Dr. Komanduri is honored with the M. Eugene Merchant Manufacturing Medal of ASME/SME for fundamental contributions in research and excellence in graduate student education and mentoring that have had a significant long-term influence on manufacturing processes, particularly the finishing of ceramic balls for high-speed and high-precision bearings and the chemical mechanical planarization of materials used in semiconductors.

“I feel humbled that I was nominated and selected for this very prestigious award,” Dr. Komanduri said. “My only regret is that Gene Merchant, who I knew professionally, passed away in 2006. I’ll miss his participation at the Honors Assembly.”

Dr. Komanduri began his career in 1972 as an assistant professor of mechanical engineering at Carnegie Mellon University in Pittsburgh. In 1977, he joined General Electric Corporate Research and Development in Schenectady, N.Y., as a member of the scientific staff and Rensselaer Polytechnic Institute in Troy, N.Y. After spending three years (1986–89) at the National Science Foundation, Dr. Komanduri joined Oklahoma

State University as a professor and chair of the More Oklahoma Science and Technology initiative in the School of Mechanical and Aerospace Engineering. Currently, he is a regents professor and A.H. Nelson Jr. Chair in Engineering.

At Oklahoma State, he developed

His research activities include the development of hard, wear-resistant coatings for cutting tools.

state-of-the-art research facilities and trained several students. His research activities include the development of hard, wear-resistant coatings for cutting tools, including low-pressure diamond and multilayer nanomaterial coatings. He also did work in molecular dynamics and Monte Carlo simulations of nanometric cutting and tribology; thermal aspects of various manufacturing processes; and electrocardiogram signal analysis for identification of cardiac disorders.

Dr. Komanduri holds 22 patents and has authored some 230 technical papers and edited 22 conference proceedings.

An ASME Fellow, he served the society as vice president of the Manufacturing Technical Group and as a member of the Council on Engineering (1989–93). He also served as chair of the Production Engineering Division’s Executive Committee; and a member of ASME’s Inter-Council Committee on the Winter Annual Meeting and the Technology Opportunities and Planning Committee.

He was an associate editor of the

Journal of Manufacturing Science and Engineering (formerly *Journal of Engineering for Industry*) and he organized the Symposium on U.S. Contributions to Machining and Grinding Research in the 20th Century (1993). He was honored with the Society’s Blackall Machine Tool and



Gage Award (1981), Charles Russ Richards Memorial Award (1990), and William T. Ennor Manufacturing Technology Award (2002).

He is also a Fellow of the Society of Manufacturing Engineers and CIRP—the International Academy for Production Engineering. He served as president (1991–92), member of the board (1989–93), and member of the Scientific Committee of the North American Manufacturing Research Institution of SME.

Dr. Komanduri earned a bachelor’s degree in mechanical engineering and a master’s degree in heat power engineering at Osmania University in 1964 and 1966. He earned his Ph.D. and D.Eng. at Monash University (Melbourne, Australia) in 1972 and 1992. ■

Ioannis N. Miaoulis

Ioannis N. Miaoulis has been on a mission ever since he took a wrong turn. That turn brought him to a dead end—a parking lot of the neighborhood middle school.

He arranged to give a talk there the following week. When the teacher was introducing his “science boys,” a little girl asked for help on a science fair project. Dr. Miaoulis was told not to waste his time with her. Instead, he worked with her and she went on to win first prize at the fair. That decision “was the moment responsible for having my career now and getting this award—because it really changed my life,” he said.

As president and director of the Museum of Science in Boston since 2003, Dr. Miaoulis is positioning the institution to bring together govern-

dation, and federal funds, NCTL plans to introduce engineering as a new discipline in schools. The center designs K-12 engineering teaching materials, helps states modify their educational and assessment standards, and offers teachers professional development. It has worked with educators in all 50 states, as well as government representatives at many levels.

At Tufts University, he founded the Thermal Analysis of Materials Processing and Comparative Biomechanics laboratories, and launched the Center for Engineering Educational Outreach and the Entrepreneurial Leadership Program.

As dean of the School of Engineering at Tufts, he championed the introduction of engineering into the Massachusetts science and technology public school curriculum. In 2001

all ages enhance their knowledge of engineering and technology and to inspiring the next generation of engineers, inventors, and scientists.

He is a member of the board of trustees of Tufts University and Wellesley College, and currently serves on NASA’s Education and Public Outreach Committee. He has also served as a presidential appointee to the National Museum and Library Services Board since 2006. A frequent speaker on science and technology literacy, he has testified before U.S. Senate and House committees and served as keynote speaker at numerous education reform conferences nationwide. He has published more than 100 research papers and holds two patents.

As a student member of ASME in 1984, Dr. Miaoulis was honored with first prize at a regional Old Guard student competition. In 1988, as a faculty member at Tufts University, he was the advisor of the national winning project of the Old Guard competition.

He is a Fellow of the Massachusetts Academy of Sciences, and a member of the American Society for

Engineering Education; the Association of Science and Technology Centers; Sigma Xi, the Scientific Research Society; and Tau Beta Pi, the Engineering Honor Society. He has received numerous honors for his research, teaching, and community outreach.

Dr. Miaoulis earned his bachelor’s degree in mechanical engineering, *summa cum laude*, at Tufts University in 1983. He earned a master’s degree in mechanical engineering at the Massachusetts Institute of Technology, Cambridge, in 1984. In 1986 and 1987, he earned a master’s degree in economics and a Ph.D. in mechanical engineering at Tufts University. ■



He spearheaded the creation of a center that brings engineering education to elementary and high schools in all 50 states.

the commonwealth became the first state in the nation to develop a statewide K-12 engineering and technology curriculum and assessment test. He also worked to improve the climate for women students, and attract and promote women faculty.

Dr. Miaoulis is the 2011 recipient of the Ralph Coats Roe Medal in recognition of seminal and leadership contributions to numerous governmental advisory panels, institutions of higher education, and professional and civic organizations devoted to helping people of

ment, industry, and education to advance the goal of a scientifically and technologically literate citizenry.

In 2004, he spearheaded the creation of the National Center for Technological Literacy at the museum. Supported by corporate, foun-

Clayton Daniel Mote Jr.

Clayton Daniel Mote Jr. credits effective mentoring, particularly Professor Ian Finney from University of California, Berkeley, for the great things that have happened in his professional life—from his first job to his teaching awards. He is extremely proud of his own role mentoring, and notes that everyone needs a mentor, even the president of a university.

Dr. Mote knows that firsthand. As president of the University of Maryland in College Park for 12 years (1998–2010), he led the institution on an ambitious path to become one of the premier public research universities in the nation. He is currently Regents Professor and Glenn L. Martin Institute Professor of Engineering.

As the 2011 recipient of the ASME Medal, Dr. Mote is honored for remarkable leadership at two major universities and the development of a comprehensive theory describing the dynamics of such flexible moving structures as bands and discs.

Prior to coming to Maryland, he was a member of the faculty at the University of California, Berkeley, for more than 30 years. He chaired the mechanical engineering department (1987–91) and served as vice chancellor of university relations (1991–98).

Dr. Mote serves as an officer of the National Academy of Engineering, a member of the National Research Council Governing Board, and on National Research Council committees for innovation, national security, and national competitiveness in engineering and science.

His research focuses on dynamic and gyroscopic systems and on biomechanics. His research on flexible structure dynamics had a significant impact on saw control and stability. The forest products industry leveraged his insights to reduce waste due

to kerf losses, improve the quality of the final products, and moderate the noise (and hearing loss) associated with wood cutting.

