# ANNUAL REPORT





The American Society of Mechanical Engineers (ASME)

ASME INDIVIDUAL MEMBERS

**\*\*\* \*\*\*** 140,000



ASME MEMBERS





#### ASME ANNUAL REPORT 2014/2015

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# OUR MISSION.

ASME's mission is to serve diverse global communities by advancing, disseminating and applying engineering knowledge for improving the quality of life; and communicating the excitement of engineering.

# OUR VALUES.

In performing its mission, ASME adheres to these core values:

- Embrace integrity and ethical conduct
- Embrace diversity and respect the dignity and culture of all people
- Nurture and treasure the environment and our natural and man-made resources
- Facilitate the development, dissemination and application of engineering knowledge
- Promote the benefits of continuing education and of engineering education
- Respect and document engineering history while continually embracing change
- Promote the technical and societal contribution of engineers

### OUR VISION.

ASME aims to be the essential resource for mechanical engineers and other technical professionals throughout the world for solutions that benefit humankind.

### FROM THE PRESIDENT & EXECUTIVE DIRECTOR



ASME REMAINS ON THE EDGE OF INNOVATION AND ENGINEERING EXCELLENCE. Reflecting on the accomplishments of ASME last year, we are energized by the optimism and sense of opportunity in the air, as ASME sets its sights on building an even brighter future for our Society. The inspiring words of our founding president, Professor Robert H. Thurston, continue to resonate 135 years later through ASME's mission to *utilize engineering knowledge to improve the quality of life*. Our mission exemplifies the focus and strength of ASME to be agile and nimble, even in changing times, as we strive for excellence and impact in all our endeavors. We've come a long way since the days of our founders, and yet there's so much more to do. That's why ASME continues to pursue new pathways – so that our Society and our profession can continue to make great strides – with significant and lasting contributions for the betterment of humankind.

Technological advances continue to be the fuel which propels our mission. The implementation of Pathway 2025, which articulates ASME's cultural values, vision for strategic growth and financial stability, has placed ASME on a path for continued growth and future success well into the 21st century. Similarly, the launch of the ONE ASME initiative has added an important dimension to the Society's work by maximizing opportunities for the entire ASME community to work collaboratively across the Society as we focus more deeply than ever on the needs and opportunities in the global engineering market.

The recent launch of ASME's Market Impact Teams (MITs) has placed new emphasis on our ability to proactively serve the needs of key markets through an integrated content and engagement approach, particularly in the areas of energy sources, power generation and advanced manufacturing. The new model is transforming the way ASME collaborates with global markets and integrates and aligns its products and service groups with ASME's mission and strategic plan.

ASME remains on the cutting edge of innovation and engineering excellence. Our expanding role in the global engineering community through our standards and certification activities, conferences, partnerships and student activities has further established our leadership role as an essential resource for mechanical engineers and other technical professionals.

On behalf of the Board of Governors and our leadership teams, we want to express our appreciation and gratitude for your contributions and continued partnership with ASME, especially during this exciting time of organizational transition and growth.

The best is yet to come!

J. ROBERT SIMS President

THOMAS G. LOUGHLIN Executive Director

### 2014/2015 ASME BOARD OF GOVERNORS



 $\begin{array}{c} 1 \\ 1 \\ 2 \\ 3 \\ 4 \\ 5 \\ 6 \\ 7 \\ \hline \end{array}$ 

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**Retired Vice President** for Innovation and Small Modular Reactor Development Westinghouse Electric Company

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ASME Secretary/Treasurer Professor of Mechanical Engineering University of Maryland, Baltimore County



John F. Elter, Ph.D. President

Sustainable Systems, LLC

# ENGINEERING A BRIGHTER FUTURE

Fiscal year 2015 was a year of organizational transition and growth – a year in which technological innovation provided greater promise of a bright future. Technological advances garnered significant public attention thanks to wearable electronics, smarter phones, cheaper 3D printing, consumer drones and driverless automobiles.

Engineers are exploring new market-focused strategies, particularly in the areas of energy, advanced manufacturing and advanced analytics. With converging technologies in advanced sensors, microelectronics and big data, engineers are developing smarter, well-integrated systems for improved and safer diagnostics and inspections. Easier access to rapid-prototyping is also broadening opportunities for creative solutions and learning processes.

Mechanical engineering is a powerful advocate at the center of the global energy conversation, as engineers scale-up renewable technologies; integrate a risk-informed, resilience-focused design basis for nuclear power generation; improve efficiencies with emerging technologies and manage demands for a more complex, innovative future.

Advanced manufacturing has been referred to as our era's new industrial revolution, with the convergence of big data, the Internet of Things, nanotechnology and wireless technologies that help to improve the lives of millions of people all around the globe. In FY15 ASME held several inaugural events that featured these trends, including the IAM3D Challenge, the Innovation Design Simulation Challenge and AM3D India. Key partnerships with America Makes and with NASA, in an inaugural 3D space challenge through *Future Engineers*, have provided unlimited opportunities for students to join ASME while exploring career paths in the engineering profession.

The ASME Foundation successfully expanded the **IN**SPIRE middle school program, exceeding its target outreach across the United States. ASME partnered with the National Science Foundation and the Women in Engineering Proactive Network for its TECAID (Transforming Engineering Culture to Advance Inclusion and Diversity) project to help ME department heads transform their approaches to diversity and inclusion.

### SPOT/ LIGHT



In 2015, ASME also commemorated its 135th anniversary. In the early formation of the Society, its founders defined mechanical engineering as a profession while shaping the world — similar to how we are shaping the world today by unleashing technology's potential as well as what shapes ASME's future. Although methods change, ASME is not reinventing the wheel — we continue to use knowledge and innovation to reach toward a brighter future in expanding the Society's value for more engineers than ever before.

Among this year's notable milestones was ASME's implementation of Pathway 2025, which articulated the Society's vision for strategic growth, financial sustainability and delivery of positive technical impact on humankind and the world. The new Technical Events and Content (TEC) sector and the Group Pathways and Support (GPS) system continue to help us achieve this vision by more effectively engaging members and volunteers in ASME programs and services.

Much of this year's activities were aimed at strengthening ASME's presence in the global engineering landscape. One example is the Innovation Showcase (ISHOW), which expanded globally in India and Kenya, while continuing its run in the United States. At ICONE 22, the premier global conference for addressing the needs of the nuclear industry, which was held in Prague, ASME met with constituents from the Czech Republic and Japan, and we held other technical conferences in Europe, South America and Asia, which expanded our global impact.

Because of our collective efforts, our membership has grown worldwide and our outreach has multiplied through our partnerships and extended networks. A key element of this approach – ONE ASME – is aligning all of ASME to be more market-focused while positioning the Society for continued growth and success well into the 21st century.

#### Keynote Focus on Global Development

Engineering for Global Development was the theme of ASME's 2014 International Mechanical Engineering Congress & Exposition in Montreal. Leaders representing industry, economics, academia and social ventures participated in a lively panel discussion, moderated by NPR's John Hockenberry, at the opening keynote event on Nov. 17, 2014. The panel discussed pressing concerns in the developing world, namely the necessity to bring appropriate technologies to underserved communities and the critical role engineering plays. From exploring market-based solutions, expanding the EGD curriculum on college campuses and a growing online community on the Engineering for Change global platform, EGD has established itself as an important and essential aspect of the global engineering conversation.

### 66

WE CONTINUE TO USE AVAILABLE KNOWLEDGE AND INNOVATION TO REACH TOWARD A BRIGHTER FUTURE IN EXPANDING THE SOCIETY'S VALUE FOR MORE ENGINEERS THAN EVER BEFORE.

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# MAKING AN IMPACT ON ASME'S FUTURE

Today's highly competitive global market presents both unprecedented challenges and opportunities.



These dynamics, combined with rapidly evolving changes in digital technology and content consumption, have been key factors in propelling ASME to embrace a vision that puts the Society on a trajectory for significant growth in the coming years, developing a framework for market-facing business development, and aligning the entire organization structurally and culturally with these tectonic shifts in the global landscape.

In FY15, a Framework for Business Development was outlined, the pillars of which include market focus, content and engagement. This framework led to the formation of Market Impact Teams (MIT), which were established to help facilitate an organizational transformation through the development of ASME's Strategic Plans for Business Development around three initial market impact areas – Energy Sources, Power Generation and Advanced Manufacturing. These plans are expected to help transform and integrate ASME through the implementation of market-facing content and engagement strategies that align with the Society's mission. This transformation will allow ASME to effectively and comprehensively advance its mission while assuring an enduring and growing organization with greater ability to achieve a positive impact through engineering solutions.

The cornerstone for ASME's future success is guided by Pathway 2025, which articulates the Society's cultural values and vision for strategic growth, financial sustainability and technical impact. In addition to Pathway 2025, the ONE ASME initiative was launched to communicate a new structural alignment and to promote an overarching cultural change and business model to ensure that ASME expands its relevance and impact in a rapidly changing world, while continuing to improve the safety and quality of life for humankind.

ASME EXPANDS ITS RELEVANCE AND IMPACT IN A RAPIDLY CHANGING WORLD, WHILE CONTINUING TO IMPROVE THE SAFETY AND QUALITY OF LIFE FOR HUMANKIND.

# SHAPING THE NEXT GENERATION OF ENGINEERS

ASME, through the ASME Foundation, has partnered with NASA to launch an exciting initiative enabling pre-college students to participate in a competition that engages the processes of additive manufacturing and 3D printing. The competition, part of a multi-year educational outreach program named *Future Engineers*, challenges K-12 students to submit digital 3D design concepts for devices that can be used in space, like food containers and other storage units. Launched in September 2014, *Future Engineers* aims to teach students ways to form ideas and concepts within the requirements of space manufacturing.

According to industry experts, 3D printing, for all its promise as the next revolution in manufacturing, requires a radically different mindset and approach to be a useful tool – which is one of the reasons *Future Engineers* is appealing to young minds eager to explore new and creative ideas.

ASME realizes the need for future engineers worldwide. In America, for example, according to the U.S. Department of Labor, the number of scientists and engineers that will be required to meet growth needs in industry between now and 2022 is 2.3 million, and many in industry believe that colleges and universities will need to further increase engineering enrollment and build more capacity to graduate enough engineers to meet the high demand, notwithstanding that mechanical engineering enrollments are already at historically high levels. This shortfall in technical skill, according to industry executives, could hamper development, impede innovation and slow research programs that are on the horizon of firms in sectors ranging from automotive and consumer electronics to energy and healthcare.

To attract more young people to the sciences, many companies sponsor competitions that test students of all ages in critical thinking, analysis, design and communications. Like its counterparts in industry, ASME is a strong advocate of workforce development and supports the role that design competitions have on influencing career decisions. For instance, the ASME Student Design Competition held at the 2014 ASME Congress in Montreal, Canada challenged students to design a functional drone that can fly and maneuver through a series of high and low obstacles. Eighteen collegiate teams from around the world participated in the competition, with the University of North Dakota winning first place honors. The *Huffington Post* in May 2015 cited the ASME Student Design Competition as "an extraordinary program in its strides to bring young, innovative engineers to real, pressing issues in our society."



