



# ANNUAL REPORT FY2018

ASME AROUND THE WORLD



**140+**  
COUNTRIES

ASME INDIVIDUAL MEMBERS



**100,000+**

ASME STANDARDS



**500+**

ASME ANNUAL REPORT  
FY2018

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A decorative graphic on the right side of the page features a network of interconnected nodes and lines. The nodes are represented by colored circles in shades of orange, blue, red, purple, green, and grey. The lines are thin and grey, creating a complex web-like structure that spans across the right half of the page.

# 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 Vision

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

# 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 Credo

Setting the Standard...

- In Engineering Excellence
- In Knowledge, Community and Advocacy
- For the benefit of humanity





# From the President & Executive Director

ASME is deeply rooted in its strong and rich history of accomplishment, impact, and passion for our mission to advance the field of engineering for the benefit of humankind. At the same time, we remain squarely focused on the future – with a keen eye for leveraging opportunities and innovations in the global engineering landscape. This past year has been an outstanding year of transition as we continue to leap forward, focusing on our core technologies and transitioning to new leadership.

Central to ASME's future and moving forward are the five focus core technologies identified by ASME's Board – Pressure Technology, Manufacturing, Bioengineering, Clean Energy, and Robotics. These, along with the myriad technologies represented by ASME's Technical Divisions, Standards Committees, and Groups, represent the core, the future, and the innovative aspects of ASME. The focus on these technologies will ensure that ASME builds on its illustrious history of transformative impact while cementing our status as a “go-to” organization. This focus will also enable us to better serve and collaborate with a broad range of stakeholders from industry, academia, government, and beyond.

We've also adopted a series of strategic actions to work in tandem with our focus on these technologies. These strategic actions are why our members, our colleagues, technologists, and others seek out ASME. These are the areas of excellence that draw them to ASME. Collectively, these actions are, leadership, technology portfolio, solutions portfolio, collaboration, and engagement. These areas will serve to both guide and ground us well into this century.

Another key to a sustainable and vibrant future for ASME and the engineering profession is the development and mentoring of students and early career engineers. One of our most exciting programs, the ASME E-Fests (Engineering Festivals), continued to pick up momentum in its second year. These ASME E-Fests are designed to challenge and promote the excitement of engineering for technically minded students around the world, while adding the element of fun. ASME remains committed to the development and support of the next generation of engineers. You can learn more about our programs in this Annual Report and in the ASME Foundation's Donor Report.

During the past fiscal year, there has been an intense focus on ensuring that ASME's operations are aligned to ASME's Board-approved strategy. This will best ensure that the Society is well-positioned to face the many opportunities and challenges ahead.

The future of ASME clearly rests on the invaluable contributions of our dedicated members, volunteers, and staff. The sheer level of passion and professional expertise in virtually every aspect of activity within the Society is plain for all to see. It is this passion that continues to make ASME the premier organization for engineers and technical professionals throughout the world. A heartfelt “thank you” from both of us for your continued support and commitment, which make it possible for all of us to deliver on the promise of ASME's vitally important mission.

CHARLA WISE  
PRESIDENT



THOMAS COSTABILE, P.E.  
EXECUTIVE DIRECTOR



# FY2018 ASME Board Of Governors

Seated front row left to right:

- 1 **Thomas Costabile, P.E.**  
Executive Director  
ASME
- 2 **Charla Wise**  
ASME President (2017-2018)  
Vice President Engineering  
Lockheed Martin Aero (Retired)
- 3 **Said Jahanmir, Ph.D.**  
ASME President Elect (2018-2019)  
Assistant Director for Federal Partnerships  
Advanced Manufacturing  
National Program Office, NIST
- 4 **Mahantesh Hiremath, Ph.D. , P.E.**  
Distinguished Engineer  
Space Systems Loral
- 5 **Robert E. Grimes**  
Program Manager  
Baker Hughes
- 6 **Mary Lynn Realff, Ph.D.**  
Associate Professor of  
Materials Science and Engineering  
Georgia Institute of Technology
- 7 **William J. Wepfer, Ph.D.**  
George W. Woodruff School of  
Mechanical Engineering  
Georgia Institute of Technology (Retired)
- 8 **Karen J. Ohland**  
Associate Director for Finance and Operations  
Princeton University Art Museum  
Princeton University
- 9 **Bryan A. Erler, P.E.**  
President  
Erler Engineering Ltd.
- 10 **Sriram Somasundaram, Ph.D.**  
Technical Lead  
Battelle Pacific Northwest National Laboratory  
(Retired)
- 11 **Caecilia Gotama, P.E.**  
Founder and Principal  
PSPF Holdings, LLC
- 12 **James W. Coaker, P.E.**  
ASME Secretary/Treasurer  
Principal  
Coaker & Company
- 13 **Stuart W. Cameron**  
Consultant  
Doosan Power Systems

Back row left to right







# ASME's Strategy and Integrated Operating Plan: Blueprint for Success

The ASME Strategy, officially adopted by the Board of Governors in September 2015, calls on ASME to pursue three overarching Enterprise Strategic Objectives: to become a globally recognized leader; to become the world's "go-to" organization for mechanical engineering solutions; and to institute a unified organizational structure to support those efforts.

To help the Society organize and prioritize its work more effectively to support the achievement of those three overarching objectives, a task force comprised of senior society volunteer and staff leaders undertook a rigorous, year-long process to build a detailed Integrated Operating Plan (or IOP) for doing so. In a nutshell, the IOP is ASME's detailed road map toward that successful future.

The IOP includes all ASME products and programs in an unprecedented unified plan that supports all key areas of our Society at scale. It lays out ambitious yet achievable sets of goals for the organization on 1-year, 3-year, and 10-year time frames. It articulates the way forward to the successful achievement of organizational and budgetary realignment, renewed infrastructure, and new competencies as called for by the ASME Strategy. The targets it defines will be kept in view by everyone at ASME as guides to ensure the Society's robust near-, middle-, and long-term success.

ASME continues to be dedicated to its mission to serve humankind. To pursue its mission most effectively, the Society first promulgated a new Strategy, and then a plan for its achievement. The IOP is that plan, a carefully constructed means for building on ASME's past achievements and current capabilities to ensure the Society's future health and success.

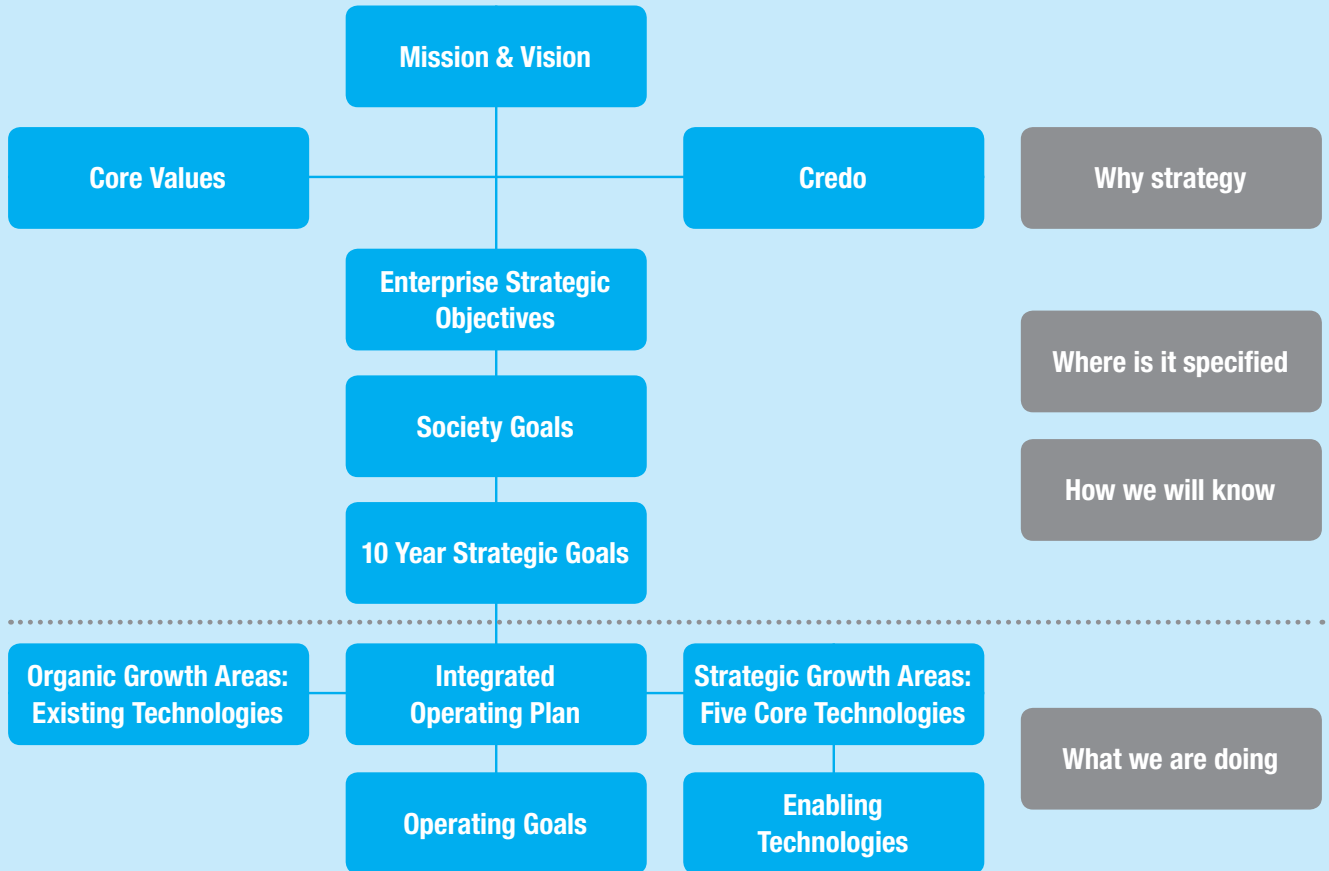




# ASME STRATEGY

## ASME Strategy

The overall strategy consists of various elements driven by the Mission and Vision through Objectives and Goals to an Integrated Operating Plan which sets budgets and targets for all of ASME including staff and volunteers of the Segments, Divisions, Councils, and Sections.



## Mission

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## Credo

Setting the Standard...

- » In Engineering Excellence
- » In Knowledge, Community & Advocacy
- » For the Benefit of Humanity

## Enterprise Strategic Objectives

ASME will:

- » Be relevant and impactful to global constituents by being the **recognized leader** in advancing engineering technology.
- » Be the **go-to organization** to help address key technology-related challenges in the public interest in a manner that engages core engineering constituencies (government, academia, industry, engineers, students, and technology development professionals).
- » Have a **unified organizational structure** and culture that encourages and empowers members and other interested individuals to find their lifelong professional home where they can impact the world, contribute content, share ideas, participate in communities, and work on projects that improve the human condition.

## Society Goals

- » ASME is an internationally-renowned **thought leader and networking hub** for engineering knowledge and information, best practices, and events.
- » ASME enables **collaboration** among industry, government, and academia to advance the cause of engineering worldwide.
- » ASME's **engagement is open and seamless**, empowering individuals worldwide to contribute, communicate, and consume engineering content to solve technical problems.
- » ASME is **globally respected** for its Standards and Certification programs and is recognized for enhancing public safety and improving quality of life for humankind.
- » ASME offers education and training programs to **prepare the workforce of tomorrow** to address the world's challenges.
- » ASME **engages and inspires future generations** to pursue careers in engineering.
- » ASME's growing impact on the world is enabled by a **well-managed and diversified revenue stream** that provides sustainable financial health.

## Strategic Actions

The essence of the ASME strategy can be summed up in the Five Strategic Actions described below. The Strategic Actions apply to all sectors, councils, divisions, sections, and technologies, staff, and volunteers throughout the organization.

### Leadership

Increase recognized value by executive leadership, as a technology innovation partner, by leveraging and mobilizing the expertise of our community.

### Technology Portfolio

Create and manage a well-balanced, sustainable technology portfolio along with associated industry- and geography-based strategies.

### Solutions Portfolio

Strengthen and expand solutions portfolio: defend Standards & Certification against agile competitors; solidify and diversify ASME's revenue base by developing solutions with strong customer demand; establish deeper expertise in content and technology development and deployment across the Technology Development Curve.

### Collaboration

Enhance ASME's impact in the mechanical engineering field by broadening collaboration with peers, creating greater scale and impact, reducing barriers to entry, and expanding diversity and student engagement.

### Engagement

Increase core constituent engagement around the world by providing high-value, relevant, impactful, and rewarding opportunities to network, participate, and learn through a branded set of technology- and purpose-advancing activities delivered through a variety of platforms.

## THE STARTING POINT

To promote Strategic Growth, the Strategy is initially focused on the Technology Portfolio, and specifically on the **Five Core Technologies** and **Eight Enabling Applications** and **Cross-cutting Technologies** listed below:

### Five Core Technologies

The following five core technologies have been initially identified as key to the overall Strategy. Each technology has a Technology Advisory Panel ("TAP") of experts in their field and their role is to provide technology and market insights, identify constituent needs, and to provide advice for potential new ASME products and services and greater constituent engagement.

In addition to these five core technologies, ASME's breadth and depth also include the rich technologies represented by its Technical Divisions, Groups, and Standards Committees.