In bioengineering, Dr. Mote is the recognized world leader in biomechanics related to skiing injuries. Through his novel experiments,

Division (1979–83), vice president for Environment and Transportation (1986–90), chair of the Environmental and Transportation Operating Board (1986–90), chair of the Per Brüel Gold Medal Committee (1988–95), vice chair of the Council of Engineering (1989–90), and Ray-

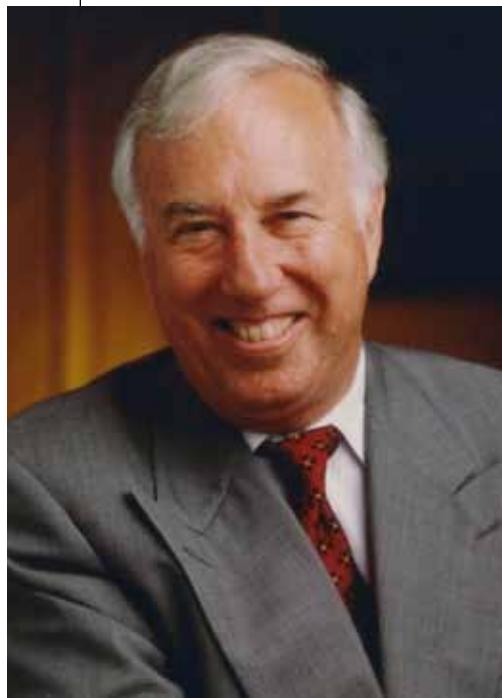
Through his novel experiments, he uncovered the mechanisms that cause ski injuries.

he uncovered the mechanisms that cause ski injuries, established the fundamental dynamical models for ski equipment and skiers, and helped define the equipment standards that now protect skiers.

Other areas of application for his research have included vibrations of fluid-conveying pipes, cable dynamics, biomechanics of prosthetic devices, bone modeling, hydrodynamic bearings, web mechanics and wrinkling, miniature force and motion sensing devices, and the biomechanics of finger motions including tactile sensing in touch typing.

Dr. Mote has authored more than 300 publications, holds four patents, and has advised 58 doctoral students.

An ASME Fellow and Honorary Member, Dr. Mote has been serving on the board of directors of the ASME Foundation since 2003 and on the ASME Press Publication Oversight Committee since 1989. Among his previous activities, he was chair of the San Francisco Section (1978–79), founding chair of the Noise Control and Acoustics



leigh lecturer (1994). He received the ASME Design Engineering Division's J.P. Den Hartog Award (2005), the Applied Mechanics Division's Applied Mechanics Award (2001), and the Society's Blackall Machine Tool and Gage Award (1975).

Dr. Mote is an honorary member of the International Society for Skiing Safety; and a Fellow of the American Academy of Arts and Sciences, the American Association for the Advancement of Science, and the Acoustical Society of America.

Dr. Mote earned his three degrees at the University of California, Berkeley: a bachelor's and a master's degree in mechanical engineering in 1959 and 1960, respectively; and a Ph.D. in engineering mechanics in 1963. He holds three honorary doctorates. ■

Thomas P. Pastor

Thomas P. Pastor became involved in codes and standards shortly after joining the Hartford Steam Boiler Inspection and Insurance Co. in 1986. He was recruited by Dr. Richard E. "Gene" Feigel, who later served as President of ASME for the 2005-06 term. "Gene is my mentor," Mr. Pastor said. "He pretty much cleared the way for me because he, himself, had gone down that same path."

Mr. Pastor is receiving the Melvin R. Green Codes and Standards Medal in recognition of extraordinary leadership and tireless efforts in the development of market-relevant standards products, the implementation of effective organizational and process enhancements, and in advancing the acceptance of ASME



codes and standards and conformity assessment programs worldwide. The medal was established in 1976 as the Codes and Standards Medal and renamed in 1996 to honor the memory and extraordinary contributions of Melvin R. Green, an ardent

supporter of industrial standards.

Mr. Pastor has 33 years of experience working in the areas of stress analysis and pressure vessel design. He began his career in 1977 with Combustion Engineering in Windsor, Conn., where he was a member of the structural analysis group responsible for performing load analyses of nuclear reactor internals subject to seismic and loss of coolant events.

After joining HSB, Mr. Pastor worked in the Codes and Standards Group in Hartford, Conn. He is currently vice president of code services for HSB Global Standards. He has managed the C&S Group for more than 20 years, and led the development of several knowledge-based databases that are used today to provide code technical support to over 3,000 ASME certificate holders and

one committee. During his tenure as chair of Subcommittee VIII *Pressure Vessels* he oversaw the development and publication of the revised Section VIII, Division 2, *Rules for Construction of Pressure Vessels*.

Mr. Pastor played a role in improving the standards development process within ASME. He promoted the use of electronic balloting for handling interpretation work within Section VIII. He also led a team to develop the first Committee Handbook for volunteers; it summarizes the entire standards development process utilized by ASME committees. In support of ASME's effort to increase international participation, Mr. Pastor worked with ASME staff to launch a new volunteer orientation training session during each Boiler Code Week. He has also contributed to the reorganization of the Boiler Code Standards committees while serving as vice chair of the BPV Standards Committee.

Mr. Pastor currently serves on ASME's Council on Standards and Certification, Board on Pressure Technology Codes and Standards, Board on Hearings and Appeals, Technical Oversight Management Committee, BPV-VIII Standards Committee and Subgroup on Design, and the PTCS Projects Oversight Group. He received a PTCS Dedicated Service Award in 2002 and ASME's J. Hall Taylor Medal in 2006.

He is a member of the American Society of Civil Engineers and the Pressure Vessel Manufacturers Association.

Mr. Pastor earned his bachelor's and master's degrees in civil engineering, with emphasis on structural design and analysis, at the University of Connecticut, Storrs, in 1975 and 1977. He is a registered professional engineer in Connecticut and Indiana. ■

He is recognized as a leader in advancing acceptance of ASME codes and standards and conformity assessment programs worldwide.

inspectors. Today, Mr. Pastor continues to lead the C&S Group as well as consult with HSB management on new strategic initiatives.

Mr. Pastor has taught basic-to-advanced seminars on Boiler and Pressure Vessel Code Section VIII, Division 1, *Design and Fabrication of Pressure Vessels*, to groups around the world.

An ASME Fellow, Mr. Pastor has been serving on the Society's BPV committees, with a primary emphasis on pressure vessel design and analysis, for 24 years; for 15 of those years he has served as an officer on at least

J.N. Reddy

An analytical thinker who excelled in mathematics, J.N. Reddy decided to pursue engineering on the advice of his teacher in Hyderabad, India, in 1962. A passionate teacher and researcher, Dr. Reddy views mathematics as the language of engineers and believes his role is to use the knowledge he has to serve the community. In his words, “That which is given is not lost.”

Dr. Reddy, a distinguished professor, regents professor, and the holder of the Oscar S. Wyatt Endowed Chair in the department of mechanical engineering at Texas A&M University, College Station, is recognized with Honorary Membership for distinctive and pioneering contributions to research and education in applied and computational mechanics through the development of refined theories and as the author of well-received books on composite materials, continuum and applied mechanics, and computational methods.

Dr. Reddy taught at the University of Oklahoma in Norman (1975–80) and Virginia Polytechnic Institute and State University in Blacksburg (1980–92). He was a research scientist at Lockheed Missiles and Space (1974–75) following his postdoctoral fellowship at the Texas Institute for Computational Mechanics at the University of Texas at Austin (1973–74).

His research interests include mathematical formulation and analysis of problems in applied mechanics including solid and structural mechanics, computational fluid mechanics, computational heat transfer, biomechanics, and the development of mathematical models and computational schemes based on the finite element method of problems in composite materials and structures, plates and shells, fluid dynamics, and

nano and biological systems. His finite element models, in parts, have been implemented into commercial software including Abaqus, NISA, and Hyperform.

Dr. Reddy is the author of more than 450 journal papers and 17 books, many of which have been

His research includes applying finite element methods to composites, fluid dynamics, and nano and biological systems.

adopted as textbooks. He is one of only a few researchers in engineering recognized by Thomson Reuters as a highly cited researcher, with over 10,000 citations and an h-index of 49. His editorial board service includes over two dozen journals, and he is the editor in chief of three other journals. He has delivered over 100 lectures at conferences around the world.