### SPOT/ LIGHT



#### Turbo Expo Celebrates 60 Years

ASME marked the 60th anniversary of Turbo Expo, the world's premier event for turbomachinery engineers and technical professionals. Through the years, the conference has earned a stellar reputation for bringing together experts from around the world to share the latest in turbine technology, research, development and application. To celebrate the International Gas Turbine Institute's distinguished heritage, Turbo Expo 2015, held in Montreal June 15-19, showcased the Turbo Expo 60th Anniversary Museum, with a display of turbine engines and historical material.

ASME sponsored three Human Powered Vehicle Challenge programs in FY15 – HPVC India (Delhi), HPVC West (San Jose, Calif.) and HPVC East (Gainesville, Fla.). Still one of the most popular ASME student competitions, HPVC showcases sleek pedal-powered vehicles that are designed for speed, endurance, safety and practicality. To optimize the performance of these "superbikes," the students must rely on engineering knowledge and skill in computer-aided design, aerodynamics, control and structural mechanics – to build a prototype that may prove to be an energy-saving and environmentally friendly transportation option of tomorrow.

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ASME

SHOW

PRACTICAL UTILITY PLATFORM

ONE THOUSAND VOLLARS

Other ASME-sponsored design competitions include the Innovative Additive Manufacturing 3D Challenge (IAM3D), and the Innovation Showcase (ISHOW). Introduced in 2014, the ASME IAM3D Challenge presents mechanical and multi-disciplinary undergraduate students from around the world an opportunity to re-engineer existing products or create new designs that minimize energy consumption and/or improve energy efficiency. Students then showcased their innovative capacity by demonstrating the value added through their ingenuity, application of sound engineering design principles and leverage of additive manufacturing technology to address a broad spectrum of industrial, manufacturing and humanitarian challenges.

The ASME ISHOW global competition, which this year focused on hardware-led social ventures, was held in three locations – Washington, DC, Prune, India and Nairobi, Kenya. The competition aims to provide practical energy, environmental and health solutions in the developing world with the hopes of taking these products to market.

The IAM3D Challenge and ISHOW, in addition to *Future Engineers*, were recognized by the American Society of Association Executives for their "positive impact on America and the world."

ASME believes that these design competitions will propel some of the best and brightest students and entrepreneurs into the engineering disciplines of future generations while helping to make the world a better place through the application of new and advanced technologies.

# A MILESTONE YEAR FOR ASME FEDERAL GOVERNMENT FELLOWS

For more than 40 years, the ASME Federal Government Fellowship Program has supported the Society's mission of advancing, disseminating and applying engineering knowledge for improving the quality of life by providing engineering and technical guidance to policy makers in the United States. The program marked two noteworthy milestones in 2015 — a year that encompassed both the introduction of a new Advanced Manufacturing Fellowship and the first occurrence of three women engineers serving simultaneously as ASME Federal Fellows.

Established in 1973, ASME's Federal Government Fellowship Program gives Society members the chance to devote a year to working in government, interacting with legislators and providing them with much-needed engineering and technical advice during the U.S. policy-making process. The ASME Federal Government Fellowship Program is made possible through the financial support of the ASME Foundation.

Prior to this year, ASME offered two types of Federal Fellowships: the ASME Congressional Fellowship, in which an engineer works with the staff of a congressional committee, U.S. senator or U.S. representative, and the ASME Foundation Swanson Fellowship, where an engineer is assigned to the White House Office of Science and Technology Policy.

Developed in collaboration with the America Makes innovation center, the new ASME Advanced Manufacturing Fellowship provides engineers with the opportunity to serve a yearlong term as an advisor at the center's headquarters in Youngstown, Ohio. Launched three years ago as the National Additive Manufacturing Innovation Institute, America Makes was established to help the United States expand its capacities in additive manufacturing or 3D printing, by encouraging collaboration among leaders from business, academia, non-profit organizations and government agencies on areas such as design, materials, technology and workforce development.

With the establishment of the new fellowship, ASME became a Gold Member of America Makes, which gave ASME a seat on the America Makes Governing Board and the opportunity to collaborate on additive manufacturing technology applied research and participate in the America Makes additive manufacturing road-mapping process.

Gloria Wiens

THE PROGRAM MARKED TWO NOTEWORTHY MILESTONES IN 2015 - A YEAR THAT **ENCOMPASSED BOTH THE INTRODUCTION** OF A NEW ADVANCED MANUFACTURING FELLOWSHIP AND THE FIRST OCCURRENCE **OF THREE WOMEN ENGINEERS SERVING** SIMULTANEOUSLY AS ASME FEDERAL FELLOWS.



### SPOT/ LIGHT



#### June Ling Ends Long Career with ASME

Following 40 years of dedicated service to both ASME and the standards industry, June Lina, ASME deputy executive director. has retired from her duties at ASME Headauarters. A world-renowned expert in the field of standards and conformity assessment, Ms. Ling started her career at ASME in July 1974 as a Nuclear Engineering administrator. She progressed through a variety of leadership roles in nuclear and pressure technology until her appointment as deputy executive director in 2012. "June's service to ASME has been extraordinary in a myriad of ways," said Executive Director Thomas G. Loughlin. "She has indeed earned the distinction of being in a class of her own."

#### 66 I WAS SO THRILLED WHEN I WAS OFFERED THE ASME CONGRESSIONAL **ENGINEERING FELLOWSHIP. THE PROGRAM HAS OPENED MY EYES** TO EXCITING NON-TRADITIONAL CAREER PATHS THAT INCORPORATE ACTIVITIES AND RESPONSIBILITIES THAT DRAW ON MORE OF MY **PERSONAL STRENGTHS.99**

Briana Tomboulian, Ph.D, ASME member

ASME member Maureen Fang began her term as the first Advanced Manufacturing Fellow in January 2015. In this role Fang worked with Mike Hripko, the workforce and education outreach deputy director for America Makes, to develop new programs for disseminating both emerging and production-level additive manufacturing information, tools and techniques to U.S. industry and to the community colleges and colleges of engineering who are training the next generation of engineers and technicians. A former Pratt & Whitney mechanical engineer, Fang is a Ph.D. candidate in mechanical engineering technology at Purdue University.

A second ASME Federal Fellow, Gloria Wiens, Ph.D., served her second term as an ASME Foundation Swanson Fellow in 2015. The Swanson Fellowship was established in 2010 in recognition of the contributions of ASME Honorary Member and Fellow Dr. John A. Swanson. Dr. Wiens, an associate professor of mechanical and aerospace engineering at the University of Florida, has served her two terms as a Swanson Fellow as the assistant director for research partnerships at the Advanced Manufacturing National Program Office (NPO), which is hosted by the National Institute of Standards and Technology in Gaithersburg, Md. During her fellowship, she worked with the Advanced Manufacturing NPO and federal agency staff to plan, design and develop formal documents for announcements and solicitations for the National Network for Manufacturing Innovation (NNMI) institutes, and to oversee physical and electronic outreach efforts to non-federal stakeholders on advanced manufacturing issues.

The third Federal Fellow in 2015 was Briana Tomboulian, Ph.D., who served as an ASME Congressional Engineering Fellow in the office of Sen. Ed Markey (D-MA). Dr. Tomboulian, who had previously spent three years as a NASA Space Technology Research Fellow, provided technical expertise on energy and environmental issues to the senator, an ardent supporter of the environment and clean energy causes. Her responsibilities ranged from composing memos and remarks for the senator, preparing him for congressional hearings and committee meetings, conducting research, meeting with constituents and interest groups, and working on longer-term projects.

# ASME YEAR IN REVIEW: 2014/2015

ASME holds its first Advanced Design and Manufacturing Impact Forum in Buffalo, NY, August 17-20. This new ASME program focused on the intersection of advanced design and advanced manufacturing in industrial and consumer applications. ASME and the ASME Foundation sponsored a new initiative for U.S. middle and high schools. The *ASME INSPIRE* digital engineering course is aimed at improving math and science literacy among young people and building their awareness of and interest in engineering. In the first month of its launch, the new program was introduced in 89 schools across the United States, giving *ASME INSPIRE* the potential to reach 2,400 students. In less than a year, *INSPIRE* has reached more than 22,156 students in 590 schools.

ASME convened a Congressional Briefing titled, "Accelerating U.S. Advanced Manufacturing: A Report from the Advanced Manufacturing Partnership (AMP) 2.0." The briefing, hosted by ASME, The Dow Chemical Company, Georgia Tech, GLOBALFOUNDRIES, MIT, and UC Berkeley, was aimed at bringing the AMP 2.0 recommendations to Members of Congress and their staff.



ASME Fellow Larry Lee (photo right), former chair of the Society's History and Heritage Committee, was featured on the season premiere of the PBS television program History Detectives. The episode explored theories, including Lee's, behind the mysterious boiler explosion of the SS Sultana steamboat in 1865. The ASME Foundation and NASA announce the launch of a new K-12 program called *Future Engineers*. The partnership led to the development of a series of 3D design challenges to inspire students to solve real space exploration challenges to be constructed on the International Space Station. ASME launched the inaugural Innovative Additive Manufacturing 3D (IAM3D) Challenge at the ASME International Mechanical Engineering Congress and Exposition held in Montreal, Canada. The new competition gives undergraduate students from around the world the opportunity to re-engineer existing products or create new designs that minimize energy consumption or improve energy efficiency. Twenty-two teams competed in the final round. The American Society of Mechanical Engineers marked the 135th anniversary of its founding on February 16, 1880, at a preliminary meeting held at the offices of the *American Machinist* magazine, in New York City. The meeting chaired by Alexander Lyman Holley who, alongside thirty leaders of industry — laid down both the intellectual boundaries of the profession and the advantages of association.

The Northern Pacific Rotary Snow Plow No. 2 was named a Historic Mechanical Engineering Landmark by ASME. On exhibit at the Lake Superior Railroad Museum in Duluth, Minn., the plow was instrumental in keeping freight and passenger rail systems in operation in the harshest of winters. It is the oldest rotary snow plow in existence. The 2015 Ralph Coats Roe Lecture was presented by Dr. Freeman A. Hrabowski III, president, University of Maryland, Baltimore. His lecture, Holding Fast to Dreams: Creating a Climate of Success for All Students, was presented on June 7 at the Roe Luncheon during the ASME Annual Meeting held in Jacksonville, Fla. TIME magazine named him one of America's 10 Best College Presidents and among the 100 Most Influential People in the World.