#### Manufacturing

The technologies associated with traditional and advanced manufacturing from product design through to production.

#### Pressure Technology

The technologies applicable to the design, materials, fabrication, examination, installation, commissioning, and maintenance of pressure equipment.

#### Clean Energy

The technologies for electric power generation, storage, distribution and usage while minimizing the impact on the environment.

#### Bioengineering

The technologies associated with application of the engineering processes in developing products, pharmaceuticals, biologics, cosmetics, food supplements, the prevention and treatment of disease.

#### Robotics

The technologies for industrial machine systems and emerging areas such as service robots, drones, and autonomous vehicles.

### Eight Enabling Applications and Cross-Cutting Technologies

In addition, eight enabling applications and cross-cutting technologies have been identified.

- » Internet of things (IoT)
- » Big data analytics
- » Artificial intelligence
- » Cybersecurity
- » Sustainability
- » Materials
- » Nanotechnology
- » Design engineering

# Industry Impact

ASME's ambitious strategic action plan, begun as an organizational road map in the 2017 fiscal year, reached the implementation phase in FY18 as the Society rolled out five industry events aligned with core technologies. Highlighting market-facing technical disciplines within the broad areas of manufacturing, robotics, clean energy, pressure technology, and bioengineering, the five events all succeeded in meeting organizational objectives to address industry needs, while positioning ASME as both a thought leader and networking hub for engineering knowledge.

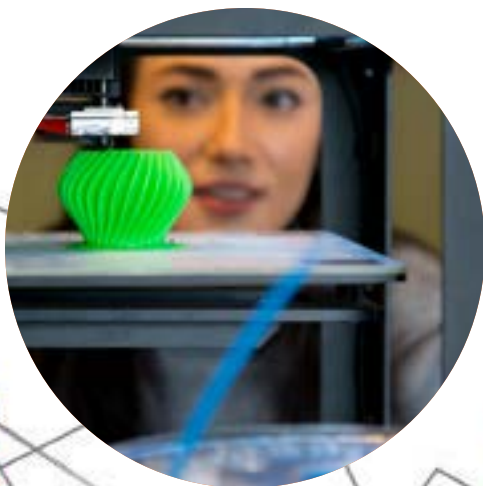
The lineup of industry events kicked off with the Offshore Wind Energy B2B Forum on May 2, 2018. The forum brought together engineers and business managers from 53 organizations to discuss the latest technologies in the design, installation, and operation of wind energy systems. Other topics included supply chain management, training, and standards for inspection of equipment. Strategically, ASME held the forum in Houston, a regional focal point in North America for the oil and gas industries – the fields with the most transferable skills to offshore wind technology and most likely candidates for this emerging U.S. market.

Later in May, ASME held AABME CONNECT, which focused on the role of modeling and simulation in healthcare, particularly the design of medical devices. The event in Minneapolis served as a strategic business outgrowth of the Society's Alliance of Advanced Biomedical Engineering, an initiative launched in 2017 to foster increased collaboration and knowledge sharing between the engineering and biomedical communities. As AABME CONNECT demonstrated, engineering principles can contribute to scaling, automation, and reducing time to market – ultimately impacting human health.

Additive manufacturing was the subject of the third industry event. The event, headlining additive manufacturing legend Terry Wohlers, was designed to help technologists and business executives understand how to prepare for the additive manufacturing revolution. Specifically, attendees learned how Boeing, GE, UPS, and others have transformed their business models and reshaped how they deliver products and services to customers leveraging additive technology.

ASME held Resolving the Challenges of Power Plant Cycling on June 25, in Orlando. In the program, industry experts from 47 companies – among them Siemens Energy, Duke Energy, and American Electric Power – examined the impact of increased cycling on equipment reliability and also explored best practices to mitigate component failure and control costs. The Society has identified pressure technology and clean energy as two of its five technology priorities, reflecting a strong commitment to the needs of power plant operators.

The Robotics for Inspection and Maintenance Forum, held June 26–27 in Houston, shed light on the growing role of applying robotic technology to enhance inspections and other tasks in industrial facilities, including oil and gas pipeline and power generation. Fifty-three organizations were represented in the two-day event, which included case studies and demonstration sessions. In holding these events, the Society has positioned itself and the importance of engineering front and center in technical areas that will be important to industries now and in the future.





# ASME E-Fests Bring Out the Best of the Engineering Experience

ASME continues to impact the lives of engineering students around the world by inspiring the next generation of engineers through ASME E-Fests (Engineering Festivals) — a series of regional three-day, two-night events aimed at bringing compelling competitions, networking opportunities, and other interactive activities to engineering students.

Having concluded its second successful year in 2018, ASME E-Fests combine creative learning opportunities around ASME competitions, hands-on workshops, career and professional development sessions, keynote events, and social activities — all while communicating the excitement of engineering.

This year, more than 3,000 attendees participated in four regional events — E-Fest Asia Pacific in Delhi, India; E-Fest West in Pomona, Calif.; ASME E-Fest East held in State College, Pa.; and the inaugural ASME E-Fest South America, which took place in Rio de Janeiro, Brazil.

“As a freshman in college, becoming a part of the Cal Poly Pomona ASME E-Fest West planning committee was not only an eye-opening experience but also a growing one. Not only did this festival give me a glimpse into what I would be doing at school the next few years, it also bonded me with some brilliant mechanical engineering students,” said Trisha Satish, ASME E-Fest West committee member.

In addition to a host of social activities and workshops, ASME E-Fests center around competitions where students can showcase their engineering skills. ASME student competitions include the Human Powered Vehicle Challenge (HPVC), where students demonstrate the application of engineering design principles in the development of sustainable and practical transportation alternatives; the Student Design Competition which provides a platform for ASME student members to present their solutions for a range of design challenges utilizing robotics; and the Old Guard Oral and Poster Presentations, a competition that emphasizes the value in delivering clear, concise, and effective oral and poster presentations and answering questions pertaining to the students’ engineering research or project. An additional CAD Battle was featured this year to showcase students’ 3D and computer-aided design skills.

“My passion lies in the automotive industry and through HPVC I got the opportunity to understand how each vehicle worked and the different ways the vehicles were safe or unsafe for the competition,” said Mirza Wali Ali Baig, a member of the ASME E-Fest West leadership program. “The staff responsible for the safety checks were engineers in the industry, and learning from their experiences gave me a better knowledge of how the industry works.”

**ASME is paving the way for student engineers to succeed in both their educational and professional goals through ASME E-Fests, and plans are underway for another fun and exciting season of engineering challenges.**



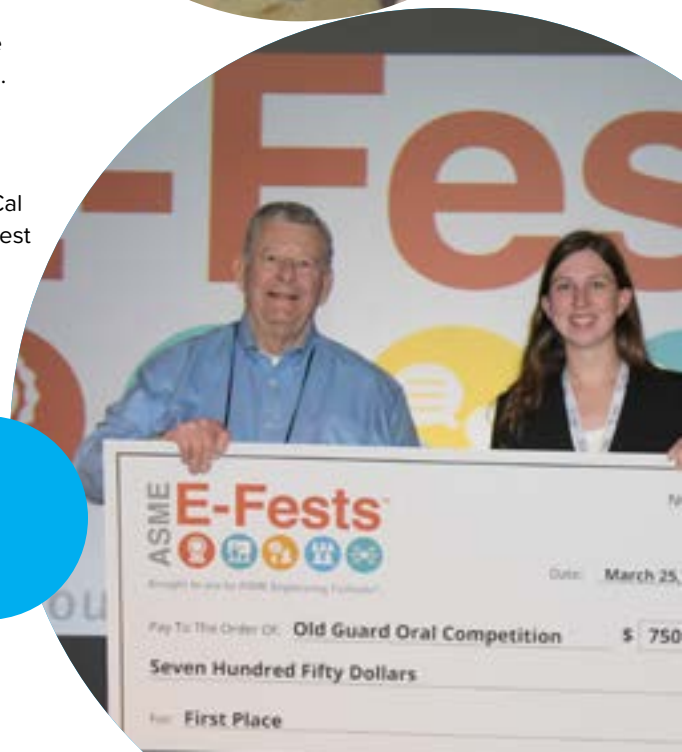


At the inaugural ASME-Fest South America, students were offered a variety of skills development and training opportunities, including ASME Standards & Certification mini-courses; sessions by industry leaders including petroleum company Petrobras on offshore wind energy initiatives; engineering and data acquisitions sponsored by National Instruments; and a 3D printing seminar offered by Radix, among other industry presentations.

“It was very important for us to come here because we wanted to show everybody, the entire world, that we could do it,” said Leonardo Gonzalez, a member of the team from the Universidad del Zulia in Venezuela, whose team spent five days traveling to Rio for the HPVC event amid numerous logistical challenges. “It was a great experience.”

ASME is paving the way for student engineers to succeed in both their educational and professional goals through ASME E-Fests, and plans are underway for another fun and exciting season of engineering challenges.

“The 2018 ASME E-Fest West was by far one of the most challenging experiences in my college career,” said Isabel Gutierrez, a fourth-year mechanical engineering student and president of the ASME Chapter at Cal Poly Pomona. “I will never forget the most important thing that ASME E-Fest West taught me: love what you do and have fun!”



ASME E-Fests  
Brought to you by ASME Engineering Education  
 Date: March 25, 2018  
 Pay To The Order Of: Old Guard Oral Competition \$ 750.00  
 Seven Hundred Fifty Dollars  
 For: First Place



# E4C Research Fellows: Early Career Engineers Dedicated to Social Impact

With an aim toward creating opportunities that prepare future generations of engineering professionals to be committed to developing sustainable solutions, Engineering for Change (E4C), of which ASME is a founding partner, welcomed an international cohort of 16 diverse and multidisciplinary early career engineers as E4C's Research Fellows.

An international community of 1.1 million engineers for social good, Engineering for Change hosts the most comprehensive and codified library of technological solutions designed for resource-constrained communities via the E4C Solutions Library. E4C Research Fellows deepen their understanding of development engineering through research, analysis, and engagement with the E4C community while investigating products presented in the library.

**Investigating technologies and synthesizing findings for peer review, the efforts of E4C Research Fellows advance knowledge resources for designers, manufacturers and implementers of essential technologies.**

This work is vital to keeping the visual and data-rich E4C Solutions Library ever-evolving as a searchable database of hundreds of affordable and innovative technologies designed to improve the quality of life of people-in-need worldwide.

The 2018 E4C Research Fellows include (L to R) Marina Diez Arrizabalaga-Energy/Spain; Radhika Mundra-Water/India; Harsh Vyas-Agriculture/India; Victor Gimenez-ITC/Spain-UK; Ignatius Waikwa-Energy/Kenya; and Elisabeth van Overbeeke-Expert Fellow/Canada.







Carola Schwank (right) of Siemens Stiftung, who was recognized with the award in the “Corporate Philanthropy Advancing the Sustainable Development Goals (SDGs)” category, was joined onstage by Iana Aranda, president of Engineering for Change.

**IMPACT.  
ENGINEERED**

# Impact.Engineered Celebrates Contributions of Engineers to UN’s Sustainable Development Goals

Designed to shine a spotlight the innovations of industry, engineers, and entrepreneurs striving for social impact in underserved communities the world over, ASME and Engineering for Change teamed up to host the inaugural “Impact.Engineered: Live Forum and Awards” at the Center for Social Innovation in New York City.

Approximately 100 engineers, scientists, entrepreneurs, and makers from the public and private sectors attended the one-day forum in October 2017, which focused on the future of engineering and highlighted the work of individuals and organizations that have consistently demonstrated a commitment to innovation, quality, rigor, sustainability, and social impact.

In addition to an awards presentation that honored work by DREV, Ericsson, Mozilla, Siemens, and Google, Impact.Engineered included opportunities for attendees to connect with representatives from social enterprises, impact design firms, and leading engineering firms, and to take part in workshops exploring the supply chains, ISHOW’s design and engineering review process, the E4C Solutions Library, and intellectual property rights.

A wide range of presenters from GE Healthcare, Tesla, Johnson & Johnson, the United Nations Development Programme, MIT, and Caterpillar focused on the standards ecosystem for social impact, global innovation flows, and 2050 breakthrough engineering trends.

# FY2018

# ASME Year in Review

## July 2017

On July 25, more than 120 Congressional staff and industry stakeholders met in Washington, D.C., for an ASME-sponsored Congressional Briefing focusing on the U.S. Department of Defense's Manufacturing Engineering Education Grant Program. A panel discussion hosted by the House and Senate Manufacturing Caucuses featured a group of subject matter experts who discussed how the grant program will help strengthen the U.S. economy and national security while safeguarding the competitiveness of the U.S. manufacturing sector. ASME President-Nominee Said Jahanmir (far right) welcomed attendees to the session.



## January 2018

ASME Press issued the fifth edition of the classic reference manual *Companion Guide to the ASME Boiler & Pressure Vessel Codes*. The two-volume set, which was edited by K.R. Rao, was completely updated to address the 2015 Boiler & Pressure Vessel Code, as well as topics pertinent to the most recent edition of the Boiler & Pressure Vessel Code, which was released in 2017. First published in 2001 and regularly updated through five editions, the *Companion Guide* is recognized as an authoritative reference work that supports ASME's standards publications for the benefit of the worldwide engineering community.