A Fellow of ASME, Dr. Reddy was associate editor (1997–2007) of *Applied Mechanics Reviews* and is now editor in chief. He is an organizer of symposia at the summer and annual meetings. Among his prior activities, he was the faculty advisor of Oklahoma University’s ASME Student Section (1976–79); member (1981–93), vice chair (1993–95), and chair (1995–97) of the Applied Mechanics Division’s Committee on Computing in Applied Mechanics; member of the ASME’s Committee on Composite Materials (1982–92); and associate editor for the *Journal of Applied Mechanics* (1992–98). He received the Worcester Reed Warner

Medal (1992) and the Charles Russ Richards Memorial Award (1995).

He is also a Fellow of the American Institute of Aeronautics and Astronautics, the American Society of Civil Engineers, the International Association for Computational Mechanics, the United States Asso-



ciation for Computational Mechanics, the American Academy of Mechanics, the Aeronautical Society of India, the Institution of Structural Engineers, and the American Society for Composites. He was a member of the Society of Engineering Science’s Board of Governors.

Dr. Reddy received his bachelor’s degree in mechanical engineering at Osmania University in Hyderabad, India, in 1968. He earned his master’s degree in mechanical engineering from Oklahoma State University, Stillwater, in 1970; and his Ph.D. in engineering mechanics at the University of Alabama in Huntsville in 1973. Dr. Reddy holds an honorary degree from the Technical University of Lisbon, Portugal (2009). He is a registered Professional Engineer in Oklahoma. ■

Honorary Membership

Paul J. Torpey

Paul J. Torpey was always interested in mechanical things, from fixing the toaster to working on bicycles. Experiences in high school fed his desire to pursue a lifetime career in technology.

Mr. Torpey is recognized with Honorary Membership for outstanding leadership in the electric utility research field that significantly advanced modern power systems, and for enlightened and insightful activities in engineering societies that improved the quality of the profession. He credits teamwork for his success and views ASME as a big family.

Mr. Torpey began his career at Bell Telephone Labs in New York where, during the 1960s, he was instrumental in adapting aircraft derivative gas turbines for emergency power

tal control, advanced energy conversion, robotics, energy conservation, and renewable resources. During this period, he also played a key role in the formation of the Electric Power Research Institute and the Empire State Electric Energy Research Corp. These organizations have supported hundreds of millions of dollars of research and development directed at efficient energy utilization, environmental protection, cleaner advanced energy sources, and improved methods for the transmission and distribution of electric energy. Among his notable accomplishments was the planning and supervision of a large-scale test burn of synthetic (coal-derived) fuel.

Named administrator of ESEERCO in 1974, Mr. Torpey guided the organization during its transforma-

Turbine Division. He served on the Society's Research Board (1974-78), where he was instrumental in identifying opportunities for ASME-sponsored research. During his tenure as vice president of research (1984-88), a number of important research studies were carried out for the federal government at the request of the National Science Foundation and the Department of Energy.

Mr. Torpey became a member of ASME's Board of Governors in 1989 and served until 1993. He conceptualized the Leadership Development Intern Program and the Three Year Integrated Financial Plan. He was deeply involved in drafting ASME's new vision and mission statements and in gaining board approval to internationalize ASME's mission.

As the 113th president (1994-95) of ASME, Mr. Torpey stressed the theme of innovation and lifelong learning to enable today's engineers to cope with rapidly changing conditions in the workplace. He supported the development of the forerunner of [asme.org](#), and the creation of new financial benefits for the membership. He also presided over the first

ASME International Presidential Workshops and established a special Task Force of the Board of Governors to streamline the committee structure. He received ASME's Centennial Medal and Distinguished Service Award.

For the American Association of Engineering Societies, he served as vice chair and governor (1996-97), treasurer (1997-98), chair elect and chairperson of the AAES's Engineers Public Policy Council (1998-99), and AAES chair (1999-2000).

Mr. Torpey earned his bachelor's and master's degrees in mechanical engineering at Columbia University, New York, in 1959 and 1960. ■



He played key roles in organizations supporting R&D for efficient use, cleaner sources, and improved distribution of electric energy.

tion from a nuclear research group into a broad-ranging research consortium to pursue all aspects of electric energy R&D on behalf of New York State's electric utilities.

In 1976, Mr. Torpey resumed his duties at Con Edison before subsequently returning to ESEERCO in 1988 as its executive director. Under his leadership, ESEERCO grew into a \$20 million operation by the early '90s. He retired as executive director in 1999.

An ASME Fellow, Mr. Torpey's early participation was in the Gas

backup for the nation's telecommunications network.

In 1970, he accepted a position at Consolidated Edison, where he helped establish one of the first electric utility research departments. As research manager/director, Mr. Torpey initiated projects in environmen-

ASME 2011 HONORS

Barnett-Uzgiris Product Safety Design Award



JOHN B. VORDERBRUEGGEN

The Barnett-Uzgiris Product Safety Design Award was established as the Triodyne Safety Award by the Design Engineering Division. In 2008, it was elevated to an ASME award and renamed. The award recognizes individuals who have made significant contributions to the safe design of products through teaching, research, and professional accomplishments.

John B. Vorderbrueggen, P.E., nuclear engineer at the U.S. Department of Energy's Office of the Departmental Representative to the Defense Nuclear Facilities Safety Board in Washington, D.C., is recognized for exceptional contributions to the advancement of accident investigation as a vehicle to make national improvements in industrial safety, and for efforts to expand the use of ASME codes and standards in government and private industry.

Mr. Vorderbrueggen has more than 35 years of experience in design, process safety, federal regulatory programs involving worker and public safety, maintenance management, human factors, quality assurance, and workforce training in various industries.

Bergles-Rohsenow Young Investigator Award in Heat Transfer



ED WALSH

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

Ed Walsh, Ph.D., senior research fellow at the University of Limerick in Ireland, is honored for significant contributions to the field of heat transfer through outstanding research on electronics cooling, micro-fluidics for medical diagnostics, boundary layer transition, and energy sustainability through experiments, equipment development, and analyses.

Dr. Walsh's main research themes are heat transfer and fluid mechanics, with a focus on energy, thermal management, and microfluidic applications. As a principal investigator, he has secured over €1.6 million (U.S. \$2.3 million) in research funding from competitive grants and industrial support. He is the named inventor on five patent applications, and the university has achieved three licenses with multinational companies based on his research activities.

Blackall Machine Tool and Gage Award



SINAN FILIZ O. BURAK OZDOGANLAR

The Blackall Machine Tool and Gage Award was established in 1954 for the best paper or papers clearly concerned with, or related to, the design or application of machine tools, gauges, or dimensional measuring instruments.

Sinan Filiz, Ph.D., assistant professor at Bilkent University in Ankara, Turkey, and O. Burak Ozdoganlar, Ph.D., associate professor at Carnegie Mellon University in Pittsburgh, are recognized for the two-part paper titled, "A Model for Bending, Torsional, and Axial Vibrations of Micro- and Macro-Drills Including Actual Drill Geometry—Part I: Model Development and Numerical Solution, and Part II: Model Validation and Application," which was published in the August 2010 issue of ASME's *Journal of Manufacturing Science and Engineering*.

Dr. Filiz is currently working on modeling, controlling, and minimizing vibrations in mechanical micro-machining processes.

Dr. Ozdoganlar's primary research interest is multiscale (micro/nano/macro) manufacturing processes and equipment. He is president of the International Institution for Micromanufacturing—I2M2.

Per Bruel Gold Medal for Noise Control and Acoustics



MARDI C. HASTINGS

The Per Bruel Gold Medal for Noise Control and Acoustics was established in 1987 in honor of Dr. Per Bruel, who pioneered the development of sophisticated noise and vibration measuring and processing equipment. The medal recognizes eminent achievement and extraordinary merit in the field, including useful applications of the principles of noise control and acoustics to

the art and science of mechanical engineering.

Mardi C. Hastings, P.E., Ph.D., professor in the George W. Woodruff School of Mechanical Engineering at Georgia Institute of Technology in Atlanta, is recognized for research and international leadership in marine bioacoustics, particularly the increased understanding of effects of underwater noise on marine life and the research efforts toward the mitigation of anthropogenic sound in the ocean.