ASME Past President Robert E. Nickell, Ph.D., a longtime member of the Society, passed away on January 21, 2015. Nickell served as the 118th president of ASME from 1999 to 2000 and was the founder of the consultancy Applied Science & Technology in San Diego, Calif. He made many significant contributions to both the engineering profession as well as ASME during a career that spanned 50 years.

More than 300 oil and gas industry professionals convened in Houston for the 2015 ASME Hydraulic Fracturing Conference to discuss current and emerging technologies for extracting oil and gas from shale rock and to examine hydraulic fracturing's role in the petroleum industry. The ASME Innovation Showcase (ISHOW) held in Washington, D.C. on May 14, provided a platform for students and entrepreneurs to leverage their expertise in hardware-based ventures and mechanical systems, which have a social impact. Ten innovations were presented in categories ranging from healthcare to education, energy and food and agriculture. This year, the ASME ISHOW expanded to include international competitions in India and Kenya.



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### TREASURER'S REPORT ASME



Warren R. DeVries ASME Treasurer

I am pleased to present the fiscal year 2015 audited financial reports of ASME. The Society continues to invest in an enterprise strategy designed to maximize ASME's impact, future relevance and growth.

ASME operations results included near-record revenues of \$113.6 million for the fiscal year, surpassed only by 2014, which was the first year of the two-year ASME Boiler and Pressure Vessel Code. ASME recorded an operating deficit of \$4.8 million. This deficit included initiative spend associated with ASME's enterprise strategy, programs and facilities aimed at pivoting the Society toward continued success. Due to challenging market conditions, investments returns were unfavorable by \$1.8 million. There was also an unfavorable adjustment of \$5.3 million for a comprehensive income charge related to pension and postretirement plans other than periodic costs. As a result, there was an aggregate decrease in net assets of \$11.9 million. The ASME General Fund portion of this decrease was \$9.1 million.

ASME's Statements of Financial Position show total assets of \$176.6 million as of June 30, 2015. This reflects an 8% decrease from 2014 while total liabilities decreased 4% over the same period. The decrease in assets was primarily attributed to funding operations in addition to weak investment returns. The decrease in liabilities included lower deferred publications revenue. Overall, ASME's net assets ended at \$93.3 million, 11% lower than 2014.

ASME received an unmodified, or clean, opinion from KPMG LLP in the Independent Auditors' Report. ASME is tax exempt under Section 501 (c) (3) of the Internal Revenue Code.

I submit these reports confident that ASME continues to be a financially sound and strong organization.

Wayner R. D. Ving

Warren R. DeVries ASME Treasurer, FY15

#### **INDEPENDENT AUDITORS' REPORT**

ASME



#### The Board of Governors The American Society of Mechanical Engineers:

We have audited the accompanying consolidated financial statements of The American Society of Mechanical Engineers D/B/A ASME (the Society), which comprise the consolidated statements of financial position as of June 30, 2015 and 2014, and the related consolidated statements of activities and cash flows for the years then ended, and the related notes to the consolidated financial statements.

#### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Society as of June 30, 2015 and 2014, and the changes in its net assets and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

KPMG LIP

September 21, 2015

#### **CONSOLIDATED STATEMENTS OF FINANCIAL POSITION**

ASME

June 30, 2015 and 2014

General	Designated and restricted	2015 Total	2014 Total
\$ 9,957,342	\$ 4,615,101	\$ 14,572,443	\$ 14,400,115
12,312,471	69,602	12,382,073	15,483,094
554,371		554,371	2,627,396
755,430		755,430	1,012,490
3,436,010	48,541	3,484,551	2,469,485
86,446,261	28,736,066	115,182,327	126,489,546
28,887,529	801,097	29,688,626	29,330,375
\$142,349,414	\$34,270,407	\$176,619,821	\$191,812,501
\$ 4.244.890	\$ 7.696.673	\$ 11.941.563	\$ 12,598,708
36.310.853		36.310.853	29.448.728
604,978	_	604.978	11.007.902
3.467.793	_	3.467.793	3.547.037
20.843.657	148.245	20.991.902	19.658.219
9,999,034		9,999,034	10,356,282
75,471,205	7,844,918	83,316,123	86,616,876
66,878,209	25,898,720	92,776,929	104,618,387
	390,202	390,202	440,671
	136,567	136,567	136,567
66,878,209	26,425,489	93,303,698	105,195,625
\$142,349,414	\$34,270,407	\$176,619,821	\$191,812,501
	General   \$ 9,957,342   12,312,471   554,371   755,430   3,436,010   86,446,261   28,887,529   \$142,349,414   \$ 4,244,890   36,310,853   604,978   3,467,793   20,843,657   9,999,034   75,471,205   66,878,209   \$142,349,414	GeneralDesignated and restricted $\$$ 9,957,342\$ 4,615,101 $12,312,471$ 69,602 $554,371$ — $-$ $755,430$ $3,436,010$ 48,541 $28,736,066$ $28,887,529$ $801,097$ $\$142,349,414$ $\$34,270,407$ $\$$ 4,244,890 	Designated and restricted2015 Total§ 9,957,342\$ 4,615,101\$ 14,572,443 $12,312,471$ $69,602$ $12,382,073$ $554,371$ $554,371$ $755,430$ $755,430$ $3,436,010$ $48,541$ $3,484,551$ $86,446,261$ $28,736,066$ $115,182,327$ $28,887,529$ $801,097$ $29,688,626$ $\$142,349,414$ $\$34,270,407$ $\$176,619,821$ \$ 4,244,890\$ 7,696,673\$ 11,941,563 $36,310,853$ $36,310,853$ $604,978$ - $604,978$ $3,467,793$ $3,467,793$ $20,843,657$ $148,245$ $20,991,902$ $9,999,034$ $9,999,034$ $75,471,205$ $7,844,918$ $83,316,123$ $66,878,209$ $25,898,720$ $92,776,929$ $$ $390,202$ $390,202$ $$ $136,567$ $136,567$ $66,878,209$ $26,425,489$ $93,303,698$ $\$142,349,414$ $\$34,270,407$ $\$176,619,821$

See accompanying notes to consolidated financial statements.

#### **Total Assets of \$176.6 Million**

(ASME Statement of Financial Position June 30, 2015)



#### **Total Liabilities of \$83.3 Million**

(ASME Statement of Financial Position June 30, 2015)



#### CONSOLIDATED STATEMENTS OF ACTIVITIES

#### ASME

	General	Designated and restricted (notes 9 and 10)	Consolidating adjustments	2015 Total	2014 Total
Operating revenue (note 6):					
Membership dues, publications, accreditation, conference					
fees, and other revenue by sector/operating unit:					
Codes and standards	\$ 36,353,516	\$ 1,136,684	\$(1,034,045)	\$ 36,456,155	\$ 38,886,492
Conformity assessment	31,436,752		(8,837)	31,427,915	31,629,550
Training and development	6,869,098	_	(564)	6,868,534	7,323,105
Programs	953,411	643,641	(379,205)	1,217,847	1,152,054
Technical events and content and institutes	10,804,953	897,630	_	11,702,583	14,037,958
Publications	14,339,994	_	_	14,339,994	14,057,056
Membership	10,908,267	_	—	10,908,267	10,959,175
Members' voluntary contributions		11,128		11,128	8,727
Miscellaneous revenue	640,293	301,854	(301,988)	640,159	680,750
Total operating revenue	112,306,284	2,990,937	(1,724,639)	113,572,582	118,734,867
Operating expenses:					
Program services by sector/operating unit:					
Codes and standards	16,846,864	1,048,013	(776,219)	17,118,658	20,305,352
Conformity assessment	17,362,715	_	(251,193)	17,111,522	19,227,682
Training and development	8,096,560	—	(16,034)	8,080,526	7,382,911
Programs	8,401,459	350,069	(379,340)	8,372,188	8,849,336
Technical events and content and institutes	13,640,181	3,746,147	—	17,386,328	19,256,048
Publications	15,324,322	_	_	15,324,322	14,492,719
Membership	2,370,722			2,370,722	2,721,367
Total program services	82,042,823	5,144,229	(1,422,786)	85,764,266	92,235,415
Supporting services:					
Board of governors and committees	1,487,181	41,327	—	1,528,508	1,580,800
Marketing	12,758,300	260,119	(301,853)	12,716,566	13,748,642
General administration	18,353,514			18,353,514	14,329,219
Total supporting services	32,598,995	301,446	(301,853)	32,598,588	29,658,661
Total operating expenses	114,641,818	5,445,675	(1,724,639)	118,362,854	121,894,076
Deficit of operating revenue over expenses	(2,335,534)	(2,454,738)	_	(4,790,272)	(3,159,209)
Nonoperating activities:					
Interest and dividends, net of investment fees of \$372,925					
in 2015 and \$322,767 in 2014	1,764,311	581,738	_	2,346,049	2,282,391
Realized and unrealized (loss) gain on investments (note 4)	(3,220,012)	(880,719)	—	(4,100,731)	15,447,129
Pension and post-retirement changes other than net					
periodic costs (notes 7 and 8)	(5,346,973)			(5,346,973)	(195,052)
(Decrease) increase in net assets (note 9)	(9,138,208)	(2,753,719)	_	(11,891,927)	14,375,259
Net assets at beginning of year	76,016,417	29,179,208	_	105,195,625	90,820,366
Net assets at end of year	\$ 66,878,209	\$26,425,489	\$ _	\$ 93,303,698	\$105,195,625

See accompanying notes to consolidated financial statements.

#### **CONSOLIDATED STATEMENTS OF CASH FLOWS**

ASME

	2015	2014
Cash flows from operating activities:		
(Decrease) increase in net assets	\$(11,891,927)	\$ 14,375,259
Adjustments to reconcile (decrease) increase in net assets to net cash		
(used in) provided by operating activities:		
Depreciation and amortization	4,967,610	5,651,983
Realized and unrealized loss (gain) on investments	4,100,731	(15,447,129)
Bad debt expense	5,140	31,837
Pension and post-retirement changes other than net periodic costs	5,346,973	195,052
Change in operating assets and liabilities:		
Accounts receivable	3,095,881	(3,357,616)
Due from The ASME Foundation, Inc.	2,073,025	(2,514,808)
Inventories	257,060	777,614
Prepaid expenses, deferred charges, and deposits	(1,015,066)	440,195
Accounts payable and accrued expenses	(657,145)	2,646,477
Accrued employee benefits	1,515,152	778,063
Deferred publications revenue	(10,402,924)	9,417,641
Deferred dues revenue	(79,244)	(3,729)
Accreditation and other deferred	1,333,683	(1,183,314)
Deferred rent	(357,248)	1,421,506
Net cash (used in) provided by operating activities	(1,708,299)	13,229,031
Cash flows from investing activities:		
Purchases of investments	(87,636,199)	(31,861,658)
Proceeds from sales of investments	94,842,687	21,491,945
Acquisition of fixed assets	(5,325,861)	(3,003,909)
Net cash provided by (used in) investing activities	1,880,627	(13,373,622)
Net increase (decrease) in cash and cash equivalents	172,328	(144,591)
Cash and cash equivalents at beginning of year	14,400,115	14,544,706
Cash and cash equivalents at end of year	\$ 14,572,443	\$ 14,400,115

See accompanying notes to consolidated financial statements.