## August 2017

Richard Rosenberg, P.E., a longtime member of ASME and former president of the Society, passed away on Aug. 26 at the age of 90. Rosenberg, a resident of San Diego, Calif., served as the 106th president of ASME from 1987 to 1988 and was an active member of ASME for nearly 60 years. He served as a member of the Board of Governors from 1982 to 1984, was an Honorary Member of ASME, and a recipient of the ASME Dedicated Service Award. Rosenberg also served on the ASME Foundation's board of directors and chaired the Society's Committee on Legal Affairs.



## February 2018

On Feb. 21, the ASME History & Heritage Committee designated its 265th landmark – the Single Crystal Turbine Blade – at a ceremony held at the New England Air Museum in Windsor Locks, Conn. The blade is credited with improving jet engine efficiency, lowering emissions, and extending time intervals between engine repairs. The event was attended by a number of Pratt & Whitney personnel, former employees, including ASME Past President Bill Weiblen, and friends of the museum. ASME Past President Richard (Gene) Feigel (photo left) presented the bronze landmark plaque to Frank Preli, chief engineer of Materials and Processes Engineering at Pratt & Whitney.

## September 2017

ASME sections took part in the "Put-A-Smile" project, aimed at bringing some much-needed cheer to children affected by the storms that devastated Texas, Florida, and Puerto Rico. The project was launched by several ASME leaders and members from the Orange County, Santa Clara Valley, and Los Angeles Sections after seeing the destruction caused by Hurricane Harvey in Houston. Packages filled with trail mix, chocolate lollipops, and fidget spinners were assembled and distributed to children in the affected areas.



## March 2018

In addition to the competitions and festivities at ASME E-Fest West, held March 23–25 in Pomona, Calif., the student participants enjoyed a special keynote luncheon, "Bringing Disney Magic to Families and Fans Through Technology," featuring three representatives from Disney Consumer Products and Interactive Media: Kathy de Paolo, vice president of engineering; Mike Goslin, DCPI's vice president of advanced development; and Nikki Katz, vice president of technology. During the presentation, the executives discussed their experiences as engineers working at Disney, opportunities for women in the engineering field, and the latest trends in engineering including social engineering.

## October 2017

ASME convened a two-day workshop and briefing in Washington, D.C., on *Realizing Gas Turbine Performance Goals through Advanced Manufacturing*. The events explored technology development in gas turbine industrial sectors and how public-private partnerships like Manufacturing USA are enabling manufacturers to create jobs and achieve technology goals, all while supporting overall U.S. public policy priorities in energy, transportation, and national security. The event, held Oct. 17–18, brought together leaders from a wide variety of industrial sectors and related organizations.



## April 2018

ASME President Charla Wise welcomed leaders of the engineering community to the 2018 Engineering Public Policy Symposium held April 24 in Washington, D.C. More than 150 leaders were in attendance, including presidents, presidents-elect, and executive directors from 45 professional engineering societies representing more than two million engineers. The focus of this year's symposium was on U.S. policy priorities pertaining to "Federal Investments in Engineering and Science to Spur Innovation and Competitiveness." The keynote speaker was Walter G. Copan, Ph.D., Under Secretary of Commerce for Standards and Technology and Director of the National Institute of Standards and Technology.

## November 2017

Chuck Hull, who is widely considered to be the inventor of 3D printing, delivered the opening keynote at the ASME 2017 International Mechanical Engineering Congress and Exposition in Tampa, Fla., on Nov. 6. Hull discussed what he believes is an important frontier for advanced manufacturing — regenerative medicine. He described the arc of 3D printing from that first machine to the thousands of applications for 3D printing today, especially in the automotive industry, in aerospace, and in healthcare.



## May 2018

Thomas Costabile, P.E., was named executive director of ASME. Costabile, a mechanical engineer and seasoned industry executive, will work to guide the Society's programs in codes and standards development, membership, conferences, technical publishing, education and professional development, and public policy. He will also lead ASME's organizational strategy focused on the creation of products, services, and programs around the Society's initial five key technologies — manufacturing, bioengineering, robotics, clean energy, and pressure technology. Costabile received his B.S.M.E. from Manhattan College and an M.B.A. in finance from Long Island University.

## December 2017

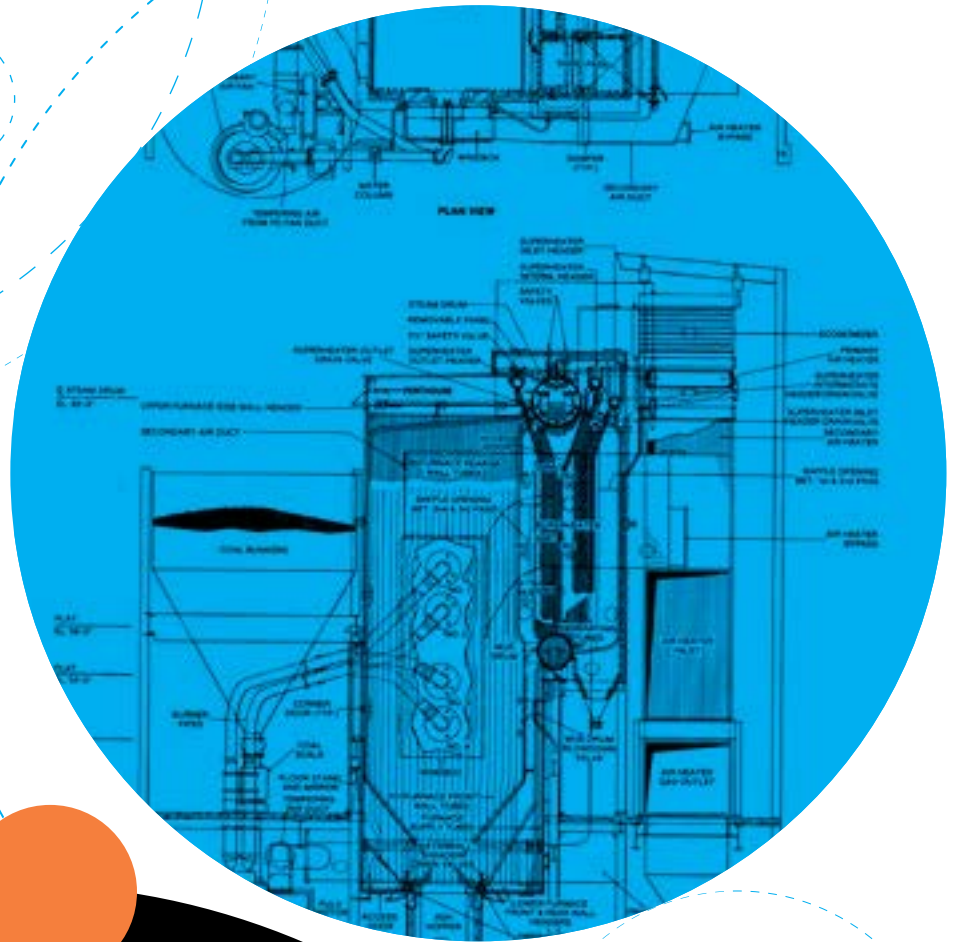
Five cutting-edge innovators and their breakthrough technologies were selected as the winners of *Mechanical Engineering* magazine's inaugural Emerging Technology Awards. Each of the five innovators in the categories of manufacturing (Siemens), robotics (Mobileye), bioengineering (MIT Media Lab), clean energy (Tesla Motors), and pressure technology (Babcock & Wilcox) were featured in the December 2017 issue of *Mechanical Engineering* and on [ASME.org](http://ASME.org). The awards reflect the five core technology areas that ASME has identified as key fields for the Society to focus on as it develops new products and programs going forward.



## June 2018

Said Jahanmir, Ph.D., was introduced as the 137th president of ASME during the Society's 2018 Annual Meeting held in Vancouver, B.C. Dr. Jahanmir has been active in ASME since 1985. His many years of service to the Society have given him a deep understanding and appreciation for the goals and mission of ASME. His professional career, which includes service in academia, the private sector, and government, has given him a unique understanding of the needs of ASME members and other engineering professionals. He currently serves as assistant director for federal partnerships, Advanced Manufacturing Program Office at the U.S. National Institute of Standards Technology.





# Financials

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# Treasurer's Report ASME

I am pleased to present the fiscal year 2018 audited financial reports of ASME. These reports indicate that the overall financial health of the Society continues to be strong and ASME is poised to continue delivering value and achieving its strategic objectives.

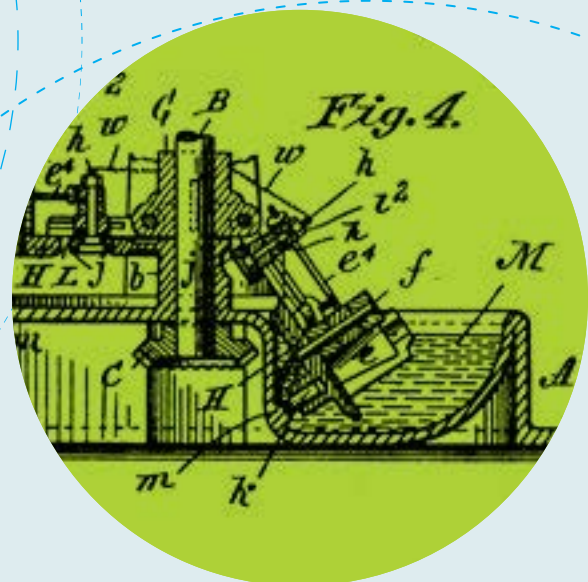
ASME revenues from operations were \$117.7 million in fiscal year 2018, an increase of \$8.2 million over fiscal year 2017. This increased revenue was used to invest in the enterprise strategy, as well as maximize ASME's impact, future growth, and relevance. Continued favorable market conditions allowed our investment portfolio to grow by \$9.4 million. There were also favorable adjustments of \$1.8 million for nonoperating charges related to pension and post-retirement costs. As a result, there was an aggregate increase in net assets of \$9.6 million. The portion affecting the ASME General Fund was an increase of \$11.1 million.

ASME's Statements of Financial Position present total assets of \$180.3 million as of June 30, 2018. This reflects a 4.2% increase from 2017. Total liabilities decreased 3.1% over the same period. The increase in assets is mostly attributed to the appreciation in the marketable investments. The decrease in liabilities is primarily due to the lower accrued employee benefits resulting from continued contributions to the ASME Defined Benefit Pension Plan. Overall, ASME's net assets ended at \$108.4 million, 9.7% higher than 2017.

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.

James W. Coaker  
ASME Treasurer, FY18





## **To 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, 2018 and 2017, 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 Consolidated Financial Statements**

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with U.S. generally accepted accounting principles; 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, 2018 and 2017, and the changes in its net assets and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

**KPMG LLP**

September 18, 2018



# THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

JUNE 30, 2018 AND 2017

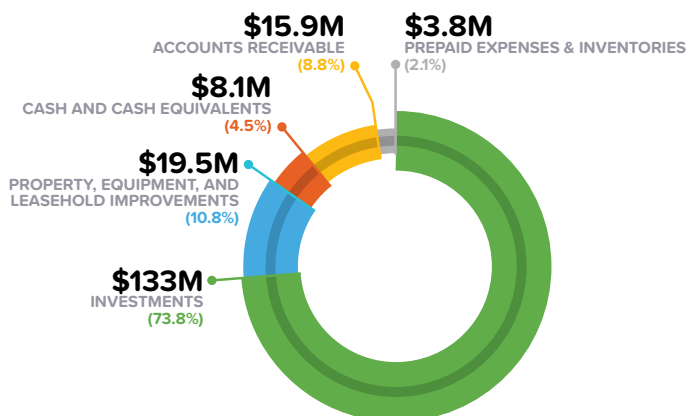


ASSETS	GENERAL	DESIGNATED AND RESTRICTED	CONSOLIDATING ADJUSTMENTS	2018 TOTAL	2017 TOTAL
Cash and cash equivalents (note 13)	\$ 3,238,164	4,851,848	—	8,090,012	12,028,869
Accounts receivable, less allowance for doubtful accounts of \$226,000 in 2018 and \$278,000 in 2017 (note 13)	25,495,231	693,234	(10,332,226)	15,856,239	13,886,295
Due from The ASME Foundation, Inc. (note 3)	—	—	—	—	279,289
Inventories	656,976	—	—	656,976	539,608
Prepaid expenses, deferred charges, and deposits	3,064,439	45,271	—	3,109,710	4,131,475
Investments (note 4)	108,218,275	24,829,489	—	133,047,764	123,392,172
Property, furniture, equipment, and leasehold improvements, net (note 5)	19,491,151	49,307	—	19,540,458	18,745,330
<b>Total assets</b>	<b>\$ 160,164,236</b>	<b>30,469,149</b>	<b>(10,332,226)</b>	<b>180,301,159</b>	<b>173,003,038</b>
<b>LIABILITIES AND NET ASSETS</b>					
Liabilities:					
Accounts payable and accrued expenses	\$ 11,085,213	9,555,197	(10,232,226)	10,408,184	9,217,347
Due to The ASME Foundation, Inc. (note 3)	63,364	—	—	63,364	—
Accrued employee benefits (notes 7 and 8)	17,415,567	—	—	17,415,567	29,331,599
Deferred publications revenue	11,332,346	—	—	11,332,346	470,043
Deferred dues revenue	2,339,030	—	—	2,339,030	2,770,615
Accreditation and other deferred revenue	19,743,323	77,856	—	19,821,179	21,221,521
Deferred rent (note 11)	10,539,157	—	—	10,539,157	11,181,078
<b>Total liabilities</b>	<b>72,518,000</b>	<b>9,633,053</b>	<b>(10,232,226)</b>	<b>71,918,827</b>	<b>74,192,203</b>
Commitments (notes 5, 11, and 12)					
Net assets:					
Unrestricted	87,646,236	20,337,309	(100,000)	107,883,545	98,307,457
Temporarily restricted (notes 9 and 10)	—	362,220	—	362,220	366,811
Permanently restricted (notes 9 and 10)	—	136,567	—	136,567	136,567
<b>Total net assets</b>	<b>87,646,236</b>	<b>20,836,096</b>	<b>(100,000)</b>	<b>108,382,332</b>	<b>98,810,835</b>
<b>Total liabilities and net assets</b>	<b>\$ 160,164,236</b>	<b>30,469,149</b>	<b>(10,332,226)</b>	<b>180,301,159</b>	<b>173,003,038</b>

See accompanying notes to consolidated financial statements.