Dr. Hastings has served on more than a dozen oversight panels, including the National Academy of Sciences' Study Committee on Potential Impacts of Ambient Noise on Marine Mammals.

Edwin F. Church Medal



RAMESH K. AGARWAL

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

Ramesh K. Agarwal, Ph.D., the William Palm Professor of Engineering at Washington University in St. Louis, is honored for meritorious service and wide-ranging contributions to mechanical engineering education through professional society activities, professional development and continuing education programs, participation in state and federal agency programs, development of cyber-enabled instruction and design curricula, introduction of service learning and sustainability in the curriculum, and numerous lectures and seminars.

Dr. Agarwal has championed the modernization of the mechanical engineering curriculum at the university, where he is also the director of the Aerospace Engineering Program and the Aerospace Research and Education Center. Dr. Agarwal is a Fellow of ASME and of 12 other societies.

Daniel C. Drucker Medal



JOHN W. RUDNICKI

The Daniel C. Drucker Medal, established in 1997, is conferred in recognition of distinguished contributions to the field of applied mechanics and mechanical engineering through research, teaching, and service to the community over a substantial period of time.

John W. Rudnicki, Ph.D., professor at Northwestern University in Evanston, Ill., is recognized for providing a new fundamental understanding of deformation instabilities in brittle rocks and granular media, including their interactions with pore fluids, with applications to fault instability, quantification of energy radiation from earthquakes, and environment- and resource-related geomechanics.

Dr. Rudnicki's research has been in the area of inelastic behavior and failure of solids, particularly geomaterials. He has been especially interested in the development of localized deformation and in the effects of coupling between deformation and fluid diffusion in connection with applications to the mechanics of earthquakes, energy storage and recovery, disposal of toxic wastes, and geological sequestration of CO₂.

William T. Ennor Manufacturing Technology Award



S.V. SREENIVASAN

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

S.V. Sreenivasan, Ph.D., professor of mechanical engineering and Thornton Centennial Fellow in Engineering at the University of Texas at Austin, is recognized for leading the development of practical low-cost nanolithography machines and processes, manufacturing innovations that are enabling applications in areas such as magnetic and solid-state storage, high-brightness light-emitting diodes, and targeted drug delivery.

Dr. Sreenivasan has published more than 100 technical articles and holds over 75 U.S. patents. He co-founded Molecular Imprints Inc. (MII), a spin-out from UT-Austin, in 2001. MII is an Austin-based nanomanufacturing company that now employs more than 100 people.

A S M E 2 0 1 1 H O N O R S

Fluids Engineering Award



JOHN F. FOSS

The Fluids Engineering Award was established by the Fluids Engineering Division in 1968. In 1978, it was elevated to an ASME award recognizing outstanding contributions over a period of years to the engineering profession and, in particular, to the field of fluids engineering through research, practice, and/or teaching.

John F. Foss, CPhys, Ph.D., professor at Michigan State University in East Lansing, is recognized for the sustained advancement of flow measurement/diagnostic methods and fluid mechanics-based inventions and applications in the automotive and aerospace fields, underpinned by fundamental research in shear flows, and for contributions to textbook and handbook publications.

Dr. Foss joined MSU in 1964 and was tasked with creating the lab content for two 4-credit fluid mechanics courses for the fall of 1965; that focus was sustained for three decades. From 1998 to 2000, he served as director of the National Science Foundation's Fluid Dynamics and Hydraulics Program.

Y.C. Fung Young Investigator Award



ALI KHADEMHSOSSEINI

The Y.C. Fung Young Investigator Award, established in 1985, recognizes a young investigator who is committed to pursuing research in bioengineering and has demonstrated significant potential to make substantial contributions to the field of bioengineering.

Ali Khademhosseini, Ph.D., associate professor at the Harvard-MIT Division of Health Sciences and Technology, Brigham and Women's Hospital, and Harvard Medical School; and an associate faculty member at Harvard's Wyss Institute for Biologically Inspired Engineering in Cambridge, Mass., is recognized for leadership in the field of biomaterials and tissue engineering, including significant contributions in the application of engineered biomaterials to micro- and nanotechnology for biomedical and biological applications.

Dr. Khademhosseini's laboratory is developing technologies to control the formation of vascularized tissues with appropriate microarchitectures as well as regulating stem cell differentiation within microengineered systems. He is also a junior principal investigator at Japan's World Premier Institute—Advanced Institute for Materials Research at Tohoku University.

Gas Turbine Award



ERIC M. CURTIS JOHN DOUGLAS DENTON JOHN LONGLEY BUDIMIR ROSIC

(Pictured clockwise from top left.)

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.

Eric M. Curtis, CEng, senior research associate at the University of Cambridge in England; John Douglas Denton, CEng, Ph.D., consultant; John Longley, Ph.D., senior lecturer at the University of Cambridge in England; and Budimir Rosic, Ph.D., university lecturer at Oxford University in England are recognized for the paper, "Controlling Tip Leakage Flow Over a Shrouded Turbine Rotor Using an Air-Curtain" (GT2009-59411), presented at Turbo Expo 2009.

J.P. Den Hartog Award



CHIEH-SU HSU

The J.P. Den Hartog Award, established by the Design Engineering Division in 1987 and elevated to an ASME award in 2010, recognizes lifetime contributions to the teaching and practice of vibration engineering.

Chieh-Su Hsu, Ph.D., professor of applied mechanics, emeritus, at the University of California, Berkeley, is recognized for seminal contributions to vibration education and nonlinear dynamics.

On the faculty of UC Berkeley since 1958, Dr. Hsu has educated thousands of students and has had a significant impact on the success of their profes-

sional careers. His research activities have been primarily in the areas of solid mechanics and dynamical systems, with accomplishments in areas including parametrically excited dynamical systems and global analysis of nonlinear dynamical systems. Dr. Hsu's publications include *Cell-to-Cell Mapping—A Method of Global Analysis for Nonlinear Systems* (Springer-Verlag, 1987).

Heat Transfer Memorial Award

The Heat Transfer Memorial Award was established in 1959 by the Heat Transfer Division. In 1974, it was elevated to an ASME award recognizing outstanding contributions to the field of heat transfer through teaching, research, practice, and design, or a combination of such activities.



SUMANTA ACHARYA – SCIENCE

Sumanta Acharya, Ph.D., L.R. Daniel Professor, and Fritz and Frances M. Blumer Professor at Louisiana State University in Baton Rouge, is recognized for seminal and long-lasting research contributions in gas turbine heat transfer and combustion, natural and mixed convection, and computational methods, enabling improved design of gas turbine engines, enhanced capability of computational fluid dynamics software, and a better understanding of complex transport phenomena.



BENGT SUNDÉN – ART

Bengt Sundén, docent (Dr-habil), professor of heat transfer and head of the department of energy sciences at Lund University in Sweden, is recognized for contributions to the understanding of mechanisms of the heat and momentum transport in complex geometries, enhancement of heat transfer, improvement and development of computational methods, and development of computational fluid dynamics and computer codes for heat exchangers.

Mayo D. Hersey Award



FARSHID SADEGHI

The Mayo D. Hersey Award, established in 1965, is bestowed for distinguished and continued contributions over a substantial period of time to the advancement of the science and engineering of tribology. Distinguished contributions may result from significant original research in one or more of the many scientific disciplines related to lubrication.

Farshid Sadeghi, Ph.D., the Cummins Professor of Mechanical Engineering at Purdue University in West Lafayette, Ind., is recognized for significant contributions to the advancement of the field of tribology through research, teaching, and mentoring of undergraduate and graduate students at Purdue; and for advancing the knowledge of lubrication and fatigue of heavily loaded contacts, lubrication and torque transmission in wet clutches, and micro-electronic sensor development for tribological applications.

Dr. Sadeghi has made outstanding contributions to mechanical engineering for nearly 30 years. He introduced tribology in the curriculum at Purdue's School of Mechanical Engineering and founded the Tribology Laboratory.