#### (1) Organization

Founded in 1880, The American Society of Mechanical Engineers (the Society), also known as ASME, is the premier organization for promoting the art, science, and practice of mechanical engineering throughout the world. The Society is incorporated as a not-for-profit organization in the State of New York and is exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code (the Code).

The Society's mission is to serve diverse global communities by advancing, disseminating and applying engineering knowledge for improving the quality of life, and communicating the excitement of engineering.

The Society has six limited liability corporations (LLC) that are consolidated into the Society's financial statements. These are Innovative Technologies Institute (ITI) LLC, Standards Technology (ST) LLC, Asia Pacific (AP) LLC, Engineering for Change (E4C) LLC, East Asia Holding LLC and ASME India Private LTD (India). ITI develops standards primarily in the risk assessment/management area. ST develops standards for emerging technologies. AP promotes the understanding and use of ASME Codes & Standards, along with other ASME services, in the growing markets of the Asia Pacific region. E4C facilitates the development of affordable, locally appropriate and sustainable solutions to the most pressing humanitarian challenges. India promotes awareness and use of the broad array of ASME products and services in the growing India market. These operations are included in the designated and restricted column of the consolidated financial statements. All significant intercompany transactions have been eliminated.

The accompanying consolidated financial statements do not include all of the Society's sections (unincorporated geographical subdivisions which are not controlled by the Society). In addition, they do not include The ASME Foundation, Inc. (the Foundation) or The American Society of Mechanical Engineers Auxiliary, Inc. (the Auxiliary), which are separately incorporated organizations affiliated with, but not controlled by, the Society.

#### (2) Summary of Significant Accounting Policies

#### (a) Basis of Accounting

The consolidated financial statements have been prepared on the accrual basis of accounting.

#### (b) Basis of Presentation

The Society's net assets, revenue, gains and losses are classified based on the existence or absence of donorimposed restrictions. Accordingly, the net assets of the Society and changes therein are classified and reported as follows:

**Unrestricted Net Assets**—Net assets that are not subject to donor-imposed stipulations.

**Temporarily Restricted Net Assets**—Net assets subject to donor-imposed stipulations that will be met either by actions of the Society and/or the passage of time. In addition, these net assets include unappropriated earnings on donor-restricted endowment.

**Permanently Restricted Net Assets**—Net assets subject to donor imposed stipulations that they be maintained permanently by the Society. Generally, the donors of these assets permit the Society to use all or part of the income earned on related investments for general or specific purposes.

Revenues are reported as increases in unrestricted net assets unless their use is limited by donor-imposed restrictions. Expenses are reported as decreases in unrestricted net assets. Gains and losses on investments and other assets or liabilities are reported as increases or decreases in unrestricted net assets unless their use is restricted by explicit donor stipulation or by law. Expirations of temporary restrictions on net assets (i.e., the donor-stipulated purpose has been fulfilled and/or the stipulated time period has elapsed) are reported as net assets released from restrictions. Restricted contributions are recorded as unrestricted revenues if the restrictions are fulfilled in the same time period in which the contribution is received.

#### (c) Revenue and Expenses

The Society's revenue and expenses are classified in a functional format. Classifications are composed principally of the following:

**Codes and Standards**—Revenue includes publication sales of Codes and Standards. Revenue from the sale of Codes and Standards is recognized over the life of the code sold. The principal product affecting revenue and expenses for this financial statement component is the Society's Boiler and Pressure Vessel Code (the Boiler Code). The Boiler Code is published every two years. The 2013 Boiler Code was released in July 2013.

**Conformity** Assessment—Revenue includes accreditation program fees. All accreditation revenues and expenses are recognized in the period that the accreditation process is completed and certificates and/or stamps are issued.

**Training and Development**—Revenue includes registration fees for and publication sales related to continuing education courses provided by the Society. Revenue and expenses are recognized in the period the program is held.

Programs-Revenue is composed principally of Foundation and government grant, conference and workshop revenue. Grant revenue is recognized as expenses are incurred. Conference and workshop fees are recognized in the period the program is held. Expenses relate to the Society's programs to identify emerging issues of interest to members and the engineering profession at large; provide technical and policy advice to government; assure quality in engineering education; support increasing diversity of women and minorities in the engineering profession and their active involvement in the Society; dissemination of information to the public; and for government- and private- sponsored programs for improving engineering education, global development, diversity in the profession, public awareness, and development of future Society leaders.

Technical Events and Content (TEC) and Institutes—

TEC revenue is composed principally of technical division meetings and conference fees, as well as revenue from research activities. All conference and meeting fees are recognized in the period the program is held. Research revenue is recognized as expenses are incurred. Expenses are associated with the Society's technical activities, including research. Institutes revenue includes all registration fees for continuing education courses and meeting, conference, and exhibit fees from the International Gas Turbine Institute (IGTI) and the International Petroleum Technology Institute (IPTI), collectively (the Institutes). All fees are recognized in the period the program is held. Expenses relate to the Institutes' continuing education program, development and accreditation of engineering curricula, and to IGTI and IPTI technical activities.

**Publications**—Revenue includes publication sales. Publication sales are recognized upon shipment of the publications except for some subscription-based activity where the revenue is recognized over the term of the subscription. Expenses relate to publication activities.

**Membership**—Revenue includes member dues and royalties from membership-based affinity programs. Member dues are recognized over the applicable membership period. Affinity revenue is recognized over the term of the scheduled payment period. Expenses relate to membership activities, as well as membership standards, grades, recruitment, and retention, and to the Society's technical activities.

#### (d) Cash Equivalents

Cash equivalents include commercial paper with original maturities of three months or less, and money market funds that are not maintained in the investment portfolio.

#### (e) Accounts Receivable

Historically, the Society has not experienced significant bad debt losses. As of June 30, 2015 and 2014, the Society determined that an allowance for uncollectible accounts is necessary for accounts receivable in the amount of \$267,000 and \$262,000, respectively. This determination is based on historical loss experience and consideration of the aging of the accounts receivable. Accounts receivables are written off when all reasonable collection efforts have been exhausted.

#### (f) Inventories

Inventories are stated at lower of cost or market. Unit cost, which consists principally of publication printing costs, is determined based on average cost.

#### (g) Investments

Investments are reported at fair value (see note 4). Although available for operating purposes when necessary, the investment portfolio is generally considered by management to be invested on a long-term basis. Realized and unrealized gains and losses are recognized as changes in net assets in the periods in which they occur. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date. Purchases and sales of securities are recorded on a trade-date basis.

Fair value measurements are based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. In order to increase consistency and comparability in fair value measurements, a fair value hierarchy prioritizes observable and unobservable inputs used to measure fair value into three levels, as described in note 4.

#### (h) Property, Furniture, Equipment, and Leasehold Improvements

Property, furniture, and equipment are depreciated on a straight-line basis over the estimated useful lives of the assets, which range from 3 to 30 years. Leasehold improvements are amortized over the lease term or the useful life of the asset, whichever is less. The Society capitalizes all assets with a cost of \$3,000 or more and a useful life of more than one year.

#### (i) Use of Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect certain reported amounts and disclosures at the date of the financial statements and the reported amounts of revenue, expenses, and other changes in net assets during the reported period. Actual results could differ from those estimates.

#### (j) Nonoperating Activities

The consolidated statements of activities distinguish between operating and nonoperating activities. Nonoperating activities include investment return (interest and dividends, as well as realized and unrealized gains and losses on investments) and certain pension and postretirement changes. All other activities are classified as operating.

#### (k) Designated Funds

The Designated Funds are primarily made up of the ASME Development Fund, the ASME Custodial Funds, ITI LLC, ST LLC, AP LLC, E4C LLC, and the India funds. The ASME Development Fund is funded by member voluntary contributions for the purpose of launching new programs. The ASME Custodial Funds hold and invest institute, division and section funds. These funds are used by institutes, divisions and sections to support engineering discipline specific programs and local engineering programs.

#### (l) Uncertain Tax Positions

There are certain transactions that could be deemed unrelated business income and would result in a tax liability. Management reviews transactions to estimate potential tax liabilities using a threshold of more likely than not. It is management's estimation that there are no material income tax liabilities that need to be recorded at June 30, 2015 or 2014.

#### (m) Reclassification

Certain reclassifications of 2014 amounts have been made to conform to the 2015 presentation.

#### (n) New Accounting Pronouncement

In fiscal 2015, the Society adopted the provisions of Accounting Standards Update (ASU) No. 2015 07, *Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent)*, which removes the requirement to categorize within the fair value hierarchy all investments for which fair value is measured using the net asset value per share practical expedient and removes the requirement to make certain disclosures for all investments that are eligible to be measured at fair value using the net asset value per share practical expedient. The Society applied the provision of the ASU retrospectively to fiscal 2014.

#### (3) Transactions with Related Parties

The Society performs certain administrative functions for the Foundation. The Society charges the Foundation for all direct expenses along with additional charges for office space and other support services. In fiscal years 2015 and 2014, such charges totaled \$860,011 and \$929,728, respectively, which represent the costs of these charges and services.

In fiscal years 2015 and 2014, the Foundation made total contributions of approximately \$237,000 and \$217,000, respectively, to the Society in support of honors and awards, Engineering for Change (E4C) and International Mechanical Engineering Conference & Exhibits (IMECE). In fiscal years 2015 and 2014, the Society contributed \$1,050,000 and \$18,671, respectively for award programs to the Foundation.

Additionally, the Society pays the Foundation's invoices with third parties. At June 30, 2015 and 2014, the Society recorded an amount due from the Foundation in the amount of \$554,371 and \$2,627,396, respectively, for amounts paid on behalf of the Foundation.

The Society performs certain administrative functions for the Auxiliary. The Society charges for all direct expenses along with additional charges and then records a donation for the services. In fiscal years 2015 and 2014, such charges totaled \$16,989 and \$28,606, respectively. The contributed services are included in the supporting services sector expenses in the accompanying consolidated statements of activities.

#### (4) Investments

Investments of the Society, as well as amounts held on behalf of the Auxiliary, are combined on a fair value basis. FASB guidance defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date and sets out a fair value hierarchy. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy under ASC Topic 820 are described below:

- Level 1: Unadjusted quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.
- Level 2: Inputs other than quoted prices within Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Inputs that are unobservable for the asset or liability and that include situations where there is little, if any, market activity for the asset or

liability. The inputs into the determination of fair value are based upon the best information in the circumstances and may require significant management judgment or estimation.