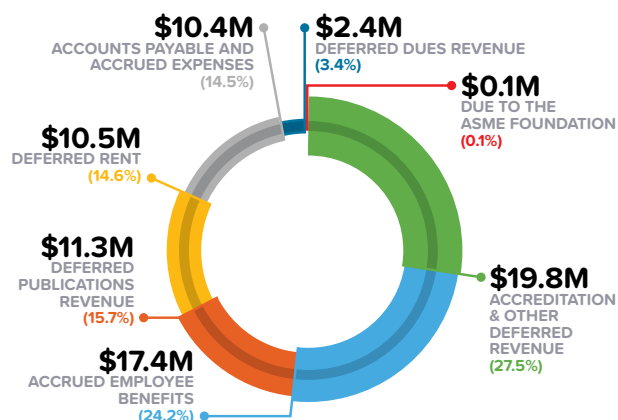
## Total Assets of \$180.3 Million

(ASME Consolidated Statements of Financial Position June 30, 2018)



## Total Liabilities of \$71.9 Million

(ASME Consolidated Statements of Financial Position June 30, 2018)



**THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS**  
**CONSOLIDATED STATEMENTS OF ACTIVITIES**  
 YEARS ENDED JUNE 30, 2018 AND 2017

	GENERAL	DESIGNATED AND RESTRICTED (NOTES 9 AND 10)	CONSOLIDATING ADJUSTMENTS	2018 TOTAL	2017 TOTAL
Operating revenue (note 6):					
Membership dues, publications, accreditation, conference fees and other revenue by sector/operating unit:					
Codes and standards	\$ 41,665,213	783,936	(725,968)	41,723,181	35,015,812
Conformity assessment	30,743,549	4,342	—	30,747,891	32,521,461
Learning and development	6,289,540	—	—	6,289,540	5,306,029
Programs	758,112	641,448	(615,270)	784,290	947,832
Technical events and content	10,495,960	18,963	—	10,514,923	9,897,058
Publications	13,006,810	—	—	13,006,810	12,186,730
Constituent engagement	13,840,050	610,544	(17,136)	14,433,458	13,145,915
Miscellaneous revenue	463,814	269,092	(533,754)	199,152	434,817
<b>Total operating revenue</b>	<b>117,263,048</b>	<b>2,328,325</b>	<b>(1,892,128)</b>	<b>117,699,245</b>	<b>109,455,654</b>
Operating expenses:					
Program services by sector/operating unit:					
Codes and standards	17,779,065	1,087,624	(681,428)	18,185,261	17,323,573
Conformity assessment	18,312,990	114,634	(310,234)	18,117,390	18,365,676
Learning and development	6,955,477	—	—	6,955,477	6,439,123
Programs (note 3)	7,076,531	1,004,241	(615,270)	7,465,502	6,081,416
Technical events and content	12,025,117	1,248,299	—	13,273,416	13,125,199
Publications	11,704,697	—	—	11,704,697	11,769,245
New product development	601,026	—	—	601,026	—
Technology advancement and business development	4,817,785	—	—	4,817,785	4,471,940
Constituent engagement	7,887,552	1,648,441	(17,136)	9,518,857	8,796,466
<b>Total program services</b>	<b>87,160,240</b>	<b>5,103,239</b>	<b>(1,624,068)</b>	<b>90,639,411</b>	<b>86,372,638</b>
Supporting services:					
Board of governors and committees	727,442	55,580	—	783,022	837,497
Marketing	4,671,489	230,731	—	4,902,220	3,616,790
Sales and customer care	2,371,874	—	(268,060)	2,103,814	1,542,560
General administration (note 3)	20,924,402	—	—	20,924,402	19,394,126
<b>Total supporting services</b>	<b>28,695,207</b>	<b>286,311</b>	<b>(268,060)</b>	<b>28,713,458</b>	<b>25,390,973</b>
<b>Total operating expenses</b>	<b>115,855,447</b>	<b>5,389,550</b>	<b>(1,892,128)</b>	<b>119,352,869</b>	<b>111,763,611</b>
<b>Surplus (deficit) of operating revenue over expenses</b>	<b>1,407,601</b>	<b>(3,061,225)</b>	<b>—</b>	<b>(1,653,624)</b>	<b>(2,307,957)</b>
Nonoperating activities:					
Interest and dividends, net of investment fees of \$313,040 in 2018 and \$231,487 in 2017	1,675,837	303,701	—	1,979,538	1,793,074
Realized and unrealized gain on investments (note 4)	6,184,436	1,226,636	—	7,411,072	11,150,506
Pension and post-retirement changes other than net periodic costs (notes 7 and 8)	2,596,937	—	—	2,596,937	1,669,789
Other components of net periodic costs (notes 7 and 8)	(762,426)	—	—	(762,426)	(2,469,795)
<b>Increase (decrease) in net assets (note 9)</b>	<b>11,102,385</b>	<b>(1,530,888)</b>	<b>—</b>	<b>9,571,497</b>	<b>9,835,617</b>
Net assets at beginning of year	76,543,851	22,366,984	(100,000)	98,810,835	88,975,218
Net assets at end of year	\$ 87,646,236	20,836,096	(100,000)	108,382,332	98,810,835

See accompanying notes to consolidated financial statements.

**THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
 YEARS ENDED JUNE 30, 2018 AND 2017



	2018	2017
Cash flows from operating activities:		
Increase in net assets	\$ 9,571,497	9,835,617
Adjustments to reconcile increase in net assets to net cash provided by (used in) operating activities:		
Depreciation and amortization	5,073,954	5,600,951
Loss on disposal of fixed assets	32,182	—
Realized and unrealized gain on investments	(7,411,072)	(11,150,506)
Bad debt recovery	(52,015)	(500)
Pension and post-retirement changes other than net periodic costs	(2,596,937)	(1,669,789)
Changes in operating assets and liabilities:		
Accounts receivable	(1,917,929)	2,895,221
Due from The ASME Foundation, Inc.	279,289	88,478
Inventories	(117,368)	13,594
Prepaid expenses, deferred charges, and deposits	1,150,193	(1,032,242)
Accounts payable and accrued expenses	438,976	(748,994)
Due to The ASME Foundation, Inc.	63,364	—
Accrued employee benefits	(9,319,095)	(4,179,336)
Deferred publications revenue	10,862,303	(9,608,175)
Deferred dues revenue	(431,585)	(285,138)
Accreditation and other deferred	(1,400,342)	297,153
Deferred rent	(641,921)	(502,298)
<b>Net cash provided by (used in) operating activities</b>	<b>3,583,494</b>	<b>(10,445,964)</b>
Cash flows from investing activities:		
Purchases of investments	(18,823,478)	(39,867,382)
Proceeds from sales of investments	16,450,530	52,753,323
Acquisition of fixed assets	(5,149,403)	(866,831)
<b>Net cash (used in) provided by investing activities</b>	<b>(7,522,351)</b>	<b>12,019,110</b>
<b>Net (decrease) increase in cash and cash equivalents</b>	<b>(3,938,857)</b>	<b>1,573,146</b>
Cash and cash equivalents at beginning of year	12,028,869	10,455,723
Cash and cash equivalents at end of year	<b>\$ 8,090,012</b>	<b>12,028,869</b>
Supplemental disclosure for cash flow information:		
Increase in amounts accrued for fixed assets	\$ 751,861	—

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) and one foreign corporate entity that are consolidated into the Society's financial statements. These are ASME Innovative Technologies Institute (ITI) LLC, ASME Standards Technology (ST) LLC, ASME Asia Pacific (AP) LLC, Engineering for Change (E4C) LLC, ASME East Asia Holding LLC (EAH), ASME India Private LTD (India) and Personnel Certifications, LLC (PCLLC). 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. EAH is a shareholder of India. India promotes awareness and use of the broad array of ASME products and services in the growing India market. PCLLC enables individuals to achieve certifications to bring back to their sponsoring organization to provide best-practices. 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 the Society's non-domestic 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 donor-imposed 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.

(Continued)

### **(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 2017 Boiler Code was released in July 2017.

**Conformity Assessment** – Revenue includes accreditation program fees. All accreditation revenues are recognized in the period that the accreditation process is completed and certificates and/or stamps are issued. Expenses are recognized as they are incurred.

**Learning and Development** – Revenue includes registration fees for and publication sales related to continuing education courses provided by the Society. Revenues are recognized in the period the program is held. Expenses are recognized as they are incurred.

**Programs** – Revenue is composed principally of Foundation and government grants, conferences 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.

**Technical Events and Content (TEC)** – TEC revenue is composed principally of registration fees from meetings, conferences, exhibits and tours, and workshop fees at the Society's technical division conferences and meetings. All fees are recognized in the period the programs are held. Expenses associated with these activities are recognized as they are incurred.

**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.

### **Technology Advancement and Business Development** –

Revenue includes incremental revenues associated with new technologies and business opportunities. The revenue amounts to \$68,977 and \$135,085 for the years ended June 30, 2018 and 2017, respectively, and is included in miscellaneous revenue in the 2018 and 2017 consolidated statements of activities. Expenses relate to the Society's mission to 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.

**Constituent Engagement** – 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**

The Society determined that an allowance for uncollectible accounts is necessary for accounts receivable as of June 30, 2018 and 2017 in the amount of \$226,000 and \$278,000, 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.

(Continued)

### **(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) 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 post-retirement changes. All other activities are classified as operating.

### **(j) Designated Funds**

The Designated Funds are primarily made up of the ASME Development Fund, the ASME Custodial Funds, ITI, ST, AP, EAH, E4C, India, and the PCLLC 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 domestic division and section funds. These funds are used by domestic divisions and sections of the Society to support engineering discipline specific programs and local engineering programs.

### **(k) 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, 2018 or 2017.

### **(l) Functional Expenses**

The costs of providing the various programs and other activities of the Society have been summarized on a functional basis in the consolidated statements of activities. Accordingly, certain costs have been allocated among program services and supporting services.

### **(m) 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 consolidated financial statements and the reported amounts of revenue, expenses, and other changes in net assets during the reported period. Significant estimates include the allowance for doubtful accounts, the valuation of investments and the assumptions used to account for pension and postretirement obligations. Actual results could differ from those estimates.

### **(n) New Accounting Pronouncements**

In fiscal 2018, the Society adopted the provisions of Financial Accounting Standards Board (FASB) Accounting Standards Update (ASU) No. 2017-07, *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. The provisions of this update require that an employer report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit cost are required to be presented in the consolidated statement of activities separately from the service cost component and outside a subtotal of income from operations. The Society adopted the provisions of this update in fiscal year 2018 and applied the provisions retrospectively to fiscal year 2017. As a result, the Society reclassified \$2,469,795 of the other components of net benefit cost from operating expenses to other components of net periodic costs in nonoperating activities in the 2017 consolidated statement of activities.

(Continued)



The FASB issued ASU 2016-14, *Presentation of Financial Statements of Not-for-Profit Entities*, which among other things, changes how not-for-profit entities report net asset classes, expenses and liquidity in their financial statements. The significant requirements of the new ASU include the reduction of the number of net asset classes from three to two: with donor restrictions and without donor restrictions; the presentation of expenses by their function and their natural classification in one location; quantitative and qualitative information about the management of liquid resources and the availability of financial assets to meet cash needs within one year of the date of the statement of financial position; and retaining the option to present operating cash flows in the statement of cash flows using either the direct or indirect method. The Society plans to adopt ASU 2016-14 for the year ending June 30, 2019.

The FASB issued ASU 2014-09, *Revenue from Contracts with Customers*, which introduced a five-step model and related application guidance, which replaces most existing revenue recognition guidance in U.S. generally accepted accounting principles. The core principle of this standard is that an entity shall recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The Society plans to adopt ASU 2014-09 for the year ending June 30, 2020.

### **(o) Reclassifications**

There were reclassifications made to certain 2017 amounts to conform with the current year presentation.

## **(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 support services. In fiscal years 2018 and 2017, such charges totaled \$365,699 and \$251,614, respectively, which represent the costs of these charges and services and are recorded in general administration expense in the consolidated statements of activities.