Patrick J. Higgins Award



SALLY REMEDIOS

The Patrick J. Higgins Award recognizes an individual who has contributed to the enhancement of standardization through contributions to the development and promotion of ASME codes and standards or conformity assessment programs. It was established in 2007 in remembrance of ASME's past vice president of the standardization department.

Sally Remedios, P.Eng., manager of codes and standards at Delta Faucet Co. in Indianapolis, is recognized for extraordinary perseverance in the development of consensus-based standards for the plumbing industry, enthusiastic leadership in the harmonization of standards between the United States and Canada, and outstanding work toward encouraging the standardization of water efficient devices.

Ms. Remedios began her certification and standards activities with the Canadian Standards Association in 1967. With Delta Faucet Co. since 1995, she is presently involved in the codes and standards related to plumbing products in the United States and Canada.

A S M E 2 0 1 1 H O N O R S

Soichiro Honda Medal



JOHN J. MOONEY

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. This medal was established in 1983 in recognition of Soichiro Honda's exemplary achievements in the field of personal transportation.

John J. Mooney, president of the Environmental and Energy Technology and Policy Institute, and John J. Mooney LLC in Wyckoff, N.J., is honored for the invention, development, and commercialization of the three-way catalytic converter used on all gasoline fueled automobiles and light-duty trucks in North America, Europe, Japan, and other industrialized countries.

Mr. Mooney spent 43 years with Engelhard Corp. in Iselin, N.J., before retiring from the firm as technical director in 2002. Through the Policy Institute, he has been working with the Partnership for Clean Fuels and Vehicles, a United Nations Environmental Program.

Internal Combustion Engine Award



ROLF D. REITZ

The Internal Combustion Engine Award, established in 1966, is given in recognition of eminent achievement or distinguished contribution over a substantial period of time, which may result from research, innovation, or education, in advancing the art of engineering in the field of internal combustion engines.

Rolf D. Reitz, Ph.D., Wisconsin Distinguished Professor of Mechanical Engineering at the University of Wisconsin-Madison, is being honored for long-term contributions to the physics of liquid fuel spray atomization, 3-D numerical modeling of combustion, and combustion system optimization; for demonstrating that multiple injectors reduce emissions in diesel engines; and for the discovery of the reactivity controlled compression ignition strategy for high-efficiency, low-emissions engine combustion.

Dr. Reitz is also the director of the UW-Madison Engine Research Center's Diesel Engine Research Consortium and is former director of the research center. His contributions are documented in nearly 400 papers in peer-reviewed journals and 11 book chapters.

Warner T. Koiter Medal



JAMES G. SIMMONDS

The Warner T. Koiter Medal was established in 1996 to recognize distinguished contributions to the field of solid mechanics. It puts special emphasis on the effective blending of theoretical and applied elements, and on leadership in the international solid mechanics community. The medal honors the late Dr. Warner T. Koiter (1914-1997), world-renowned authority in the field of solid mechanics, and commemorates his vast contributions as research engineer and teacher. The medal was funded by the Technical University of Delft in the Netherlands.

James G. Simmonds, Ph.D., professor emeritus in the department of civil and environmental engineering at the University of Virginia in Charlottesville, is recognized for seminal contributions to linear and nonlinear theories in solid mechanics, with special emphasis on plates and shells, and for an extensive body of journal publications and books on solid mechanics and applied mathematics.

Dr. Simmonds has contributed to the field for more than 50 years.

Robert E. Koski Medal



RICHARD BURTON

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 field of design engineering and dynamic systems and control.

Richard Burton, P.Eng., Ph.D., professor at the University of Saskatchewan in Saskatoon, Canada, is honored for pioneering contributions to the advancement of the art and practice of fluid power motion and control through education, innovation, and leadership roles in ASME's Fluid Power Systems and Technology Division and as one of the initiators of Fluid Power Net International.

A member of the department of mechanical engineering at the University of Saskatchewan since 1974, Dr. Burton has been very active in the international fluid power community.

Allan Kraus Thermal Management Medal



ROBERT E. SIMONS

The Allan Kraus Thermal Management Medal, established in 2009, recognizes individuals who have demonstrated outstanding achievements in thermal management of electronic systems as well as commitment to the field of thermal sciences.

Robert E. Simons is recognized for innovative and pioneering work in the development of cooling techniques for application to electronic computer packages and systems; and for the promotion and dissemination of knowledge to advance the understanding and appreciation of the role of thermal management in the design of electronic packages and systems.

Mr. Simons, a retired IBM senior technical staff member, has had a distinguished 45-year career in the thermal management of electronics. He joined IBM in Poughkeepsie, N.Y., in 1966 and, although he retired in 1993, Mr. Simons is currently consulting at IBM's Advanced Thermal Laboratory. He holds over 130 patents.

Frank Kreith Energy Award



ANN MARIE SASTRY

The Frank Kreith Energy Award was established in 2005 to honor an individual who has made significant contributions to a secure energy future with particular emphasis on innovations in conservation and/or renewable energy. Contributions may be through research, education, practice, or significant service to society that will lead to a sustainable energy future. 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, and was funded by Holocaust Settlement Claim No. 4931 for Nazi victims and by the Kreith family.

Ann Marie Sastry, Ph.D., president and chief executive officer of Sakti3 Inc. in Ann Arbor, Mich., and Arthur F. Thurnau professor of engineering at the University of Michigan in Ann Arbor, is honored for significant contributions to a globally sustainable and secure energy future through research, development, education, and engineering application.

Bernard F. Langer Nuclear Codes and Standards Award



WILFRED C. LAROCHELLE

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.

Wilfred C. LaRochelle, principal nuclear consultant at HSB Global Standards in Hartford, Conn., is cited for tireless leadership and dedicated service in promoting the acceptance of ASME codes and standards around the world.

During his 35-year career at HSB Global Standards, Mr. LaRochelle has worked in several positions, all related to safety inspections during the fabrication or operation of boilers, pressure vessels, and nuclear components in accordance with ASME codes. His main areas of expertise include quality assurance and quality control manual requirements, ASME accreditation issues, and ASME general nuclear requirements.

A S M E 2 0 1 1 H O N O R S

Gustus L. Larson Memorial Award



ARVIND RAMAN

The Gustus L. Larson Memorial Award was established in 1974 and honors Gustus L. Larson, 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 graduation.

Arvind Raman, Ph.D., professor and university faculty scholar in the School of Mechanical Engineering and the Birck Nanotechnology Center at Purdue University in West Lafayette, Ind., is recognized for outstanding achievements in mechanical engineering within 10 to 20 years following graduation.

Dr. Raman is internationally recognized for his research on the nonlinear dynamics and fluid-structure interactions of microcantilevers for atomic force microscopy and micro- and nanosystems, rotating disks for data storage, and piezoelectric fans for electronics cooling. He is co-founder and past chair of the ASME Technical Committee on Micro- and Nanosystems. Dr. Raman has been cited more than 1,000 times for his nearly 100 articles published in high-impact journals.

H.R. Lissner Medal



JAY D. HUMPHREY

The H.R. Lissner Medal was established in 1977 and is presented for outstanding accomplishments in the area of bioengineering.

Jay D. Humphrey, Ph.D., professor at Yale University in New Haven, Conn., is recognized for superior achievements in the field of biomechanics, including journal articles, undergraduate and graduate textbooks, and scholarly lectures that have influenced education and the direction of researchers around the world.

Throughout his career, Dr. Humphrey has been actively engaged in undergraduate and graduate instruction, curriculum development, and the mentoring of students; in research, primarily in cardiovascular biomechanics, which has resulted in many archival journal publications and conference presentations; and in service to the bioengineering community. He has authored or co-authored three textbooks and serves as founding co-editor of the international journal *Biomechanics and Modeling in Mechanobiology*. Dr. Humphrey joined the biomedical engineering department at Yale in 2010.