In determining fair value, the Society utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible in its assessment of fair value.

The following methods and assumptions were used in estimating the fair values of significant financial instruments at June 30, 2015 and 2014.

#### **Common Stock**

Common stocks are valued at the closing price reported on the active market on which the individual securities are traded. Shares are liquid with conversion to cash generally within a few days.

#### Mutual Funds

Mutual funds are valued based upon quoted market prices determined in an active market. There are no restrictions on redemptions of these funds, and they can be redeemed daily.

Investments, measured at fair value on a recurring basis, are classified as Level 1 and consisted of the following at June 30, 2015 and 2014:

	2015	2014
Common stock:		
U.S. large cap	\$ 8,239,024	\$ 5,916,582
U.S. mid cap	967,405	2,274,881
Developed international	1,426,925	1,464,143
Other equity		758,700
Equity—mutual funds:		
Large blend	28,770,458	35,855,953
Foreign large blend	18,739,791	20,365,563
Small blend	6,724,155	6,433,722
Aggressive allocation	2,254,243	2,189,636
Energy	2,602,382	3,554,081
Natural resources	794,166	1,023,935
U.S. corporate bonds	_	23,870,916
Mutual funds—bonds and		
fixed income	45,730,136	20,492,810
Money market funds	436,649	3,880,752
Total portfolio	116,685,334	128,081,674
Less:		
Undivided interest held on		
behalf of the Auxiliary	1,503,007	1,592,128
Total ASME	\$115,182,327	\$126,489,546

Realized and unrealized gain on investments for the years ended June 30, 2015 and 2014 consists of the following:

	_	2015	2014
Realized gain on investment			
transactions	\$	5,298,594	\$ 2,714,927
Unrealized (loss) gain		(9,399,325)	12,732,202
	\$	(4,100,731)	\$ 15,447,129

#### (5) Property, Furniture, Equipment, and Leasehold Improvements

Property, furniture, equipment, and leasehold improvements at June 30, 2015 and 2014 consist of the following:

	2015	2014
Land	\$ 583,077	\$ 583,077
Building and building		
improvements	2,831,502	2,831,502
Computer equipment	37,916,585	35,107,487
Leasehold improvements	15,215,751	13,114,674
Furniture and fixture	8,757,297	8,887,751
Others	76,259	41,338
	65,380,471	60,565,829
Less accumulated depreciation and		
amortization	(35,691,845)	(31,235,454)
	\$ 29,688,626	\$ 29,330,375

Construction in progress of \$9,983,613 is included in the above property, furniture, equipment, and leasehold improvements at June 30, 2015. The estimated cost to complete these projects at various dates through June 2017 is approximately \$1,148,400.

Depreciation and amortization expense amounted to \$4,967,610 and \$5,651,983 for the years ended June 30, 2015 and 2014, respectively. During the years ended June 30, 2015 and 2014, ASME wrote off fully depreciated property and equipment amounting to \$511,219 and \$4,404,114, respectively.

#### (6) Operating Revenue

Operating revenue is presented principally by Sector in the accompanying consolidated statements of activities. Set forth below is revenue for the years ended June 30, 2015 and 2014, summarized by type:

	2015	2014
Membership dues	\$ 8,123,181	\$ 8,308,279
Codes and standards and		
technical publication		
revenue	50,796,150	52,943,548
Accreditation revenue	31,427,915	31,629,550
Conferences, exhibits, and		
course fees	18,571,116	21,361,063
Other operating revenue	4,002,933	3,802,950
Member's voluntary		
contributions	11,128	8,727
Miscellaneous	640,159	680,750
	\$ <u>113,572,582</u>	\$ <u>118,734,867</u>

#### (7) Pension Plans

The Society has a noncontributory defined benefit pension plan (the Plan) covering approximately 46% of its employees. Normal retirement age is 65, but provisions are made for early retirement. Benefits are based on salary and years of service. The Society funds the Plan in accordance with the minimum amount required under the Employee Retirement Income Security Act of 1974, as amended. The Society uses a June 30 measurement date. During the 2015 fiscal year, there were no significant events that would require remeasurement.

The funded status reported in the consolidated statements of financial position as of June 30, 2015 and 2014, was measured as the difference between fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Benefit obligation at June 30

at June 30

position:

Fair value of plan assets

Funded status

Accrued employee

Total net periodic

benefit cost

benefits

Employer contributions

Weighted average assumptions used to

Weighted average assumptions used to determine net periodic benefit cost for the years ended June 30,

Benefits paid

determine benefit

Discount rate

obligations at June 30:

Rate of compensation increase

Amounts recognized in the consolidated statements of financial

#### Notes to Consolidated Financial Statements

The following table provides information with respect to the Plan as of and for the years ended June 30, 2015 and 2014:

Other changes in plan assets and benefit obligations recognized in the change in unrestricted net assets for the years ended June 30, 2015 and 2014 are as follows:

	2015	2014
Net loss	\$ (7,211,972)	\$(1,386,002)
Amortization of loss Amortization of prior	1,845,045	2,000,071
service credit	(425,432)	(425,432)
Net amount recognized in change in unrestricted		
net assets	\$ <u>(5,792,359)</u>	\$ 188,637

The net periodic pension cost for the years ended June 30, 2015 and 2014 includes reclassifications of amounts previously recognized as changes in unrestricted net assets as follows:

	2015	2014
Amortization of loss	\$ 2,433,577	\$ 2,000,071
Amortization of prior		
service cost	(425,432)	(425,432)

Amounts that have not been recognized as components of net periodic benefit cost but included in unrestricted net assets to date as the effect of adoption of ASC 715-30 as of June 30, 2015 and 2014 are as follows:

	2015	2014
Net actuarial loss	\$28,631,494	\$23,264,567
Prior service credit	(2,439,533)	(2,864,965)
Net amounts recognized in		
unrestricted net assets	\$26,191,961	\$20,399,602

The following table presents the Plan's assets measured at fair value as of June 30, 2015 and 2014. At June 30, 2015 and 2014, the assets in the Plan's investment portfolio were considered Level 1, except for those investments reported at net asset value which are not included in the fair value hierarchy.

	2015	2014
Equity—mutual funds:		
Large blend	\$ 4,785,650	\$ 4,648,494
Foreign large blend	5,521,384	4,944,652
Energy	1,882,456	2,572,510
Natural resources	2,145,733	1,763,396
Bonds and fixed income—		
mutual funds	28,455,860	28,248,772
Investments reported at net		
asset value:		
Large blend	7,365,560	9,030,030
Money market fund	255,787	464,128
Total ASME Pension		
Plan & Trust Assets	\$50,412,430	\$51,671,982

2015

\$(75,080,439)

50,412,430

\$(24,668,009)

\$(24,668,009)

3,027,880

3,500,000

(3,459,689)

4.55%

3.50

2014

\$(71,019,752)

51,671,982

\$(19,347,770)

\$(19,347,770)

3,567,740

3,500,000

(2,966,549)

4.25%

3.50

2015 and 2014:		
Discount rate	4.25%	4.75%
Expected return on		
plan assets	7.25	7.25
Rate of compensation		
increase	3.50	3.50
The accumulated benefit	obligation for the	Plan was

\$65,607,476 and \$62,877,200 at June 30, 2015 and 2014, respectively.

(Continued)

The following methods and assumptions were used in estimating the fair values of significant financial instruments at June 30, 2015 and 2014.

#### Mutual Funds

Mutual funds that are valued upon quoted market prices determined in an active market are considered Level 1 in the fair value hierarchy. Mutual funds are valued at the net asset value (NAV) as reported by the fund and are not traded on a publicly traded exchange. There are no restrictions on any of these funds and they can all be redeemed daily.

The pension investments are managed to provide a reasonable investment return compared to the market, while striving to preserve capital and provide cash flows required for distributions. The portfolio is diversified among investment managers and mutual funds selected by the Plan's trustees using the advice of an independent performance evaluator.

The expected long-term rate of return for the Plan's total assets is based on both the Society's historical rate of return and the expected rate of return on the Society's asset classes, weighted based on target allocations for each class. The Society's pension plan weighted average asset allocations at June 30, 2015 and 2014, by asset category, are as follows:

	2015	2014
Mutual funds invested in equity securities	40%	44%
Mutual funds invested in debt securities	60	55
Other	—	1
	100%	100%

The Society expects to contribute \$6,000,000 to the Plan in fiscal year 2016.

Amounts in unrestricted net assets and expected to be recognized as components of net periodic benefit cost in fiscal year 2016 are as follows:

Net loss	\$1,845,045
Prior services credit	(425,432)

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid as follows:

	Amount
Year ending June 30:	
2016	\$ 3,508,315
2017	3,783,886
2018	3,856,008
2019	4,512,557
2020	4,675,370
2021–2025	27,509,601

In addition to the Plan, the Society maintains the ASME Benefit Restoration Plan (SERP). ASME's SERP is a nonqualified, unfunded deferred compensation plan for the benefit of ASME executives whose compensation exceeds a federally imposed limit on the amount of compensation that can be contributed to qualified (i.e., tax-exempt) retirement plans. The effect of the federal limits was that the compensation of persons at or below the limit was fully eligible for qualified retirement contributions, while those with compensation greater than the limit "lost" the additional compensation for purposes of calculating their retirement plan contributions.

In 1994, ASME initiated the SERP as a "Benefits Restoration Plan" in order to "restore" more highly compensated employees to a measure of parity with employees who earn lower amounts and whose full compensation is taken into account for purposes of calculating retirement plan contributions. Participants in the SERP are those employees whose compensation exceeds the compensation limit for qualified plan contributions, subject to ASME's Board of Governors' approval.

During the 2015 fiscal year, there were no significant events that would require remeasurement.

#### Notes to Consolidated Financial Statements

The following table provides information with respect to the SERP as of and for the years ended June 30, 2015 and 2014:

	2015	2014
Benefit obligation at June 30	\$(1,459,053)	\$(1,485,819)
Fair value of plan assets at June 30		
Funded status	\$(1,459,053)	\$(1,485,819)
Amounts recognized in the consolidated statements of financial position: Accrued employee		
benefits	\$(1,459,053)	\$(1,485,819)
Total net periodic		
benefit cost	166,585	104,548
Employer contributions	—	—
Benefits paid		
Weighted average		
assumptions used to		
determine benefit		
obligations at June 30:	4.550/	4.050/
Discount rate	4.55%	4.25%
Rate of compensation	2.50	2.50
Increase	3.50	3.50
weighted average		
assumptions used to		
benefit east for the second		
and a lune 20, 2015		
ended June 50, 2015		
and 2014:	4 250/	4 750/
Discount rate	4.25%	4./5%
Expected return on	NT/A	NT/A
plan assets	1N/A	IN/A
kate of compensation	2 500/	2 500/
increase	3.50%	5.50%

The accumulated benefit obligation for the SERP was \$1,126,171 and \$818,156 at June 30, 2015 and 2014, respectively.