In fiscal years 2018 and 2017, the Foundation made total contributions of approximately \$98,000 and \$188,000, respectively, to the Society in support of ISHOW and Engineering for Change (E4C) and is included in programs revenue. In fiscal years 2018 and 2017, the Society contributed \$4,105,637 and \$538,250, respectively, for award programs to the Foundation and recorded the contributions in program and general administration expenses in the consolidated statements of activities.

Additionally, the Society pays invoices to third parties where the invoices include services for both the Society and the Foundation. At June 30, 2017, the Society recorded an amount due from the Foundation in the amount of \$279,289, for amounts paid on behalf of the Foundation. At June 30, 2018, the Society recorded an amount due to the Foundation in the amount of \$63,364, for amounts owed to the Foundation which include contributions received by ASME 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 2018 and 2017, such charges totaled \$32,892 and \$30,506, 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. Financial Accounting Standards Board (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 Accounting Standards Codification (ASC) Topic 820 are described below:

- Level 1:** Unadjusted quoted prices or published net asset value for funds with characteristics similar to a mutual fund 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.

(Continued)

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, 2018 and 2017:

#### 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 or published 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, 2018 and 2017:

	2018	2017
Common stock:		
U.S. large cap	\$ 15,697,656	13,996,690
Equity – mutual funds:		
Large blend	32,869,626	28,748,967
Foreign large blend	23,518,162	21,938,784
Small blend	7,469,286	6,412,336
Aggressive allocation	1,598,933	2,311,523
Energy	3,067,982	2,517,095
Natural resources	935,693	814,266
Mutual funds – bonds and fixed income	49,126,700	47,779,716
Money market funds	264,350	354,496
<b>Total portfolio</b>	<b>134,548,388</b>	<b>124,873,873</b>
Less:		
Undivided interest held on behalf of the Auxiliary	1,500,624	1,481,701
<b>Total ASME</b>	<b>\$ 133,047,764</b>	<b>123,392,172</b>

Realized and unrealized gain on investments for the years ended June 30, 2018 and 2017 consists of the following:

	2018	2017
Realized gain on investment transactions	\$ 1,055,937	3,587,114
Unrealized gain	6,355,135	7,563,392
	<b>\$ 7,411,072</b>	<b>11,150,506</b>

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

Property, furniture, equipment, and leasehold improvements at June 30, 2018 and 2017 consist of the following:

	2018	2017
Computer equipment	\$ 45,763,484	40,137,992
Leasehold improvements	15,872,786	15,805,090
Furniture and fixtures	4,391,834	4,555,277
Others	53,242	53,242
	<b>66,081,346</b>	<b>60,551,601</b>
Less accumulated depreciation and amortization	(46,540,888)	(41,806,271)
	<b>\$ 19,540,458</b>	<b>18,745,330</b>

Construction in progress of approximately \$4,545,000 and \$674,000 is included in the computer equipment category at June 30, 2018 and 2017, respectively. These amounts include costs associated with projects to improve the Society's infrastructure and software platforms relating to reporting financial results, customer-facing applications and the ASME website. Such improvements include gaining efficiencies and additional capabilities through the replacement of outdated, legacy software applications, much of which is being developed through the partnership of subject matter experts within the Society and technical counterparts. The estimated cost to complete these projects at various dates through May 2021 is approximately \$7,569,000.

Depreciation and amortization expense amounted to \$5,073,954 and \$5,600,951 for the years ended June 30, 2018 and 2017, respectively. During the years ended June 30, 2018 and 2017, ASME wrote off property and equipment amounting to \$371,520 and \$3,630,879, 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, 2018 and 2017, summarized by type:

	2018	2017
Membership dues	\$ 7,011,045	7,346,105
Codes and standards and technical publication revenue	54,491,161	47,202,542
Accreditation revenue	30,732,364	32,521,461
Conferences, exhibits, and course fees	19,610,216	17,564,128
Other operating revenue	5,662,505	4,521,687
Miscellaneous	191,954	299,731
	<b>\$ 117,699,245</b>	<b>109,455,654</b>

**(7) Pension Plans**  
**(a) Defined Benefit Pension Plan**

The Society has a noncontributory defined benefit pension plan (the Plan) covering employees hired prior to January 1, 2006. The Plan was closed to new entrants effective December 31, 2005. 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.

The funded status reported in the consolidated statements of financial position as of June 30, 2018 and 2017 was measured as the difference between fair value of plan assets and the benefit obligation on a plan-by-plan basis.

The following table provides information with respect to the Plan as of and for the years ended June 30, 2018 and 2017:

	<b>2018</b>	<b>2017</b>
Benefit obligation at June 30	\$ (71,579,760)	(77,081,267)
Fair value of plan assets at June 30	62,216,943	57,548,119
<b>Funded status</b>	<b>\$ (9,362,817)</b>	<b>(19,533,148)</b>
Amounts recognized in the consolidated financial statements:		
Accrued employee benefits	\$ 9,362,817	19,533,148
Service cost	(366,823)	(1,316,737)
Other net periodic benefit costs	531,222	263,098
Settlement loss	(1,336,784)	(2,163,261)
Employer contributions	9,000,000	6,000,000
Benefits paid	(5,457,500)	(7,585,974)
Weighted average assumptions used to determine benefit obligations at June 30:		
Discount rate	4.42 %	3.98 %
Rate of compensation increase	N/A	3.50
Weighted average assumptions used to determine net periodic benefit cost for the years ended June 30, 2018 and 2017:		
Discount rate	3.98 %	3.78 %
Expected return on plan assets	6.50	6.50
Rate of compensation increase	N/A	N/A

The accumulated benefit obligation for the Plan was \$71,579,760 and \$77,081,267 at June 30, 2018 and 2017, respectively.

Other changes in plan assets and benefit obligations recognized in the change in unrestricted net assets for the years ended June 30, 2018 and 2017 are as follows:

	<b>2018</b>	<b>2017</b>
Net gain (loss)	\$ 327,750	(1,787,070)
Amortization of net actuarial loss	678,182	693,517
Effect of settlement/curtailment on net actuarial loss	1,336,784	2,163,261
<b>Net amount recognized in change in unrestricted net assets</b>	<b>\$ 2,342,716</b>	<b>1,069,708</b>

Amounts that have not been recognized as components of other net periodic benefit cost but included in unrestricted net assets to date as of June 30, 2018 and 2017 are as follows:

	<b>2018</b>	<b>2017</b>
Net actuarial loss	\$ 25,127,641	27,470,357

Amounts in unrestricted net assets and expected to be recognized as components of other net periodic benefit cost in fiscal year 2019 are as follows:

Net loss	\$ 632,512
----------	------------

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

	<b>AMOUNT</b>
Year(s) ending June 30:	
2019	\$ 4,018,292
2020	4,516,080
2021	4,229,418
2022	4,296,030
2023	4,359,805
2024 – 2028	22,890,769

On June 6, 2016, the Society adopted a resolution to freeze the Plan prior to December 31, 2016. During 2018 and 2017, Plan participants requested lump sum payments exceeding the sum of service cost and interest cost. As a result of the above action, the projected benefit obligation decreased by \$3,808,024 and \$6,070,066 in 2018 and 2017, respectively. A settlement loss of \$1,336,784 and \$2,163,261 is recognized in other components of net periodic costs in the 2018 and 2017 consolidated statements of activities, respectively.

(Continued)



The following table presents the Plan's assets measured at fair value as of June 30, 2018 and 2017. At June 30, 2018 and 2017, the assets in the Plan's investment portfolio were considered Level 1.

	2018	2017
Equity – mutual funds:		
Large blend	\$ 3,428,910	12,169,862
Foreign large blend	—	6,147,234
Energy	—	2,724,080
Money market fund	5,258,854	908,022
Bonds and fixed income – mutual funds	53,529,179	35,598,921
<b>Total ASME pension plan and trust assets</b>	<b>\$ 62,216,943</b>	<b>57,548,119</b>

The following methods and assumptions were used in estimating the fair values of significant financial instruments at June 30, 2018 and 2017:

#### *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. 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, 2018 and 2017, by asset category, are as follows:

	2018	2017
Mutual funds invested in equity securities	14 %	35 %
Mutual funds invested in debt securities	86	65
	<b>100 %</b>	<b>100 %</b>

The Society expects to contribute \$10,000,000 to the Plan in fiscal year 2019.

### **(b) Benefit Restoration Plan**

In 1994, ASME initiated the ASME Benefit Restoration Plan (SERP) 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. ASME's SERP is a nonqualified, unfunded deferred compensation plan for the benefit of certain 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.

On June 6, 2016, the Society adopted a resolution to freeze the SERP prior to December 31, 2016. During 2017, the SERP was fully transitioned to a deferred compensation plan under Section 457(f) of the Internal Revenue Code, which triggered a settlement as of December 31, 2016. The obligation was remeasured at December 31, 2016 using a discount rate of 4.12%. A settlement loss of \$574,475 is recognized in other components of net periodic costs in the 2017 consolidated statement of activities. The SERP was fully liquidated in December 2017, resulting in no obligation or assets as of June 30, 2018.

Other changes in SERP assets and benefit obligations recognized in the change in unrestricted net assets for the year ended June 30, 2017 are as follows:

	2017
Net loss	\$ (99,414)
Amortization of net actuarial loss	6,190
Effect of settlement/curtailment on net actuarial loss	574,475
<b>Net amount recognized in change in unrestricted net assets</b>	<b>\$ 481,251</b>

### **(c) Defined Contributions Plans**

The Society has a qualified defined contribution plan covering all eligible full-time employees hired after December 31, 2005, which was frozen to new contributions as of December 31, 2016. Pension expense for the year ended June 30, 2017 of \$255,642.

The Society also maintained a thrift plan under Section 403(b) of the Code covering substantially all employees, which was frozen as of December 31, 2016. The Society's contribution was \$536,175 for the year ended June 30, 2017.

(Continued)

**THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
 JUNE 30, 2018 AND 2017



On January 1, 2017, the Society no longer contributed to the qualified defined contribution plan and thrift plan and began contributing to retirement plan under Section 401(k) of the Code covering substantially all employees. The 401(k) Plan is open to existing and new employees. Under the 401(k) Plan, the Society is matching contributions for employees who previously participated in the ASME Defined Benefit Pension Plan, the ASME Defined Contribution Plan and the ASME Thrift Plan, as well as newly hired employees. The Society contributed \$3,317,556 and \$1,763,119 for the years ended June 30, 2018 and 2017, respectively. These contributions were comprised of Base Match of \$1,538,305 and \$778,928, Contributing Match of \$1,038,989 and \$543,107, and Transitional Match of \$740,262 and \$441,084 for the years ended June 30, 2018 and 2017, respectively.

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

The Society provides certain life insurance and healthcare benefits to retired employees (the Postretirement Plan). The retiree life insurance benefit is noncontributory and is for a closed group of retirees who retired prior to the discontinuance of this benefit. This benefit was terminated for current employees as of July 1, 2005, and is in effect only for then-current participants. 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.

	2018	2017
Weighted average assumptions used to determine benefit obligations at June 30:		
Discount rate	4.29 %	3.60 %
Expected return on plan assets	N/A	N/A
Rate of compensation increase	3.50	3.50
Healthcare cost trends:		
Increase from current year to next fiscal year	7.50	7.00
Ultimate rate increase	4.50	5.00
Fiscal year that the ultimate rate is attained	2030	2022

Weighted average assumptions used to determine net periodic benefit cost for the years ended June 30, 2017 and 2016:		
Discount rate	3.60 %	3.24 %
Expected return on plan assets	N/A	N/A
Rate of compensation increase	3.50 %	3.50 %
Healthcare cost trends:		
Increase from current year to next fiscal year	7.00	7.50
Ultimate rate increase	5.00	5.00
Fiscal year that the ultimate rate is attained	2022	2022

The following tables provide information with respect to the postretirement benefits as of and for the years ended June 30, 2018 and 2017:

(Continued)

	2018	2017
Postretirement benefit obligation	\$ (1,995,846)	(2,270,181)
Accrued benefit recognized	(1,995,846)	(2,270,181)
Service cost	(77,603)	(82,373)
Other net periodic postretirement benefit costs	43,136	4,843
Employer contribution	54,581	47,884
Plan participants' contribution	84,070	97,613
Benefits paid	138,651	145,497

Other changes in postretirement plan assets and benefit obligations recognized in the change in unrestricted net assets for the years ended June 30, 2018 and 2017 are as follows:

	<b>2018</b>	<b>2017</b>
Net actuarial gain	\$ 280,504	145,113
Prior service credit	(26,283)	(26,283)
<b>Net amount recognized in change in unrestricted net assets</b>	<b>\$ 254,221</b>	<b>118,830</b>

Amounts that have not been recognized as components of net periodic benefit costs, but included in unrestricted net assets to date as of June 30, 2018 and 2017, are as follows:

	<b>2018</b>	<b>2017</b>
Net gain	\$ (1,277,729)	(997,225)
Prior service credit	(13,671)	(39,954)
<b>Net amount recognized in unrestricted net assets</b>	<b>\$ (1,291,400)</b>	<b>(1,037,179)</b>

Estimated amounts that will be amortized from unrestricted net assets into net periodic benefit cost in the fiscal year ending in 2019 are as follows:

	<b>2019</b>
Actuarial gain	\$ 92,624
Prior service credit	(13,672)

Healthcare cost rate trends:

1. Assumed healthcare cost trend rate for the next year	7.5 %
General description of the direction and pattern of change in the assumed trend rates thereafter	-0.25% per year to 4.5%, then 4.5% thereafter
Ultimate trend rate and when that rate is expected to be achieved	4.5 %
2. One percentage point increase:	
Effect on total service and interest cost	\$ 15,781
Effect on end of year postretirement benefit obligation	124,631
3. One percentage point decrease:	
Effect on total service and interest cost	\$ (13,605)
Effect on end of year postretirement benefit obligation	(109,875)

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

	<b>AMOUNT</b>
Year(s) ending June 30:	
2019	\$ 155,750
2020	157,112
2021	158,578
2022	156,527
2023	160,459
2024 – 2028	892,186

(Continued)



## (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, 2018 and 2017:

	2018		2017	
	TEMPORARILY RESTRICTED	PERMANENTLY RESTRICTED	TEMPORARILY RESTRICTED	PERMANENTLY RESTRICTED
Award programs	\$ 250,845	40,110	236,197	40,110
The engineering library	109,302	74,695	129,078	74,695
Membership programs	2,073	21,762	1,536	21,762
	<u>\$ 362,220</u>	<u>136,567</u>	<u>366,811</u>	<u>136,567</u>

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 2018 or 2017. Temporarily restricted activity for 2018 and 2017 is summarized below:

	2018	2017
Interest and dividends, net of investment fees	\$ 5,971	7,182
Realized and unrealized gain in fair value of investments	24,913	44,591
Net assets released from restrictions	(35,475)	(37,896)
<b>(Decrease) increase in temporarily restricted net assets</b>	<u>\$ (4,591)</u>	<u>13,877</u>

The increase in unrestricted net assets in 2018 and 2017 was \$9,576,088 and \$9,821,740, respectively.