Charles T. Main Student Section Award

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



DANIELLE P. JACOBSON – GOLD

Danielle P. Jacobson, a mechanical engineering and mechanics student at Drexel University in Philadelphia, is recognized for outstanding contributions as chair of the ASME Student Section at the university, including tireless efforts to recruit new members and encourage involvement on a national level; and for active service within the campus community for three years.

Ms. Jacobson is pursuing her bachelor's and master's degrees in mechanical engineering, with a concentration in aerospace engineering; she expects to graduate in June 2012.



KENNETH SCHNAUTZ – SILVER

Kenneth Schnautz, an undergraduate at the University of Southern Indiana in Evansville, is recognized for long-term leadership in bringing the university's ASME Student Section from a dormant section to a thriving organization, and for significantly impacting the region through efforts including the creation of a robotics competition that hosts more than 100 middle and high school students each year.

Mr. Schnautz is pursuing a bachelor's degree in engineering, with emphasis on mechatronics; he expects to graduate in December 2011.

McDonald Mentoring Award



ROBERT BIRKMYRE

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

Robert Birkmyre, CEng, is honored for exemplary contributions in supporting the professional development of young engineers, particularly mentoring activities that have helped a large number of graduates achieve registration as chartered engineers.

While working at MIRA Ltd. in Nuneaton, U.K., from 1985 until 2003, Eur Ing Birkmyre's efforts ranged from project managing test facilities and vehicle proving ground to providing training and support to staff in charge of running new facilities, leading the body structures department, and subsequently, moving into training. Following his early retirement, he worked as a professional mentor for a local training company. Throughout this effort, he worked alongside the Institution of Mechanical Engineers, using their computer-based mentoring system to guide undergraduates and graduates to gain professional status.

Van C. Mow Medal



DAVID ALAN VORP

The Van C. Mow Medal was established by the ASME Bioengineering Division in 2004 for initial bestowal in 2005. It 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.

David Alan Vorp, Ph.D., professor of bioengineering and cardiothoracic surgery at the University of Pittsburgh, is recognized for pioneering contributions in the application of biomechanics to the cardiovascular system, particularly the understanding of abdominal aortic aneurysms, and for leadership within the national and international bioengineering community.

Dr. Vorp is a leader in the fields of vascular biomechanics and tissue engineering. He is the founding director of the university's Center for Vascular Remodeling and Regeneration. He recently co-founded Neograft Technologies Inc., a medical device company.

Nadai Medal



SUBRA SURESH

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

Subra Suresh, Sc.D., director of the National Science Foundation in Arlington, Va., is honored for pioneering contributions to the field of fracture and fatigue of engineering materials over a wide range of scales, and for visionary leadership in promoting research and education in the field.

Dr. Suresh was sworn in as the 13th director of the NSF in October 2010. Prior to his confirmation, he served as dean of the Engineering School and Vannevar Bush Professor of Engineering at the Massachusetts Institute of Technology in Cambridge. A mechanical engineer interested in materials science and biology, Suresh pioneered research to understand the mechanical properties of materials. His most recent research tackled the biomechanics of red blood cells under the influence of diseases such as malaria.

Burt L. Newkirk Award



ROBERT L. JACKSON

The Burt L. Newkirk Award was established in 1976. It 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.

Robert L. Jackson, Ph.D., associate professor at Auburn University in Alabama is recognized for significant

ASME 2011 HONORS

contributions to theoretical and experimental research in the field of tribology as evidenced by 40 refereed journal publications and numerous citations.

Prior to Dr. Jackson's arrival at Auburn, there was no history of tribology in the school's department of mechanical engineering. He established the Multiscale Tribology Laboratory, and he and his research group have made significant contributions in the areas of contact mechanics, hydrodynamic lubrication, multiphysics coupled modeling, electrical and thermal contact, and machine design.

Old Guard Early Career Award



JULIE A. BACHMANN KULIK

The Old Guard Early Career Award was established in 1994 to help a young engineer bridge the gap between college and professional life. Its intent is to bring that individual closer to the activities of ASME by providing encouragement for graduating student members to upgrade to member and actively become involved in the work of the Society.

Julie A. Bachmann Kulik, a mechanical engineer at WorleyParsons Group in Reading, Pa., is recognized for inspiring talented students to create innovative solutions to complex problems as a FIRST Robotics Competition mentor; founding ASME's Philadelphia Young Engineers, which encourages aspiring engineers to return to ASME through networking; and service to ASME through numerous local and national positions.

Among her efforts at WorleyParsons, Ms. Kulik has been a member of the STARS (Strategic Teaming and Resource Sharing) license renewal team, researching and co-authoring *Time Limited Aging Analysis for Nuclear Power Plants*.

Rufus Oldenburger Medal



HARUHIKO HARRY ASADA

The Rufus Oldenburger Medal was established in 1968 to recognize significant contributions and outstanding achievements in the field of automatic control through education, research, development, innovation, or service to the field and profession.

Haruhiko Harry Asada, Ph.D., Ford Professor of Engineering, and director of the Brit and Alex d'Arbeloff Laboratory for Information Systems and Technology at the Massachusetts Institute of Technology in Cambridge, is recognized for pioneering contributions to robotics and biomedical engineering, particularly the development of direct-drive arms, flexible fixturing, and wearable health monitoring systems, which have influenced engineers and practitioners worldwide.

Dr. Asada is also the head of the control, instrumentation, and robotics area in the department of mechanical engineering at MIT, and is the founder of four start-up companies. He holds 24 U.S. patents.

Performance Test Codes Medal



W. CARY CAMPBELL

The Performance Test Codes Medal, established in 1981, is awarded to an individual or individuals who have made outstanding contributions to the development and promotion of ASME Performance Test Codes, including the Supplements on Instruments and Apparatus.

W. Cary Campbell, P.E., principal engineer at Southern Company Services Inc. in Birmingham, Ala., is recognized for leadership and success in maintaining the ASME Performance Test Codes philosophy to provide the most accurate results reasonably achievable, and for prolific contributions in power plant performance engineering that have made the Southern Company a recognized leader in the field.

With the Southern Company for more than 30 years, Mr. Campbell specializes in the testing, evaluation, and optimization of electric generating plant performance. His experience includes testing and evaluation of over 90 gas turbines, 17 fossil-fired steam turbines, 15 combined-cycle/cogeneration plants, and 10 nuclear units.

Pi Tau Sigma Gold Medal



DAVID SAINTILLAN

The Pi Tau Sigma Gold Medal was established in 1938 by Pi Tau Sigma in coordination with ASME to recognize outstanding achievements by a young engineering graduate in mechanical engineering within 10 years following his or her baccalaureate degree.

David Saintillan, Ph.D., assistant professor at the University of Illinois at Urbana-Champaign, is honored for outstanding achievements in mechanical engineering within 10 years of graduation.

Dr. Saintillan's research focuses on the development of mathematical models and efficient computational tools for problems involving such complex fluids as particulate suspensions and polymer solutions. His work has applications in materials science, microfluidics, and biophysics, among other fields. His list of publications includes more than 20 articles and one book chapter, and he has given over 25 invited lectures.

James Harry Potter Gold Medal



MOHAMAD METGHALCHI

The James Harry Potter Gold Medal was established in 1980 in recognition of eminent achievement or distinguished service in the application of the science of thermodynamics in mechanical engineering.

Mohamad "Hameed" Metghalchi, Sc.D., professor and department chair at Northeastern University in Boston, is recognized for pioneering the application of thermodynamics beyond its classical and traditional use by calculating flame speed of burning mixtures of fuel, air, and diluents; and for motivating other researchers in the field of thermodynamics by expanding the research areas and funding opportunities.

Dr. Metghalchi joined Northeastern University in 1979 and is currently professor and chair of the department of mechanical and industrial engineering, and head of the Thermodynamics and Combustion Laboratory. He previously served as associate chair of the department for more than 10 years and was interim dean of the College of Engineering (2006-07).