Other changes in SERP assets and benefit obligations recognized in the change in unrestricted net assets for the years ended June 30, 2015 and 2014 are as follows:

	2015	2014
Net gain (loss)	\$ 139,986	\$ (411,100)
Amortization of loss	105,687	68,789
Amortization of prior service credit	(52,322)	) (52,322)
Net amount recognized in change		
in unrestricted net assets	<u>\$ 193,351</u>	\$ (394,633)

The net periodic pension cost for the years ended June 30, 2015 and 2014 includes reclassifications of amounts previously recognized as changes in unrestricted net assets as follows:

2015	_	2014
\$ 105,687	\$	68,789
(52,322)		(52,322)
	<b>2015</b> \$ 105,687 (52,322)	<b>2015</b> \$ 105,687 \$ (52,322)

Amounts that have not been recognized as components of net periodic benefit costs but included in unrestricted net assets to date as the effect of adoption of ASC 715-30 are as follows:

	2015	2014
Net actuarial loss	\$ 892,139	\$1,137,812
Prior service credit	(258,361)	(310,683)
Net amounts recognized in		
unrestricted net assets	\$ 633,778	\$ 827,129

Amounts in unrestricted net assets and expected to be recognized as components of net periodic benefit cost in fiscal year 2016 are as follows:

Net loss	\$ 105,687
Prior services credit	(52,322)

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid as follows:

	Amount
Year ending June 30:	
2016	\$ 505,289
2017	2,610
2018	4,049
2019	5,819
2020	7,882
2021–2025	69,550

The Society has a qualified defined contribution plan covering all eligible full-time employees hired after December 31, 2005. The Society is required to make contributions in accordance with the pension plan agreement. The maximum plan contribution per year will not exceed the amount permitted under IRS Code Section 415, and will also be subject to the limitations of IRS Code Section 403(b). Pension expense for the years ended June 30, 2015 and 2014 are \$519,010 and \$447,890, respectively.

The Society also maintains a thrift plan under Section 403(b) of the Code covering substantially all employees. The Society's contribution was approximately \$1,030,411 and \$970,000 for the years ended June 30, 2015 and 2014, respectively.

#### (8) Postretirement Healthcare and Life Insurance Benefits

The Society provides certain healthcare and life insurance benefits to retired employees (the Postretirement Plan). For eligible retirees hired prior to 1995, the life insurance benefit is noncontributory and the healthcare coverage is subsidized by the Society. The Society no longer provides life insurance benefits to retirees. The Society currently permits eligible early retirees (55 with twenty years of service or age 62 with ten years of service) to remain on the group health insurance plan until age 65, by paying the full insurance cost. The estimated cost of such benefits is accrued over the working lives for those employees expected to qualify for such benefits. The Society uses a June 30 measurement date. This benefit was terminated for current employees as of July 1, 2005, and is in effect only for then-current participants.

The following table provides information with respect to the postretirement benefits as of and for the years ended June 30, 2015 and 2014:

	2015	2014
Postretirement benefit		
obligation	\$(2,351,854)	\$(2,588,036)
Accrued benefit recognized	(2,351,854)	(2,588,036)
Net periodic postretirement		
benefit cost	84,271	122,911
Employer contribution	68,418	81,533
Plan participants' contribution	42,368	66,321
Benefits paid	110,786	147,854

Estimated amounts that will be amortized from unrestricted net assets into net periodic benefit cost in the fiscal year ending in 2015 are as follows:

	2015	2014
Actuarial gain	\$(51,600)	\$(25,550)
Prior service credit	(26,283)	(26,283)
Weighted average assumptions		
used to determine benefit		
obligations at June 30:		
Discount rate	3.98%	3.75%
Expected return on plan assets	N/A	N/A
Rate of compensation increase	3.50%	3.50%
Healthcare cost trend:		
Increase from current year		
to next fiscal year	8.00	8.50
Ultimate rate increase	5.00	5.00
Fiscal year that the ultimate		
rate is attained	2022	2022
	2015	2014
Weighted average assumptions		
used to determine net periodic		
benefit cost for the years ended		
June 30, 2015 and 2014:		
Discount rate	3.75%	4.25%
Expected return on plan assets	N/A	N/A
Rate of compensation increase	3.50%	3.50%
Healthcare cost trend:		
Increase from current year		
to next fiscal year	8.50	9.00
Ultimate rate increase	5.00	5.00
Fiscal year that the ultimate		
rate is attained	2022	2022

Amounts that have not been recognized as components of net periodic benefit costs, but included in unrestricted net assets to date as the effect of adoption of ASC 715-60 as of June 30, 2015 and 2014, is as follows:

	2015	2014
Net loss	\$(834,265)	\$(555,947)
Prior service credit	(92,520)	(118,803)
Net amount recognized in		
unrestricted net assets	\$ <u>(926,785)</u>	\$ <u>(674,750)</u>

The net periodic benefit cost for the years ended June 30, 2015 and 2014 includes reclassifications of amounts previously recognized as changes in unrestricted net assets as follows:

	2015	2014
Amortization of gain Prior service credit	\$ (46,092) (26,283)	\$ (28,990) (26,283)
	(==;===)	(,,,

Other changes in postretirement plan assets and benefit obligations recognized in the change in unrestricted net assets for the years ended June 30, 2015 and 2014 are as follows:

	2015	2014
Net actuarial gain	\$278,318	\$ 37,227
Prior service cost	(26,283)	(26,283)
Net amount recognized in		
unrestricted net assets	\$252,035	\$_10,944

Healthcare cost rate trend:

1. Assumed healthcare cost trend rate for	
the next year	8.0%
General description of the direction and	0.5% per year
pattern of change in the assumed trend	to 5%, then
rates thereafter	5% thereafter
Ultimate trend rate and when that rate is	
expected to be achieved	5.0%
2. One percentage point increase:	
Effect on total service and interest cost	\$ 15,694
Effect on end of year postretirement	
benefit obligation	127,411
3. One percentage point decrease:	
Effect on total service and interest cost	\$ (13,494)
Effect on end of year postretirement	
benefit obligation	(112,016)
-	

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid as follows:

	Amount
Year ending June 30:	
2016	\$ 184,080
2017	187,108
2018	186,712
2019	185,796
2020	180,801
2021-2025	963,965

#### (9) Temporarily and Permanently Restricted Net Assets

Temporarily and permanently restricted net assets and the income earned on permanently restricted net assets are restricted by donors to the following purposes at June 30, 2015 and 2014:

	2015		2014		
	Temporarily restricted	Permanently restricted	Temporarily restricted	Permanently restricted	
Award programs	\$ 222,111	\$ 40,110	\$238,474	\$ 40,110	
library Membershin	168,091	74,695	201,586	74,695	
programs	_	21,762	611	21,762	
	\$390,202	\$136,567	\$440,671	\$136,567	

Temporarily restricted net asset activity has not been separately presented in the consolidated statements of activities. There was no activity in permanently restricted net assets during 2015 and 2014. Temporarily restricted activity for 2015 and 2014 is summarized below:

	2015	2014
Interest and dividends, net of		
investment fees	\$ 11,683	\$ 11,181
Realized and unrealized (loss) gain		
in fair value of investments	(19,731)	76,981
Net assets released from restrictions	(42,421)	(39,976)
(Decrease) increase in		
temporarily restricted		
net assets	\$ <u>(50,469)</u>	\$ 48,186

The (decrease) increase in unrestricted net assets in 2015 and 2014 was (\$11,841,458) and \$14,327,073, respectively.

#### (10) Endowment Net Assets

The Society recognized that New York State adopted as law the New York Prudent Management of Institutional Funds Act (NYPMIFA) on September 17, 2010. NYPMIFA replaced the prior law which was the Uniform Management of Institutional Funds Act (UMIFA).

In addition, NYPMIFA created a rebuttable presumption of imprudence if an organization appropriates more than 7% of a donor-restricted permanent endowment fund's fair value (averaged over a period of not less than the preceding five years) in any year. Any unappropriated earnings that would otherwise be considered unrestricted by the donor will be reflected as temporarily restricted until appropriated.

The Society's Board of Governors has interpreted NYPMIFA as allowing the Society to appropriate for expenditure or accumulate so much of an endowment fund as the Society determines is prudent for the uses, benefits, purposes and duration for which the endowment fund was established, subject to the intent of the donor as expressed in the gift instrument. Unless stated otherwise, the assets in a donor-restricted endowment fund shall be donor-restricted assets until appropriated for expenditure by the Board of Governors. As a result of this interpretation, the Society has not changed the way permanently restricted net assets are classified. See note 2 for how the Society classifies its net assets.

Total

The Society's investment policy is to provide for safety and marketability of principal, maintenance of purchasing power, reasonable yield on invested funds, and minimum idle cash in working funds. Any surplus should be invested. The policy has charged the Committee on Finance and Investments (COFI) with investment decision responsibility. The policy further states that the COFI will have the advice of professional counsel in deciding the desired ratio of equities to fixed income securities, and in deciding investment purchases and sales. To this end, the COFI uses the professional firm of Lowery Asset Consulting (LAC). LAC does not trade in any securities, only provides analysis and advice. The current equity to fixed ratio goal is 60% equity to 40% fixed, dependent on market conditions.

Changes in endowment net assets for the year ended June 30, 2015:

	T	emporarily restricted	P	ermanently restricted	e ii	ndowment
Endowment net assets, beginning of year	\$	440,671	\$	136,567	\$	577,238
Contributions to endowment						—
Investment activity:						
Interest and dividends		11,683		_		11,683
Realized gain on investments		26,867		_		26,867
Unrealized loss on investments		(46,598)				(46,598)
Total investment activity		(8,048)		_		(8,048)
Amount appropriated for expenditures		(42,421)				(42,421)
Endowment net assets, end of year	\$	390,202	\$	136,567	\$	526,769

Changes in endowment net assets for the year ended June 30, 2014:

	Temporarily restricted	Р	ermanently restricted	e i	Total endowment nvestments
Endowment net assets, beginning of year	\$ \$392,485	\$	136,567	\$	529,052
Contributions to endowment			_		—
Investment activity:					
Interest and dividends	11,181		—		11,181
Realized gain on investments	12,320		_		12,320
Unrealized gain on investments	64,661				64,661
Total investment activity	88,162				88,162
Amount appropriated for expenditures	(39,976)				(39,976)
Endowment net assets, end of year	\$ 440,671	\$	136,567	\$	577,238

Endowment net assets of \$526,769 and \$577,238 are included with investments in the consolidated statements of financial position at June 30, 2015 and 2014, respectively.

#### (11) Commitments and Contingencies

The Society's principal offices are located at 2 Park Avenue, New York, under a lease expiring on March 31, 2028. In connection with this lease, the Society has provided as security a \$2,134,133 letter of credit. No amounts have been drawn against this letter of credit.