(Continued)

## (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.

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, 2018 are as follows:

	<b>TEMPORARILY RESTRICTED</b>	<b>PERMANENTLY RESTRICTED</b>	<b>TOTAL ENDOWMENT INVESTMENTS</b>
Endowment net assets, beginning of year	\$ 366,811	136,567	503,378
Investment activities:			
Interest and dividends	5,971	—	5,971
Realized gain on investments	2,653	—	2,653
Unrealized gain on investments	22,260	—	22,260
<b>Total investment activities</b>	<b>30,884</b>	<b>—</b>	<b>30,884</b>
Amount appropriated for expenditures	(35,475)	—	(35,475)
Endowment net assets, end of year	<b>\$ 362,220</b>	<b>136,567</b>	<b>498,787</b>

Changes in endowment net assets for the year ended June 30, 2017 are as follows:

	<b>TEMPORARILY RESTRICTED</b>	<b>PERMANENTLY RESTRICTED</b>	<b>TOTAL ENDOWMENT INVESTMENTS</b>
Endowment net assets, beginning of year	\$ 352,934	136,567	489,501
Investment activities:			
Interest and dividends	7,182	—	7,182
Realized gain on investments	14,229	—	14,229
Unrealized loss on investments	30,362	—	30,362
<b>Total investment activities</b>	<b>51,773</b>	<b>—</b>	<b>51,773</b>
Amount appropriated for expenditures	(37,896)	—	(37,896)
Endowment net assets, end of year	<b>\$ 366,811</b>	<b>136,567</b>	<b>503,378</b>

Endowment net assets of \$498,787 and \$503,378 are included with investments in the consolidated statements of financial position at June 30, 2018 and 2017, respectively.

(Continued)

## (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 New Jersey Office, 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.

The Society has another lease agreement, expiring on October 1, 2022 for the property located at 11757 Katy Freeway, Suite 370, Houston, TX.

In addition to 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, 2018:

	<b>AMOUNT</b>
Year(s) ending June 30:	
2019	\$ 5,834,000
2020	5,859,000
2021	5,885,000
2022	5,911,000
2023	5,760,000
2024 – 2029	26,571,000

Rent expense under all of the Society's leases was approximately \$5,218,000 and \$5,311,000 in 2018 and 2017, respectively.

(Continued)



## **(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, 2018. Terms are LIBOR plus 1.50%, (which is 4.2631% and 3.2384% at June 30, 2018 and 2017, 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 and during the years ended June 30, 2018 and 2017, 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. Interest-bearing 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, 2018 and 2017, cash accounts in financial institutions exceeded the federal insured limits by approximately \$6,534,000 and \$11,258,000, 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 29% and 23% of accounts receivables at June 30, 2018 and 2017, 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 18, 2018, the date the consolidated financial statements were available to be issued.

# Donor Report FY2018



*Funding  
Excellence in  
Engineering*

# From the Chair & Executive Director

**The passion and focus that drive mechanical engineers is that we are problem solvers. We want to fix, enhance, refine, raise the bar – redefine the very nature of what’s possible and improve the human condition overall.**



TOM D. PESTORIUS  
CHAIR, ASME FOUNDATION

A handwritten signature in black ink, appearing to read "Thomas D. Pestorius".

The ASME Foundation is committed to this mind-set, as we strive to inspire, engage, develop and support current and future generations of engineers to new heights of engineering achievement that create lasting social impact.

Whether showcasing engineering within K-12 STEM education, supporting engineering students in their quest to be next-generation change agents, celebrating innovation and the creative spirit of young entrepreneurs, or fostering the promise of unique technologies in the global development space, the programs supported by the ASME Foundation donor community strive to grow and evolve – in purpose, impact, and scale.

In identifying new opportunities, we are returning our attention to our ASME roots and will be focusing on vibrant group collaborations. Our aim is to create more valuable pathways for global engagement. Mechanical Engineering and the ASME member community at large is our strength, our unique differentiator. We are eager to amplify the many experiences and initiatives created by our members.



ANAND SETHUPATHY  
EXECUTIVE DIRECTOR, ASME FOUNDATION

A handwritten signature in black ink, appearing to read "Anand Sethupathy".

The generosity and spirit of the ASME member and ASME Foundation donor communities continue to drive us. Thank you all for your steadfast commitment! We look forward to working with you as we continue to elevate programs that celebrate the promise and opportunity of being a mechanical engineer.



# Contributions and Program Summary

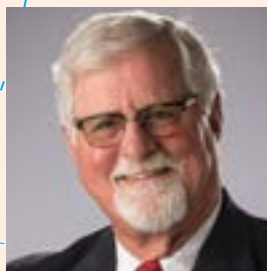
## Contributions

	<b>Total: \$4.80 Million</b>
ASME Divisions and Sections Gifts	\$ 4,107,000
Individual Unrestricted Gifts	\$ 482,000
Corporate and Foundation Gifts	\$ 104,000
Planned Giving Gifts	\$ 80,000
Individual Program Funding	\$ 28,000

## Program Funding

	<b>Total \$1.64 Million</b>
K-12 Stem Educational Programs	\$ 625,000
Engineering Honors and Awards	\$ 328,000
Scholarships	\$ 323,000
Federal Fellows and Public Policy Programs	\$ 267,000
Engineering for Global Development	\$ 101,000

# Board of Directors FY2018



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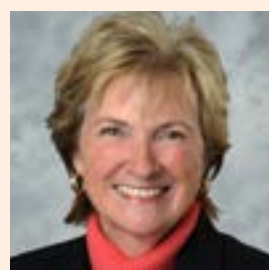
**THOMAS COSTABILE, P.E.**  
Executive Director, ASME  
(Ex-Officio)



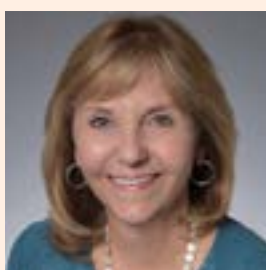
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# Archimedes Club

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 to identify them as a prominent supporter, listing as an Archimedes Club member in the Foundation's annual donor report and website, and invitations to donor receptions at select ASME meetings.

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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 a member in this exclusive society.

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Balakumar Balachandran  
Ken & Ruth Ann Balkey  
Peter Behr  
Richard Benson  
Delfo Bianchini  
William Borter  
Betty Bowersox  
Jennifer Brock  
James Buchwald  
Daniel Campau  
Nicholas Cedrone  
John Cipolla  
Thomas Cognata  
Richard Cogswell  
Joshua De Santiago  
Ravindra Deshpande  
Pete Deubler  
Warren DeVries  
Christopher Duffy  
Jon Ebacher  
Martin Engler  
Bryan Erler  
Albert Ferrari  
Alvin Filstrup  
Kenneth Fisher  
James Force  
Stewart Fox  
Luis Gominho  
Leland Griffith  
Krishna Gupta  
John Hallquist  
Mark Hereth  
Regina Hoffmann  
Robin Hooker  
Jennifer Jewers Bowlin  
Marshall Jones  
Matthew Kiley  
Rudolf Landwaard  
Jerry Lee  
James Lemke  
Thomas Loughlin  
Robert Malahy  
Robert Manross  
Webb Marnier  
Thomas Marshall  
Adam Mattmuller

Donald McConnell  
John Mercer  
Christian Meszaros  
C. Dan Mote  
Veerendra Mulay  
John Olsen  
Zachary Parnell  
Albert Peterson  
Ronald Pezon  
K. Keith Roe  
Syroun Sanossian  
Ian Savaya  
Douglas Scarth  
Paul Scott  
Robert & Kay Simmons  
Robert Skaggs  
Susan Skemp  
Stuart Speyer  
William Stenzel  
Keith & Ruthy Thayer  
David Thompson  
Robert Thresher  
James Traversi  
Thomas Tsotsis  
William Van De Graaff  
William Wepfer  
Frank White  
James White  
Alexander Zuran



# Alexander Holley Society

Holley Society members provide ASME with crucial resources to advance the engineering profession and help transform the world through unique engineering-based programs.

# Donor Honor Roll

The support provided by the ASME Foundation, through its portfolio of programs, scholarships, and awards, is enhanced because of the generosity of these donors. 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 humanity. Thank you!

## **PATRON (\$5,000+)**

Ibrahim Ashie  
Lynden Davis  
Nancy Deloye Fitzroy  
Henry Peelle  
Thomas Pestorius  
John Swanson

## **SPONSOR (\$500–\$999)**

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Joseph Davidson  
Richard Duncan  
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Brad Fisk  
Samuel Florman  
Ernest Freeman  
Charles Goggio  
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A. Edward Scherer  
Eric Sherrard

John Sofia  
Lawrence Stewart  
Raphael Susnowitz  
Walter Taylor  
Thomas Washburn  
Joan Wiley  
Charles Williams  
Edward Wolcott  
Justin Young

## **SUPPORTER (\$250–\$499)**

Ismail Adawi  
Yousuf Al-Fulajj  
Anthony Arbore  
George Austin  
James Bacon  
Paul Baker  
Andrew Banta  
Robert Barnett  
Ronald Barr  
Robert Bell  
Amanda Bligh  
Nicholas Borman  
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Gary Doll  
Michael Drosjack  
Abdel Hady Ebrahim  
Eugene Eckstein  
Bruce William Farber  
Frank Fearn  
E. Fisher  
David Fleming  
Ahmed Ghoniem  
Philip Gibson  
Jessica Gmeinder

Antonio Gonzales  
David Gray  
Richard Green  
Thomas Greider  
Richard Grey  
Gopal Gupta  
Charles Haldeman  
Je-Chin Han  
William Hanna  
Donald Harris  
Alex Heston  
Donald Hillstrom  
Richard Horton  
Samuel Horton  
Charles Hosler  
Richard Huntington  
Daniel Isaman  
Anthony Iwamiya  
Kevin Jalbert  
G. Leonard Johnson  
Lonny Kelley  
Walter Kelm  
H. Khalifa  
Garland Kile  
Andrew Kilner  
Yong Ku Kim  
Robert Klemm  
Albert Kobayashi  
Richard Konig  
David Korenke  
Julie Kulik  
Edward Lamoureux  
Jay Larson  
Ammon Lentz  
Gregory Lyon  
Edward Maciejewski  
Richard Marboe  
Richard McLeod  
John McMahon  
David Melear  
William Miller  
Tony Min  
William Moodie  
Alex Moutsoglou  
Kajal Mukherjee  
John Myers  
Mohinder Nayyar  
William New  
Norman Newhouse

Fred Newman  
Sanford Nobel  
Michael O'Carroll  
William Olson  
David Openshaw  
Gary Ostrand  
Matthew Pahl  
Coda H. Pan  
Roger Panton  
Harshad Parikh  
Sameer Parikh  
Kenneth Peterson  
Charles Pieper  
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Michael Radke  
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John Roderique  
Wilfred Rouleau  
James Russell  
Chester Sandberg  
Joe Sarphie  
Darrell Schmidt  
Albert Schnell  
Willard Shade Jr.  
Vasant Shah  
David Sheffield  
David Simmons  
Clark Simpson  
Richard Smith  
Alvin Spicer  
Craig Stahly  
John Stimson  
David Strange  
Stephen Sullivan  
Henry Tessier  
Leroy Tomlinson  
Paul Weitzel  
John Wesner  
Kenneth Wheeler  
David Wright  
David Yeager  
Joseph Yurso  
David Zobkiw

# Scholarships

## ASME Foundation Scholarship Recipients for the 2017–18 Academic Year

For almost three decades, generous donors have established scholarship funds at the ASME Foundation to give back to the engineering community. Over this time, the ASME Foundation has granted over \$1.7 million to more than 600 students from over 170 colleges and universities worldwide for the sole purpose of assisting deserving engineering students in their academic studies. ASME's scholarships match a student's interest and abilities with scholarships focused on specific areas of study of industry affiliation and are awarded based on leadership skills, scholastic ability, financial need, and potential contribution to the mechanical engineering profession. The program focus is on enabling a diverse cross section of top humanitarian-involved students to become fully educated and equipped young engineers for the benefit of humankind.