Prime Movers Committee Award



WILLIAM H. KIRKENIR DAVID EARLEY

The Prime Movers Committee Award, established in 1954, recognizes outstanding contributions to the literature of thermal electric station practice or equipment that is available through public presentation and publication.

William H. Kirkenir, lead engineer at Progress Energy in Raleigh, N.C.; and David Earley, president of Combustion Technologies Corp. in Apex, N.C., are recognized for the paper titled "Combustion Optimization for Increased Fuel Flexibility," presented at the ASME 2010 Power Conference.

Mr. Kirkenir has more than 30 years of experience working in the power industry. He has been with Progress Energy since 2005.

Mr. Earley has been working in instrumentation for electric power plants for most of his career. He founded Combustion Technologies Corp. with co-owner Nicholas Ferri in 2000.

Charles Russ Richards Memorial Award



HUAJIAN GAO

The Charles Russ Richards Memorial Award, established in 1944, was named in honor of a founder of Pi Tau Sigma. It is given to an engineering graduate who has demonstrated outstanding achievements in mechanical engineering for 20 years or more following graduation.

Huajian Gao, Ph.D., Walter H. Annenberg Professor of Engineering at Brown University in Providence, R.I., is recognized for outstanding achievements in mechanical engineering for 20 years or more following graduation.

A S M E 2 0 1 1 H O N O R S

Dr. Gao's research has been focused on the understanding of basic principles that control mechanical properties and behaviors of materials in both engineering and biology; applications include microelectronic and optoelectronic devices, nanotechnology, nano- and hierarchical materials in engineering, biomimetics, bio-sensing, and gene/drug delivery systems. He has authored or co-authored about 300 scientific papers that have received over 10,000 citations, and he has an h-index of 53.

Safety Codes and Standards Medal



DANIEL N. WOLFF

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 activity.

Daniel N. Wolff, P.E., staff engineer at The Manitowoc Co.-Manitowoc Crane Division in Wisconsin, is recognized for more than 25 years of service on the ASME B30 Standards Committee, providing technical expertise on committee and subcommittee activities; and for leadership contributions as chair of B30.22, including initiating a complete rewrite of the volume to reflect the needs of the industry.

Mr. Wolff began his career at National Crane in Waverly, Neb., in 1971; National Crane is now a product group of The Manitowoc Co. Mr. Wolff has authored many company product safety handbooks, safety and owner's manuals, and numerous articles on crane design and safety.

R. Tom Sawyer Award



DILIP R. BALLAL

The R. Tom Sawyer Award, established in 1972, is bestowed upon an individual who has made important contributions toward the advancement of the gas turbine industry, as well as the ASME International Gas Turbine Institute, over a substantial period of time.

Dilip R. Ballal, D.Sc., Hans von Ohain Distinguished Chair Professor at the University of Dayton in Ohio, is honored for pioneering combustion and fuels research that has advanced the design and development of gas turbine combustors and fuels; and for enthusiastic efforts in advancing and promoting the International Gas Turbine Institute.

Dr. Ballal joined the university in 1983. He is the founding director of the von Ohain Fuels and Combustion Center, a State of Ohio Center of Excellence in Advanced Energy and one of the top two centers of its kind in the nation. A former chair of the IGTI, Dr. Ballal is an ASME senior vice president.

Milton C. Shaw Manufacturing Research Medal



TETSUTARO HOSHI

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

Tetsutaro Hoshi, Ph.D., director of Hoshi Technical Research in Toyohashi, Japan, is recognized for major contributions to the understanding of fracture mechanics of carbide tools in milling operations, machining vibration analysis, and the transformation of machining science to production floors with computer-aided manufacturing and software-assisted knowledge-base systems integrated to machine tools.

Dr. Hoshi is among the pioneers who established the theory of suppression of regenerative chatter vibrations in machining systems including cutting, boring, milling, and grinding processes. Many of the global machine tool builders have improved the dynamic stability of their machine structures and achieved higher productivity using Dr. Hoshi's theory and analytical tools. He holds a joint patent on shave forming of wire with the late Dr. Milton C. Shaw.

Ruth and Joel Spira Outstanding Design Educator Award



FARROKH MISTREE

The Ruth and Joel Spira Outstanding Design Educator Award was established as a division award in 1998. The award was elevated to an ASME award in 2001 to recognize a person who exemplifies the best in furthering engineering design education through vision, interactions with students and industry, scholarship, and impact on the next generation of engineers, and a person whose action serves as a role model for other educators to emulate.

Farrokh Mistree, Ph.D., professor at the University of Oklahoma in Norman, is honored for lifelong dedication and numerous contributions to the engineering design community, particularly for instilling a passion for design in generations of students as an inspirational advisor and mentor.

Currently, Dr. Mistree is focusing on creating and implementing, in partnership with industry, a curriculum for educating strategic engineers—those who have developed the competencies to create value through the realization of complex engineered systems.

Spirit of St. Louis Medal



ABRAHAM KAREM

The Spirit of St. Louis Medal was established in 1929 by Philip D. Ball, ASME members, and citizens of St. Louis. It is awarded annually for meritorious service in the advancement of aeronautics and astronautics. Contributions from Northrop Grumman have been made to supplement the medal endowment.

Abraham Karem, president of Karem Aircraft Inc. in Lake Forest, Calif., is honored for a lifetime of innovative aircraft design and development, including extraordinarily long-endurance unmanned aerial vehicles (UAVs) and the first helicopter to successfully use a variable-speed rotor.

Over some 50 years in aeronautics, Mr. Karem has repeatedly promoted revolutionary visions for innovation and demonstrated the technical acuity, perseverance, and leadership to realize these dreams. The Amber, a remarkably advanced all-digital, high-reliability UAV system, achieved an impressive 38-hour endurance at a time when UAV endurance rarely exceeded six hours.

Student Section Advisor Award



JAY M. SAMUEL

The Student Section Advisor Award, established in 1990 as the Faculty Advisor Award and renamed in 2000, is presented to an ASME member who is a current or former Student Section advisor whose leadership and service qualities have contributed, for at least three years, to the program and operations of a Student Section of the Society. The endowment for the award was provided by the Old Guard Committee.

Jay M. Samuel, Ph.D., senior lecturer at the University of Wisconsin-Madison, is recognized for outstanding service as Student Section advisor of the ASME Student Section at the University of Wisconsin-Madison for 18 years, mentoring innumerable students and fostering leadership and professionalism.

With UW-Madison since 1979, Dr. Samuel currently teaches introduction to materials science, mechanics of materials, design of machine elements, and materials selection courses. He has developed several course manuals and co-developed the first computer-grading program in the college.

J. Hall Taylor Medal



MAHENDRA D. RANA

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

ASME 2011 HONORS

broad fields of piping and pressure vessels.

Mahendra D. Rana, P.E., engineering fellow at Praxair Inc. in Tonawanda, N.Y., is recognized for professionalism and leadership in consensus building for codes and standards for pressure equipment; and for technical excellence in the investigation, understanding, and advancement of codes and standards for pressure vessel technology.

Mr. Rana has been working in the research and development, and engineering departments of Praxair Inc. for the past 37 years.

Robert Henry Thurston Lecture Award



FRANCIS C. MOON

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

Francis C. Moon, Ph.D., Joseph C. Ford Professor of Mechanical Engineering Emeritus at Cornell University in Ithaca, N.Y., is recognized for outstanding contributions to linear and nonlinear dynamics of mechanical systems, magneto-solid mechanics, chaos theory and applications to mechanics, and the history of kinematics of machines.

Dr. Moon has also made important contributions to technologies of magnetic levitation of trains, design of superconducting magnets for fusion reactors, superconducting bearings, dynamics of magnetic rail guns, and more recently, energy harvesting using vibro-wind technology.

Timoshenko Medal



ALAN NEEDLEMAN

The Timoshenko Medal was established in 1957 and is conferred annually in recognition of distinguished contributions to the field of applied mechanics. Instituted by the Applied Mechanics Division, it honors Stephen P. Timoshenko, world-renowned authority in the field, and it commemorates his contributions as author and teacher.