The lease for 2 Park Avenue includes free rent concessions and scheduled rent increases that have been recognized on a straight-line basis over the term of the lease. The accumulated difference between rent expense and cash payments is included in liabilities as deferred rent in the accompanying consolidated statements of financial position.

The Society has a lease agreement for their NJ Service Center, entered into on November 8, 2014 and expiring on July 31, 2026 for the property located at 150 Clove Road, 6th Floor, Little Falls, NJ.

The Society has another lease agreement, expiring on October 31, 2022, for the property located at 1828 L Street NW, Washington, DC.

In addition to the above leases, the Society also has a number of other lease commitments for regional offices and office equipment expiring through 2026.

The following is a schedule of the approximate minimum future rentals on all leases at June 30, 2015:

	Amount
Year ending June 30:	
2016	\$ 5,438,562
2017	5,534,775
2018	5,586,870
2019	5,881,126
2020	5,907,634
2021-2028	44,211,158

Rent expense under all of the Society's leases was approximately \$4,459,000 and \$4,510,000 in 2015 and 2014, respectively. The Society sublet space in one of its operating offices and sub-rental income was approximately \$4,500 and \$10,300 in 2015 and 2014, respectively.

#### (12) Line of Credit

The Society had established a \$5,000,000 secured, uncommitted line of credit to service short-term working capital needs. The line of credit, renewable annually, expires on December 31, 2015. Terms are LIBOR plus 1.50%, (which is 2.2715% and 2.0451% at June 30, 2015 and 2014, respectively) the bank has a general lien on the assets of the Society, and interest will be automatically deducted from the Society's bank account monthly. As of June 30, 2015 and September 21, 2015, the Society had not drawn any funds from this line of credit.

#### (13) Concentration of Credit Risk

Cash and cash equivalents that potentially subject the Society to a concentration of credit risk include cash accounts with banks that exceed the Federal Deposit Insurance Corporation (FDIC) insurance limits. Interestbearing accounts are insured up to \$250,000 per depositor. Beginning in 2013, noninterest-bearing accounts are insured the same as interest-bearing accounts. As of June 30, 2015 and 2014, cash accounts in financial institutions exceeded the federal insured limits by approximately \$10,520,000 and \$11,162,000, respectively, of cash and cash equivalents held by banks that exceeded FDIC limits. Such excess includes outstanding checks.

Within accounts receivable, there are receivables from one company that represent 33% and 15% of accounts receivables at June 30, 2015 and 2014, respectively.

#### (14) Subsequent Events

ASME has evaluated, for potential recognition and disclosure, events subsequent to the date of the consolidated statement of financial position through September 21, 2015, the date the consolidated financial statements were available to be issued. ASME sold property located at 22 Law Drive, Fairfield, NJ 07004 for \$3,600,000 on July 6, 2015, which resulted in a gain on the sale. Other than as noted above, no other events have occurred that would require adjustment to or disclosure in the accompanying consolidated financial statements.



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# FROM THE EXECUTIVE DIRECTOR

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NONE OF THIS PAST YEAR'S IMPACT WOULD HAVE BEEN ACHIEVED WITHOUT OUR DONORS.

**99** 

These are exciting times for the ASME Foundation

**and our donors** and we have achieved much over this past year. Working hand in hand with ASME's staff and volunteers, and supported by thousands of members and friends who provided our essential financial support, the Foundation's funded programs have provided inspiration, practical expertise and means to change the world, both for engineers working today and the students studying to become our next generation of engineers tomorrow.

Our economic and global future depends on improving and diversifying the talent pipeline into STEM fields. The challenges we face as a society are more complex than ever before and worldwide, billions struggle in abject poverty without basic services. As leaders in the field of engineering, ASME has the ability and resources to improve the quality of life across a wide range of audiences and industries. The program portfolio we are developing focuses on achieving just such an impact and I am extremely proud of the work we have accomplished so far. However, the job is never done and tomorrow will always bring new challenges. Therefore, we must never waver from our commitment and mission focus.

None of this past year's impact would have been achieved without our donors. Their ongoing support enabled and increased our ability to positively influence a brighter future for students, engineers, the field of engineering – and in the end, humanity. We simply couldn't do it without them, so I want to personally say thank you once again for your steadfast commitment and support.

Warmest Regards,

Mha El-Ghobashy

Noha El-Ghobashy Executive Director

# CONTRIBUTIONS AND PROGRAM FUNDING

#### CONTRIBUTIONS TOTAL: \$2.19 MILLION

**\$700,000** Individual Unrestricted Gifts

#### \$1,265,000

ASME Institutes, Divisions and Section Gifts

**\$100,000** Corporate and Foundation Gifts

**\$125,000** Planned Giving Gifts



#### PROGRAM FUNDING TOTAL: \$1.6 MILLION

**\$640,000** K-12 STEM Education Programs

**\$100,000** University Student Programs

**\$150,000** Engineering for Global Development Programs

**\$140,000** Federal Fellows and Public Policy Programs

**\$360,000** Scholarships

**\$210,000** Engineering Honors and Awards

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Since 2003, the Archimedes Club has united the ASME planned giving community in the common goal of supporting programs that will help advance the engineering profession.

Membership in the Archimedes Club is open exclusively to those generous supporters who remember the ASME Foundation in their will or estate planning. By choosing to make a planned gift in your will, charitable lead or remainder trusts, or through a charitable gift annuity, you can feel confident that you are helping to ensure the future of ASME's impact.

In recognition of this special commitment, Archimedes Club members will receive a commemorative brass display coin to identify you as a prominent supporter; listing as an Archimedes Club member in our annual donor report and on the Foundation's website; and invitations to donor receptions at select ASME meetings.

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## ASME Foundation proudly celebrates the increasing number of donors who pledge \$1,000 or more annually in support of its programs.

Founded in 2011, the Holley Society, named after one of the founders of ASME, showcases the Foundation's appreciation and support of its top donors. These leadership contributions are crucial funds that are used to serve the immediate needs of ASME programs. Holley Society members are honored with a distinct lapel pin that designates them as member in this exclusive society, special communications and invitations from ASME and ASME Foundation leadership, top seating at various events such as the Honors Assembly and the President's Dinner, and the knowledge that you are helping ASME transform the world through unique engineering-based programs.

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The support the Foundation provides, through its portfolio of programs, scholarships and awards, is made greater because of their generosity. This honor roll is one way of acknowledging the vital contributions of our donors as we strive to be good stewards of their gifts. Together, these gifts increase our ability to positively influence a brighter future for students, engineers, the field of engineering and, optimally, humanity.

Thank you!

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For nearly thirty years, generous donors have established scholarship funds at the ASME Foundation to give back to their engineering community. In just the last ten years, the ASME Foundation has granted over \$1 million to more than 500 students from over 170 colleges and universities worldwide, for the sole purpose of helping deserving engineering students achieve. Annually awarded to ASME university student members based on leadership skills, scholastic ability, financial need and potential contribution to the mechanical engineering profession, ASME's scholarships match a student's interests and abilities with scholarships focused on specific areas of study or industry affiliations.

IN THE PAST

10 years

THE ASME FOUNDATION HAS **GRANTED OVER** 

# \$1 million TO MORE THAN 500 students

ASME FOUNDATION SCHOLARSHIP RECIPIENTS FOR THE 2015-16 ACADEMIC YEAR

Kenneth Andrew Roe Scholar (\$13,000)

### 66

THE PROFESSIONAL SKILLS I ACQUIRED WHILE A MEMBER OF ASME WILL ALLOW ME TO FUNCTION AND PERFORM IN THE ENGINEERING INDUSTRY. RECEIVING THIS AWARD WILL AID IN MY ACHIEVEMENT OF MY PROFESSIONAL GOALS, AND I AM EXTREMELY GRATEFUL.

99

Adam Lemoine Worcester Polytechnic Institute

FROM OVER 170 colleges and universities worldwide

### 2014 ASME FOUNDATION SCHOLARSHIP AWARDEES

ASME Foundation Scholar (\$11,000) Meredith Campbell (1st year) Daniel Webster College

Alexander Blum (2nd year-renewal) University of North Carolina, Charlotte

Caleb Amy (3rd year-renewal) Georgia Institute of Technology

ASME/SHPE Scholarships (\$5,000) Post-Graduate: Rochelle Piatt University of New Mexico

Undergraduate: Delbert Stewart California State University, Northridge ASME Nuclear Division (NED) Scholarship (\$5,000) Alyxandria Wszolek University of Tennessee

Paulina Hyde Idaho State University

Ali Rafi City College of New York

Garland Duncan Scholarship (\$5,000) Mark Chang University of Washington

Paul Mazza Western New England University Willis F. Thompson Scholarship (\$4,500) Christina Ramsey University of Houston

Marcus Bracey Wright State University

Andrew Brow University of Maryland, Baltimore County

American Electric Power Scholarship (\$4,000) Kushal Neupane University of New Orleans

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#### GRADUATE TEACHING FELLOWSHIP

The Graduate Teaching Fellowship Program supports and encourages outstanding doctoral candidates studying mechanical engineering education (and related engineering fields), particularly women and minorities. Each \$5,000 Fellowship award is selected annually by ASME's Board on Education.

#### **Graduate Teaching Fellowship Recipients:**

Lily Li University of California, Santa Barbara

Isaac Leventon University of Maryland, College Park

Janet Tsai University of Colorado, Boulder

Brecca Gaffney University of Denver

Christopher Ortega University of Houston

# PROGRAMS SUPPORTED BY YOUR GENEROSITY

ASME INSPIRE DIGITAL STEM EDUCATION COURSE FOR U.S. MIDDLE AND HIGH SCHOOLS WAS ADOPTED IN



schools

#### **INSPIRE**

The inaugural year of the ASME **IN**SPIRE digital STEM education course for U.S. middle and high schools far exceeded all expectations, having been adopted in 590 schools – nearly twice the first-year goal set by the program's organizers. The online, in-class course aims to improve math and science literacy among young people, building their awareness of and interest in engineering. The self-paced, teacher-led course uses an interactive secret-agent themed environment and "code-to-learn" concepts to teach important STEM topics ranging from algebra to computer science. Initially, the ASME Foundation is funding **IN**SPIRE for three years, ensuring the program is available to schools across the country at no cost to school districts or taxpayers, with the goal of reaching at least 1,000 schools during that time period. If our first year is any indication, we are off to a great start.