## **Kenneth Andrew Roe Scholar (\$13,000)**

**Trevor White**  
Rensselaer Polytechnic Institute

*“Receiving this award solidifies my attendance at Rensselaer for my senior year and enables me to continue pursuing my research project, involve myself further in ASME, and invest more time narrowing my search for a career... I hope that one day I can return the generosity and similarly bless a young professional.”*

– Trevor White

## **ASME Foundation Scholar (\$11,000)**

**Jason Bugarin**  
Worcester Polytechnic Institute

**Jared Talamini (1st year)**  
Wentworth Institute of Technology

**Austin Kaul**  
South Dakota School of Mines & Technology

*“With these opportunities made possible by ASME I have grown professionally and socially as an engineer... This scholarship also offers me pride in knowing I can pay off my loans sooner and without asking for help from my family.”*

– Austin Kaul



## **ASME/SHPE Scholarships (\$5,000)**

**Post-Graduate: Erin Hong**  
California State University, Northridge

**Undergraduate: Danielle Petterson**  
University of South Florida

*“Winning this scholarship from ASME has definitely lifted some of the weight off of my shoulders and has given me the little boost I needed to continue working toward my goals. I am so proud of this organization for valuing its student members and I am so grateful to have been given this opportunity.”*

– Danielle Petterson





**ASME Nuclear Division (NED) Scholarship (\$5,000)**

Joshua Smith  
Colorado State University

Eric Zhong  
California Polytechnic State University

Hank Costner  
Utah State University

**Garland Duncan Scholarship (\$5,000)**

Tamim Reza  
University of Michigan–Flint

Mukul Sawant  
Purdue University

**Willis F. Thompson Scholarship (\$4,500)**

Viktoria Meyerhoff  
Indiana University – Purdue University

Tooba Ehtesham  
University of Houston



*“ I am very grateful for the scholarship because it has not only provided me with an opportunity to continue my education at the University of Houston, it has also given me a drive to succeed... This scholarship will allow me to continue my academic career and focus on ASME.”*

– Tooba Ehtesham

Joseph Pechstein  
Milwaukee School of Engineering

**American Electric Power Scholarship (\$4,000)**

Brianna Forsthoefel  
Michigan State University

**Melvin R. Green Scholarship (\$4,000)**

Gregory Dorian  
University of Massachusetts Lowell

Mitchell Vogatsky  
Gannon University

**Virginia Tech Memorial Scholarship (\$4,000)**

Emilio Jimenez  
Virginia Polytechnic Institute and State University

**William J. & Marijane E. Adams, Jr. Scholarship (\$3,000)**

Nicole Peacock  
University of California – Davis

**ASME Foundation Scholarship (\$3,000)**

Maria Coleman  
Johns Hopkins University

**F. W. “Beich” Beichley Scholarship (\$3,000)**

Kelly Sibree  
The College of New Jersey

**ASME Power Division Scholarship (\$3,000)**

Nathaniel Klint  
Wentworth Institute of Technology

**Stephen T. Kugle Scholarship (\$3,000)**

Marshall Schoth  
Louisiana Tech University

**ASME Metropolitan Section John Rice Memorial Scholarship (\$3,000)**

Amanda Gelbart  
New York University

**John & Elsa Gracik Scholarship (\$2,500)**

Brittany Felder  
Wayne State University

Nicholas Koutos  
Saint Louis University

Aldo Kusnardi  
Minnesota State University, Mankato

Heather Hava  
University of Colorado at Boulder



*“ This spring semester I completed my comprehensive exam and am now a Ph.D. candidate, which was a major milestone that was made possible by the John & Elsa Gracik Scholarship! ”*

– Heather Hava, NASA Fellow

Michelle Morency  
University of Cambridge, UK

Michael Kelly  
University of California, Berkeley

Robert Vasinko  
Virginia Polytechnic Institute and State University

Jonah Allen  
Clarkson University

Emily Meuers  
Michigan Technological University

Tyler Ronken  
South Dakota School of Mines & Technology

**ASME Foundation Hanley Scholarship (\$2,500)**

Sarah Kassim  
York University

**Marcus N. Bressler Memorial Scholarship (\$2,500)**

Zhangxi Jesse Feng  
University of New Hampshire

**Kate Gleason Scholarship (\$2,000)**



Minh Nguyen  
Florida Atlantic University

“I feel exceptionally grateful to be a recipient of the ASME 2017–2018 Kate Gleason Scholarship, as it is instrumental in allowing me to work on my aspirations as a mechanical engineering student... I would like to express my utmost appreciation to the ASME Foundation for providing this opportunity.”

– Minh Nguyen

**Christopher Hoffman Memorial Scholarship (\$2,000)**

Ryley Davis  
Minnesota State University

**Samuel Mercer Memorial Scholarship (\$2,000)**

Nicholas Savino  
Drexel University

**Frank & Dorothy Miller Scholarship (\$2,000)**

Andrew Gray  
Milwaukee School of Engineering  
Josiah Horner  
South Dakota School of Mines & Technology

**Allen Rhodes Memorial Scholarship (\$1,500)**

Mohammad Abassi  
Minnesota State University, Mankato

**ASME Foundation Variable International (\$ - Varies)**

\*Outside the US – (Amount determined by need and economy of the country- \$ Undisclosed)

Eurydice Kanimba  
Virginia Polytechnic Institute and State University

Komal Ashfaq  
NED University of Engineering & Technology

Baber Baig  
NED University of Engineering & Technology

Tapish Gupta  
LNM Institute of Information Technology

**ASME Auxiliary Scholarship Winners for the 2017–18 Academic Year**

**Lucy And Charles W.E. Clarke Scholarship (\$5,000)**

Michael Abagon  
Illinois Institute of Technology

Joy Arnold  
Arizona State University

Sean Copenhaver  
Virginia Polytechnic Institute

Joseph Haire  
Cedarville University

Laura Lund  
Kettering University

Daniel Neamati  
California Institute of Technology

Joshua Pauls  
Oregon State University

Joseph Self  
University of Michigan

Thomas Upchurch  
Colorado School of Mines and Technology

Tyler Woods  
University of Central Florida

**Elisabeth M. and Winchell M. Parsons Scholarship (\$3,000)**

Mary Anderson  
New Mexico Institute of Mines and Technology

**Irma and Robert Bennett Scholarship (\$3,000)**

Joseph Difroschia  
Wentworth Institute of Technology

Samuel Kupiec  
Union College

Derek Runner  
Milwaukee School of Engineering

**Marjorie Roy Rothermel Scholarship (\$3,000)**

Jordan Argyle  
University of Idaho

Timothy Watkins  
Cleveland State University

**Sylvia W. Farny Scholarship (\$3,000)**

Daniel Neumann  
George Fox University

Samuel Steup  
Trinity University

**Carolyn and James M. Chenoweth Scholarship (\$3,000)**

Michael Gydesen  
Rochester Institute

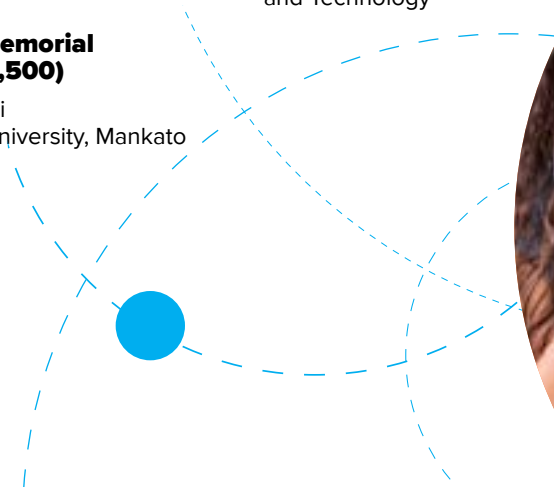
Jarod McKenzie  
George Fox University

Zach Wright  
St. Louis University

**Rice Cullimore Scholarship (\$3,000)**

Muhammad Zubair Irshad  
Georgia Tech

Haris Moazam Sheikh  
University of California, Berkeley



# ASME INSPIRE's Fourth Year: New Content Leads to Bigger Impact

The fourth year of the ASME INSPIRE digital STEM course for middle and high school students featured new, enhanced program content, a record number of schools incorporating the course in their curricula, and achieving a major milestone: the ASME INSPIRE program was used in all 50 states.

During the academic year 2016–2017, ASME INSPIRE's hallmark program — “INSPIRE STEM Readiness” — was used in more than 1,000 schools across 48 states. Over the past three years, this award-winning online, in-class student experience of using early algebra and coding skills to successfully complete 16 missions has engaged more than 100,000 middle and high school students.

As every engineer knows, with proof of concept comes opportunities. Enter “ASME INSPIRE Career Readiness,” a new program that allows middle school students to explore real careers and gain applicable skills. Based on their individual journey through these career paths, students develop a personalized portfolio of exciting opportunities and profiles specific to their interests.

The impact of this new experience: ASME INSPIRE programs were used in 1,380 schools by more than 1,900 teachers engaging over 107,000 students in academic 2017–2018 — an impressive 55% increase in student participation over the previous academic year. More to the point, before and after experience assessments show an overall 112% knowledge gain in data visualization and interpretation, understanding algorithms, and design thinking and prototyping.

INSPIRE scholars at Alexander Graham Middle School in Charlotte, N.C., are a great example of the lasting value of the program. Led by their teacher, Air Force veteran April Carpenter, these eighth-grade INSPIRE champions completed both INSPIRE online programs.

Following a 17-year military career, Carpenter has spent over a decade teaching Career and Technological Education (CTE) in Charlotte Mecklenburg Schools. This is her fourth year integrating ASME INSPIRE into her classroom experience, finding it an invaluable tool in supporting her success and primary goal as a CTE teacher — promoting college and career readiness.

“Using INSPIRE within our curriculum opens the doorway to opportunities and gets students thinking,” Carpenter said. “It’s real-world, and the software itself is encouraging and motivational. It gets them talking about college and a career direction that they may not have ever considered.”

Additionally Carpenter noted that using ASME INSPIRE — with its hands-on and self-guided approach — helps students discover exciting possibilities and illuminate a path toward a fulfilling and important career in engineering. “Some students may not hear that they can go to college, but we support that dream and the pursuit of STEM career fields,” she said. “These students will make an impact in the world.”



## TEACHER SURVEY STATS

**97% say course content was important and relevant to my students**

**91% say course enhanced materials I teach in the classroom**

**92% say course was easy to fit into my standard curriculum**





**“The (INSPIRE) program breaks down socioeconomic barriers. All students, regardless of their family income, can aspire to a career in the STEM path.”**

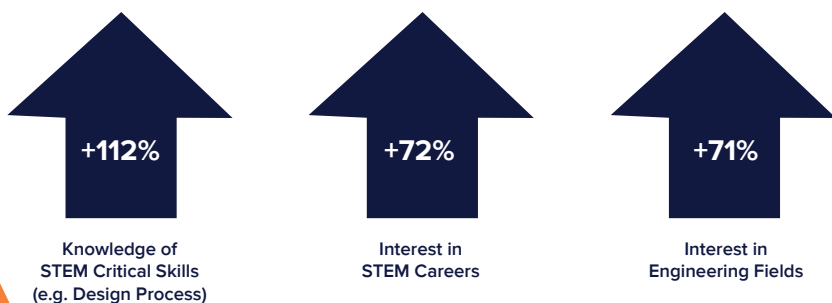
**Lesa Levi, guidance counselor,  
Platt City Middle School**

**375K+ HOURS  
OF LEARNING  
BY INSPIRE  
STUDENTS AND  
TEACHERS**



### Having a Positive Impact

as measured by in-course pre-post-student assessments and surveys



**“(INSPIRE) changed the way I look at things, the world, and how I can change my life and others through learning about new things in science, math, engineering...it’s really cool.”**

**From 7th grader, Hollywood Academy of Arts & Sciences**





**ASME President Said Jahanmir commended the three winning teams for their vision and the positive effect their products could have throughout the world.**

**“ISHOW winners’ display of creativity and ingenuity, and that of their peers, fully embodies the spirit of ISHOW and exemplifies the potential of tomorrow’s engineering problem-solvers and social entrepreneurs.”**

#### **2015 ISHOW Winner Alexapath**

What they do: Alexapath makes a traditional microscope smarter, enabling quick sharing of images and video feeds of slides to specialists working remotely.

Since ISHOW, Alexapath has garnered \$500K in grant funding to conduct field trials in India and begin the process for FDA approval in the U.S.