Alan Needleman, Ph.D., professor of materials science and engineering at the University of North Texas in Denton, is recognized for seminal contributions to the understanding of inelastic deformation and failure of materials.

Dr. Needleman's career has been intertwined with the rise of the field of computational solid mechanics. He has made many significant and lasting contributions, usually as the first to demonstrate that computational approaches are both feasible and likely to yield insight into physical phenomena. The author or co-author of nearly 300 archival journal publications, Dr. Needleman has been recognized as a highly cited author in both engineering and materials science.

Frank von Flue Award



GENERAL MOTORS TECHNICAL EDUCATION PROGRAM

The Frank von Flue Award, established in 2002, recognizes significant contributions by an individual or a group to the promotion of lifelong learning for mechanical engineers.

The General Motors Technical Education Program (Warren, Mich.) is recognized for offering high priority graduate level courses from top ranked universities to grow critical employee skills and strengthen GM's engineering capabilities in support of business objectives.

In 1984, General Motors Corp. initiated the formation of the GM Technical Education Program for the Advanced Product and Manufacturing Engineering Staff. The program enabled GM to keep its engineering community technically current and on the leading edge of innovative knowledge to compete in a growing, global market. Technical coursework is offered through distance learning technologies in partnership with a select set of tier-one universities with proven automotive and automotive-related research initiatives. To date, nearly 4,000 GM employees on six continents have earned job-related degrees or certificates through the program.

George Westinghouse Medals

The George Westinghouse Medals were established to recognize eminent achievement or distinguished service in the power field of mechanical engineering. To perpetuate the value of the rich contribution to power development made by George Westinghouse, honorary member and 29th president of the Society, the Westinghouse Educational Foundation established the Gold Medal in 1952 and the Silver Medal in 1971.



NICHOLAS SYRED—GOLD

Nicholas Syred, CEng, Ph.D., honorary distinguished professor in the School of Engineering at Cardiff University, U.K., is recognized for innovative research that has contributed to the understanding and application of swirl flows for cleaner combustion using fossil fuels; and for the novel development of heat exchangers, fluidic devices, hot gas cleaning, and cyclones.

Dr. Syred has authored or co-authored more than 300 publications. He holds 13 patents.



MARGARET S. WOOLDRIDGE

Margaret S. Wooldridge, Ph.D., an Arthur F. Thurnau Professor in the departments of mechanical and aerospace engineering at the University of Michigan in Ann Arbor, is recognized for contributions as an international leader on the chemistry of alternative and traditional fossil fuels and methods to improve performance and efficiency of combustion systems, and for developing new curricula on methods to advance stationary and mobile power.

Dr. Wooldridge is also the director of U-M's automotive engineering program and co-director of the global automotive and manufacturing engineering program.

Arthur L. Williston Medal



PRABAL GOYAL

The Arthur L. Williston Medal, established in 1954, recognizes the best paper submitted on a subject chosen to challenge the abilities of engineering students. The annual competition is open to any ASME student member or member who received a baccalaureate degree within two years of the submission deadline.

Prabal Goyal, graduate student at École Polytechnique in Paris, is cited for the paper titled "Refreshable Braille Display for Teaching Geometry to Visually Challenged."

Mr. Goyal received his bachelor's of technology degree in production and industrial engineering at the Indian Institute of Technology in Delhi in August 2011. In keeping with his interest in projects that benefit society, he worked on refreshable Braille displays as his bachelor's degree project. Mr. Goyal is currently pursuing a master's degree in renewable energy science and technology.

Henry R. Worthington Medal



DONALD P. SLOTEMAN

The Henry R. Worthington Medal, established in 1980, is bestowed for eminent achievement in the field of pumping machinery including, but not limited to, research, development, design, innovation, management, education, or literature.

Donald P. Sloteman, director of advanced technology, Curtiss-Wright Flow Control, Engineered Pump Division in Phillipsburg, N.J., a business segment of Curtiss-Wright Corp., is recognized for pioneering contributions in the experimental development and application of advanced hydraulic designs for the whole specific speed range of rotodynamic pumps and inducers, including the elimination of cavitation damage and performance instabilities.

Mr. Sloteman is responsible for conceiving and executing pump design and technology programs with a focus on U.S. Navy shipboard propulsion plant pumping applications. His responsibilities include managing efforts related to the fluid and mechanical design and analysis of centrifugal pumps, the execution of experimental test programs, and the development of test capability and facilities for the evaluation of those pumps. Mr. Sloteman holds four patents.

S.Y. Zamrik PVP Medal**WILLIAM T. SPRINGER**

The Pressure Vessel and Piping Medal was established in 1980. Renamed the S.Y. Zamrik PVP Medal in 2010, it is bestowed for outstanding contributions in the field of pressure vessel and piping technology including, but not limited to, research, development, teaching, and significant advancements of the state of the art.

William T. Springer, P.E., Ph.D., associate professor

at the University of Arkansas in Fayetteville, is recognized for significant contributions in the nondestructive evaluation arena, including supporting ASME's Pressure Vessels and Piping Division through the development of joint NDE sessions at PVP conferences; developing, chairing, and co-chairing numerous technical sessions; and authoring papers, editing conference proceedings, and reviewing journal papers.

On the faculty since 1981, Dr. Springer currently serves as the 21st Century Mechanical Engineering Chair at the university and is helping coordinate a student exchange program with the Politecnico di Torino in Italy.

I N D E X**RECIPIENTS OF ASME HONORS AND AWARDS - 2011**

Sumanta Acharya	p. 65	Ioannis N. Miaoulis	p. 58
Ramesh K. Agarwal	p. 64	Farrokh Mistree	p. 72
Thad W. Allen	p. 52	Francis C. Moon	p. 74
Haruhiko Harry Asada	p. 70	John J. Mooney	p. 66
Dilip R. Ballal,	p. 72	Clayton Daniel Mote Jr.	p. 59
Adrian Bejan	p. 53	Alan Needleman	p. 74
Robert Birkmyre	p. 68	O. Burak Ozdoganlar	p. 64
Yvonne C. Brill	p. 54	Thomas P. Pastor	p. 60
Richard Burton	p. 66	Arvind Raman	p. 68
W. Cary Campbell,	p. 70	Mahendra D. Rana	p. 72
Eric M. Curtis	p. 65	J.N. Reddy	p. 61
John Douglas Denton	p. 65	Rolf D. Reitz	p. 66
David Earley	p. 70	Sally Remedios	p. 65
Joseph A. Falcon	p. 55	Budimir Rosic	p. 65
Sinan Filiz	p. 64	John W. Rudnicki	p. 64
John F. Foss	p. 65	Farshid Sadeghi	p. 65
Huajian Gao	p. 70	David Saintillan	p. 70
General Motors	p. 74	Jay M. Samuel	p. 72
Prabal Goyal	p. 74	Ann Marie Sastry	p. 66
Mardi C. Hastings	p. 64	Kenneth Schnautz	p. 68
Tetsutaro Hoshi	p. 72	James G. Simmonds	p. 66
Chieh-Su Hsu	p. 65	Robert E. Simons	p. 66
Jay D. Humphrey	p. 68	Donald P. Sloteman	p. 74
Nathan H. Hurt	p. 56	William T. Springer	p. 75
Robert L. Jackson	p. 68	S.V. Sreenivasan	p. 64
Danielle P. Jacobson	p. 68	Bengt Sundén	p. 65
Abraham Karem	p. 72	Subra Suresh	p. 68
Ali Khademhosseini	p. 65	Nicholas Syred	p. 74
William H. Kirkenir	p. 70	Paul J. Torpey	p. 62
Ranga Komanduri	p. 57	John B. Vorderbrueggen	p. 64
Julie A. Bachmann Kulik	p. 70	David Alan Vorp	p. 68
Wilfred C. LaRochelle	p. 66	Ed Walsh	p. 64
John Longley	p. 65	Daniel N. Wolff	p. 72
Mohamad Metghalchi	p. 70	Margaret S. Wooldridge	p. 74