#### FUTURE ENGINEERS – 3D SPACE CHALLENGE

"Houston, we have a problem!" This is probably the first time that NASA said those words without a hint of concern – but with a whole lot of excitement and enthusiasm! Over the last year, the ASME Foundation entered into a 5-year partnership with NASA to sponsor a unique K-12 STEM education platform, Future Engineers, to develop a series of challenges centered on space exploration for K-12 students. The launch of the first-ever Zero-G 3D printer to the International Space Station last September signaled the start of an exciting revolution in space exploration and inspace manufacturing, and the perfect opportunity to initiate our series with the "Design a Space Tool" challenge. Over 1,000 users registered and 470 submissions were received. The competition created over 32 million impressions and 6,000 conversations over social media. Astronaut and engineer judges were impressed by the creativity and practical utility demonstrated as student submissions addressed many of the current challenges confronting life in space. Additional challenges are planned approximately every six months to continue to build awareness and interest in engineering for K-12 students both

#### IAM3D

The ASME Innovative Additive Manufacturing 3D Challenge (IAM3D) is designed to give mechanical and multi-disciplinary undergraduate students around the world an opportunity to re-engineer existing products or create new designs that minimize energy consumption and/or improve energy efficiency. Students showcase their creativity by demonstrating the value added through their ingenuity, application of sound engineering design principles, and leverage of Additive Manufacturing technologies to address a broad spectrum of industrial, manufacturing and humanitarian challenges. In just its second year, IAM3D reached over 30,000 ASME student members across 625 ASME student sections on college and university campuses worldwide.

#### **IDSC**

The ASME Innovative Design Simulation Challenge (IDSC) gives mechanical and multi-disciplinary engineering students an opportunity to showcase their modeling and simulation skills to address a broad spectrum of academic, industrial, manufacturing and humanitarian challenges. During the challenge, students develop and practice engineering design skills using simulation frameworks and environments to identify and fine-tune sound design concepts. This past year 17 teams made submissions with twelve finalists selected. Looking forward, strong growth is planned in the Digital Manufacturing industry. ISHOW

#### ABOUT PREVIOUS WINNERS WHY APPLY JUDGES TIMELINE

# \$500K

**ASME INNOVATIO** 

al Competition for Hardw

#### **ISHOW GLOBAL**

2015 was a big year for the ISHOW...It went Global! Given the success of the U.S. platform, coupled with the increasing interest and demand from international applicants, this past year marked the addition of two new locations, India and Kenya, to supplement the Washington, D.C. finals. In addition, participant submissions were required to have an explicit "social or environmental" focus.

Washington, D.C. finals. In addition, participant submissions were required to have an explicit "social or environmental" focus. The ISHOW provides its competitors further experience in product development and commercialization, bridging the gap between engineering knowledge and practical business skills. Over 150 submissions were received, leading to 30 finalists pitching their hardware-led social innovations for \$500,000 worth of prizes in seed grants and engineering support. Augmenting the prize package, winners also received an extensive design and engineering review by a panel of industry experts, to improve their ability to take their innovation to market.

> This past year's changes to the ISHOW represent powerful innovations themselves—all made possible by the support of our members. Contributions to the ASME Foundation have been integral to the ISHOW's growth and success year after year. Not only is the ISHOW a platform for fresh ideas, but the competition represents a unique opportunity for applicants to tap wisdom they normally wouldn't have access to and for accomplished engineers to observe and advise the next generation.

#### **ISHOW OFFERED**

\$500,000

WORTH OF PRIZES IN SEED GRANTS AND ENGINEERING SUPPORT

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#### FEDERAL FELLOWS

For over 40 years, ASME Federal Fellowships have been providing a valuable public service to the nation while offering ASME members the unique opportunity to participate directly in the policy-making process. Our Fellows serve at the White House, a Federal Agency, or in Congress for one-year terms, during which they offer non-partisan technical advice to elected officials who often have limited scientific and technical backgrounds. ASME Fellows have distinguished themselves as key advisors to the government in areas such as aerospace, critical infrastructure, risk analysis, energy, manufacturing and engineering education. Our Fellows are fully funded by the ASME Foundation with each receiving annual stipends plus training and relocation expenses.

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### 2014 HONORS & AWARDS A CELEBRATION OF ENGINEERING ACHIEVEMENT

Recognition of an engineer's work by his or her peers is among the most gratifying of professional achievements. The ASME Honors and Awards program, funded through the ASME Foundation by individual awards and endowment funds, pays tribute to engineering achievement and contributions to the profession. Van C. Mow, Ph.D., Stanley Dicker professor of biomedical engineering and orthopaedic bioengineering at Columbia University, New York, was selected to receive the ASME Medal. Dr. Mow, an ASME Fellow, was recognized for his significant contributions to biomechanical and biomedical engineering, particularly seminal breakthroughs in understanding the biomechanics of human joints, and for his mentoring of engineering students. The award was conferred at the Society's 2014 Honors Assembly held in conjunction with the ASME International Mechanical Engineering Congress and Exposition in Montreal, Canada. RECIPIENTS OF ASME HONORS AND AWARDS - 2014

ASME President J. Robert Sims presents the ASME Medal award to Dr. Van C. Mow at the 2014 Honors Assembly.

ASME Medal

#### HONORARY MEMBERSHIP

Warren R. DeVries, Ph.D., Fellow University of Maryland-Baltimore County

#### HONORARY MEMBERSHIP

Robert E. Nickell, Ph.D., Fellow Applied Science & Technology

#### **ASME MEDALIST**

Van C. Mow, Ph.D., Fellow Columbia University

#### HONORARY MEMBERSHIP Pol D. Spanos P

**Pol D. Spanos**, Ph.D., Fellow Rice University

#### ACHIEVEMENT AWARDS

BARNETT-UZGIRIS PRODUCT SAFETY DESIGN AWARD **Donald S. Bloswick**, Ph.D., Fellow University of Utah

BERGLES-ROHSENOW YOUNG INVESTIGATOR AWARD IN HEAT TRANSFER Jonathan A. Malen, Ph.D., Member Carnegie Mellon University

PER BRUEL GOLD MEDAL FOR NOISE CONTROL AND ACOUSTICS **Andrew N. Norris**, Ph.D. Rutgers University

EDWIN F. CHURCH MEDAL John W. Cipolla, Ph.D., Fellow Northeastern University

DANIEL C. DRUCKER MEDAL Lallit Anand, Ph.D., Fellow Massachusetts Institute of Technology

WILLIAM T. ENNOR MANUFACTURING TECHNOLOGY AWARD **Placid M. Ferreira**, Ph.D., Fellow University of Illinois at Urbana-Champaign



NANCY DELOYE FITZROY AND ROLAND V. FITZROY MEDAL

Xiang Zhang, Ph.D., Fellow University of California, Berkeley FLUIDS ENGINEERING AWARD Efstathios E. Michaelides, Ph.D., Fellow Texas Christian University

Y.C. FUNG YOUNG INVESTIGATOR AWARD W. David Merryman, Ph.D. Vanderbilt University



KATE GLEASON AWARD Ursula M. Burns Xerox



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SOICHIRO HONDA MEDAL **Thomas Morel**, Ph.D., Fellow Gamma Technologies, Inc.

INTERNAL COMBUSTION ENGINE AWARD

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H.R. LISSNER MEDAL **Kyriacos A. Athanasiou**, Ph.D., Fellow University of California, Davis

MACHINE DESIGN AWARD Larry L. Howell, Ph.D., Fellow Brigham Young University

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CHARLES T. MAIN STUDENT LEADERSHIP AWARD (SILVER) **Claire Harper**, Member The University of Alabama

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S.Y. ZAMRIK PRESSURE VESSELS AND PIPING MEDAL **Arthur G. Ware**, Ph.D., Fellow Consultant

DIXY LEE RAY AWARD Leo P. Duffy Duffy Group (Retired)

CHARLES RUSS RICHARDS MEMORIAL AWARD Suresh V. Garimella, Ph.D., Fellow Purdue University



RALPH COATS ROE MEDAL **Adam Hart-Davis**, DPhil. Freelance Photographer, Writer/Broadcaster

SAFETY CODES AND STANDARDS MEDAL Robert Bolen Retired, DuPont Co

R. TOM SAWYER AWARD Reza S. Abhari, Ph.D., Fellow ETH Zurich

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OUTSTANDING STUDENT SECTION ADVISOR AWARD Antonios Kontsos, Ph.D., Member Drexel University

J. HALL TAYLOR MEDAL Charles Becht IV, Ph.D., Fellow Becht Engineering Co., Inc.

TECHNICAL COMMUNITIES GLOBALIZATION MEDAL **Upendra S. Rohatgi**, Ph.D., Fellow Brookhaven National Laboratory

ROBERT HENRY THURSTON LECTURE AWARD **Ken P. Chong**, Ph.D., Fellow George Washington University

TIMOSHENKO MEDAL Robert M. McMeeking, Ph.D., Fellow University of California at Santa Barbara

GEORGE WESTINGHOUSE GOLD MEDAL

**Ryoichi S. Amano**, Ph.D., Fellow University of Wisconsin-Milwaukee

HENRY R. WORTHINGTON MEDAL Gerald L. Morrison, Ph.D., Fellow Texas A&M University

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**Mingyang Li**, Member Missouri University of Science and Technology

BLACKALL MACHINE TOOL & GAGE

**Lie Tang**, Ph.D. Quality Manufacturing Systems, Inc.

BLACKALL MACHINE TOOL & GAGE AWARD

**Robert G. Landers**, Ph.D., Fellow Missouri University of Science and Technology

BLACKALL MACHINE TOOL & GAGE AWARD **Ming C. Leu**, Ph.D., Fellow Missouri University of Science and Technology

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**Mohammad Janbozorgi**, Ph.D. University of Southern California

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### SPOT/ LIGHT



#### ASME President's Award

Established in 1998, the ASME President's Award recognizes prominent individuals, companies, government agencies, or colleges and universities for making significant contributions to the engineering profession and to technological advancement. In 2014, ASME President J. Robert Sims presented the award to John Hockenberry, host of the National Public Radio program The Takeaway, for his role in promoting the art and science of engineering and technical advancements and for his support of ASME.

#### 2014 ASME HONORS ASSEMBLY

Seated (L to R) Adam Hart-Davis, Cristina Amon, chair of the Committee on Honors, Van C. Mow, Ursula M. Burns

#### Standing (L to R) **Thomas G. Loughlin**, ASME Executive Director, **James W. Coaker**, **Warren R. DeVries**, **Pol D. Spanos**, **J. Robert Sims**, ASME president (2014-2015), and **Xiang Zhang**



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### SPOT/ LIGHT



### ASME New Jersey Office on the Move

ASME announced the relocation of its New Jersey office facility from Fairfield, NJ to the 32,500 square-foot office space at the Overlook Corporate Center in Little Falls, NJ. The location provides ASME with a number of new amenities including additional office and meeting space, an onsite cafeteria, more parking space and accessibility to mass transit for convenient commuting between New York Headquarters and New Jersey. "The Overlook Corporate Center meets all of our current and future needs and will play a part in the Society's continuing evolution and growth," said ASME Executive Director Tom Loughlin.



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