#### **2016 ISHOW Winner Paygo Energy**

What they do: PayGo Energy is a revolutionary cookstove solution and distribution system that enables consumers to access clean and efficient fuel at a price point that is within their daily energy budget.

Since ISHOW, PayGo Energy has raised \$2 million in funding to finance the expansion of their customer base in Nairobi, the development of its software platform and next-generation smart meter, and the growth of its team.



(Left to right) Carlos Castro-Gonzales of Team PointCheck accepts the 3D-printed ISHOW trophy from ISHOW judge Peter Larsen of FormLabs and Paul Scott, director, Engineering for Global Development.



(Left to right) Director, Engineering for Global Development Paul Scott, Adriana Lombardi Franco and Félix Escalante Delgado of Team Solar Hybrid Coffee Roaster (first winner from South America), and ASME President-Nominee Richard Laudenat, who served as one of the judges at ISHOW USA.



(Left to right), Paul Scott, director, Engineering for Global Development, presents the ISHOW grand prize trophy to Sanskriti Dawle and Saif Shaikh of Team Anne at ISHOW India.



(Left to right) Dorine Poelhekke and Sanne Castro of SimGas, with Dr. Kamau Gachigi, founding executive director of Gearbox at ISHOW Kenya.

# ISHOW: Global Innovation and the Power of Social Entrepreneurship

Spanning three continents – India, Africa, and North America – the 2018 Innovation Showcase (ISHOW) competitions brought together hardware-based solutions to global social challenges all with an aim to improve the human condition. Sharing a total cash prize pool of \$500,000 across all three global events, eight teams of entrepreneurs presented their hardware-led, socially beneficial inventions in Washington, D.C., in June 2018 at the third ASME ISHOW of the year, ISHOW USA. Featuring innovations as diverse as a low-cost device that allows the visually impaired to self-teach Braille, to a new technology that enables rural farmers without electricity to reap the financial reward of selling roasted coffee beans, three teams – two based in the United States and one hailing from Peru – were named the 2018 grand prize winners.

Required to have an existing prototype that shows promise to scale to market along with an eagerness to receive technical support and feedback from industry networks, ISHOW winners are chosen based on criteria that include knowledge of the customer or user, hardware validation and development, manufacturing optimization, and the team's strategy for implementation.

One of the winning teams at ISHOW USA, from the Massachusetts-based company Leuko, is the creator of PointCheck, a noninvasive, portable device that allows for the early detection of low neutrophil levels in cancer patients receiving chemotherapy. Since chemotherapy can lower neutrophil levels, which inhibits the body's ability to fight infections, early detection of low neutrophil levels could help thousands of patients being treated with chemotherapy to avoid infections. Other systems that detect low neutrophil levels require blood draws and laboratory analyses.

For Carlos Castro-Gonzalez, who represented his company Leuko at the competition, being selected as one of the grand prize winners meant recognition and validation. "The judges were really experts in their fields. They are people that know how to take hardware products to market, and they have done that several times. And the fact that they recognize that we are on a good track to do so means a lot to us," he said. Castro-Gonzalez went on to say that the team's cash prize would be used to hire a consultant to help the company develop a strategy for working with the U.S. Food and Drug Administration, which is an important next step for his team.

Félix Escalanta Delgado and Adriana Lombardi Franco, two representatives from the Lima, Peru-based company Compadre, were also named grand prize winners for their product, the Solar Hybrid Coffee Roaster. Their technology enables small, rural farmers in Peru, who do not have access to electricity and normally sell their coffee beans raw, to roast their own beans using sunlight. Since raw beans are much cheaper than roasted beans, the ability to roast their beans allows these rural farmers to increase their revenue streams and profits. In addition to its economic benefits for farmers, the solar roasting process also promotes organic practices and reduces carbon dioxide output.

While conceding that winning the prize money was a boon for her company, Lombardi Franco was also grateful for the opportunity to meet and interact with the ISHOW judges and technical advisors. "Other competitions we have participated in were more formal – it was just the pitch and then the judges decided on winners," she said. "Here, we were really happy that we got to spend time with the judges so they could learn about us, our enterprise, and our company. The two hours we had with the judges was really necessary to explain our company. It was great not to be judged just on a five-minute pitch. Also, the judges and technical advisors gave us feedback right away. Some interesting ideas came out from that judging."

The third winning team, AIM Tech from Michigan, is the developer of NeoVent, a noninvasive, dual-pressure ventilator for use in rural countries such as Nepal, where as many as 50,000 infants die every year, primarily as a result of respiratory ailments due to infections and premature births. AIM Tech aims to solve that problem with its ventilator, which is easy to use, does not require continuous electricity, and can be built for less than \$20.

Luis Silva-Velasco, who represented AIM Tech at the competition, noted that his team planned to use their share of the prize money to fund more pilot studies and clinical trials and work toward FDA clearance. Silva-Velasco added that receiving input from the judges was a particularly rewarding aspect of the competition. "I think the judges identified quite a few things we can improve on," he said. "I think we need to change our implementation strategy, to work more on customer needs. The team also needs to build and launch a robust supply chain in order to build the product," Silva-Velasco said.



ASME President Charla Wise (left) and Chair of the Committee on Honors Yildiz Bayazitoglu (right) present the ASME Medal to Dr. Zdeněk P. Bažant at the 2017 Honors Assembly.

# 2017 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. Zdeněk P. Bažant, Ph.D., S.E., McCormick Institute professor and W.P. Murphy professor of civil and mechanical engineering, and materials science at Northwestern University, was chosen to receive the ASME Medal, the Society's highest award. The Medal was presented to Dr. Bažant in recognition of eminently distinguished engineering achievement as a world leader in the mechanics of materials and structures, and for developing a statistical theory of the strength and lifetime of quasibrittle structures of random material properties, while improving the safety of large structures such as buildings, bridges, and aircraft.

The award was conferred at the Society's 2017 Honors Assembly held in conjunction with the ASME International Mechanical Engineering Congress and Exposition in Tampa, Fla.

### **ASME MEDAL**

Zdeněk P. Bažant, Ph.D., Fellow  
Northwestern University

### **HONORARY MEMBERS**

Ramesh K. Agarwal, Ph.D., Fellow  
Washington University

John W. Cipolla, Ph.D., Fellow  
Retired

Michael F. Modest, Ph.D., Fellow  
University of California, Merced

### **ADAPTIVE STRUCTURES AND MATERIAL SYSTEMS AWARD**

Marcelo J. Dapino, Ph.D., Fellow  
The Ohio State University

### **BARNETT-UZGIRIS PRODUCT SAFETY DESIGN AWARD**

Saeed D. Barbat, Ph.D.  
Ford Motor Company

### **BERGLES-ROHSENOW YOUNG INVESTIGATOR AWARD IN HEAT TRANSFER**

Austin J. Minnich, Ph.D., Member  
Caltech

### **PER BRUEL GOLD MEDAL FOR NOISE CONTROL AND ACOUSTICS**

Malcolm Crocker, Ph.D., Fellow  
Auburn University

### **EDWIN F. CHURCH MEDAL**

Francis A. Kulacki, Ph.D., Fellow  
University of Minnesota

### **DANIEL C. DRUCKER MEDAL**

David M. Parks, Ph.D., Fellow  
Massachusetts Institute of Technology

### **FLUIDS ENGINEERING AWARD**

Michael W. Plesniak, Ph.D., Fellow  
The George Washington University

### **Y.C. FUNG YOUNG INVESTIGATOR AWARD**

Kristin M. Myers, Ph.D. Member  
Columbia University

### **MELVIN R. GREEN CODES AND STANDARDS MEDAL**

Paul D. Edwards, Fellow  
WECTEC Global Project Services Inc.

### **J.P. DEN HARTOG AWARD**

Kon-Well Wang, Ph.D., Fellow  
University of Michigan

### **HEAT TRANSFER MEMORIAL AWARD (SCIENCE)**

Christoph Beckermann, Ph.D., Fellow  
University of Iowa

### **HEAT TRANSFER MEMORIAL AWARD (ART)**

Zahid H. Ayub, Ph.D., Fellow  
Isotherm, Inc.

**HEAT TRANSFER MEMORIAL AWARD (GENERAL)**

Mohamed S. El-Genk, Ph.D., Fellow  
University of New Mexico

**MAYO D. HERSEY AWARD**

James R. Barber, Ph.D., Fellow  
University of Michigan

**PATRICK J. HIGGINS MEDAL**

Thomas Charlton Jr.  
Charlton Associates, LLC

**SOICHIRO HONDA MEDAL**

John E. Dec, Ph.D., Fellow  
Sandia National Laboratories

**INTERNAL COMBUSTION ENGINE AWARD**

Paul Miles, Ph.D., Member  
Sandia National Laboratories

**WARNER T. KOITER MEDAL**

Wei Yang, Ph.D.  
National Natural Science Foundation  
of China

**ROBERT E. KOSKI MEDAL**

Werner Dieter, Ph.D.  
Retired

**ALLAN KRAUS THERMAL MANAGEMENT MEDAL**

Masaru Ishizuka, Ph.D., Fellow  
Toiyama Prefectural University

**FRANK KREITH ENERGY AWARD**

Gershon Grossman, Sc.D., Fellow  
Technion–Israel Institute of Technology

**JAMES N. LANDIS MEDAL**

Yassin A. Hassan, Ph.D., Fellow  
Texas A&M University

**BERNARD F. LANGER NUCLEAR CODES AND STANDARDS AWARD**

Kevin Ennis  
Retired

**GUSTUS L. LARSON MEMORIAL AWARD**

Evelyn N. Wang, Ph.D., Fellow  
Massachusetts Institute of Technology

**H.R. LISSNER MEDAL**

Gerard A. Ateshian, Ph.D., Fellow  
Columbia University

**MACHINE DESIGN AWARD**

S.V. Sreenivasan, Ph.D., Member  
The University of Texas at Austin

**CHARLES T. MAIN STUDENT LEADERSHIP AWARD (GOLD)**

Gemma Iruegas, Member  
Universidad Panamericana Campus  
Aguascalientes

**CHARLES T. MAIN STUDENT LEADERSHIP AWARD (SILVER)**

Jithu Paulose, Member  
Federal Institute of Science  
And Technology

**M. EUGENE MERCHANT MANUFACTURING MEDAL OF ASME/SME**

Michael F. Molnar, Fellow  
National Institute of Standards  
& Technology

**VAN C. MOW MEDAL**

Richard R. Neptune, Ph.D., Member  
The University of Texas at Austin

**NADAI MEDAL**

John A. Rogers, Ph.D.  
Northwestern University

**SIA NEMAT-NASSER EARLY CAREER AWARD**

Yashashree Kulkarni, Ph.D., Member  
University of Houston

**OLD GUARD EARLY CAREER AWARD**

Katie Correll, Member  
Universal Creative

**RUFUS OLDENBURGER MEDAL**

Miroslav Krstic, Ph.D., Fellow  
University of California, San Diego

**OUTSTANDING STUDENT SECTION ADVISOR AWARD**

Nadir Yilmaz, Ph.D., Member  
Howard University

**PERFORMANCE TEST CODES MEDAL**

Thomas K. Kirkpatrick, Ph.D., Member  
McHale & Associates, Inc.

**PI TAU SIGMA GOLD MEDAL**

Shannon K. Yee, Ph.D., Member  
Georgia Institute of Technology

**S.Y. ZAMRIK PRESSURE VESSELS AND PIPING MEDAL**

Mahendra D. Rana, Fellow  
Consultant

**CHARLES RUSS RICHARDS MEMORIAL AWARD**

Jian Cao, Ph.D., Fellow  
Northwestern University

**RALPH COATS ROE MEDAL**

Adrian Bejan, Ph.D., Fellow  
Duke University

**SAFETY CODES AND STANDARDS MEDAL**

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Otis Elevator Company

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University of Idaho

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Stanford University

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Pressure Piping Engineering  
Associates, Inc.

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North Carolina State University

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Technical University of Denmark

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Alan Williams, Ph.D., Member  
The University of Leeds

**GEORGE WESTINGHOUSE SILVER MEDAL**

Frédéric Villeneuve, Ph.D., Member  
Siemens Power and Gas



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## **SAVIO L.-Y. WOO TRANSLATIONAL BIOMECHANICS MEDAL**

Arthur Erdman, Ph.D., Fellow  
University of Minnesota

## **HENRY R. WORTHINGTON MEDAL**

Yu-Tai Lee, Ph.D., Fellow  
Retired

## **BLACKALL MACHINE TOOL & GAGE AWARD**

Hai Trong Nguyen, Ph.D.  
Hanoi University of Science  
and Technology

Hui Wang, Ph.D., Member  
Florida State University

Bruce L. Tai, Ph.D., Member  
Texas A&M University

Jie Ren, Member  
Florida State University

S. Jack Hu, Ph.D., Fellow  
University of Michigan at  
Ann Arbor

Albert J. Shih, Ph.D., Fellow  
University of Michigan at  
Ann Arbor

## **FREEMAN SCHOLAR AWARD**

S. Balachandar, Ph.D., Fellow  
University of Florida

## **GAS TURBINE AWARD**

Ho-On To, Ph.D., Member  
University of Cambridge

Robert J. Miller, Ph.D.  
University of Cambridge

## **MELVILLE MEDAL**

Qiang Ma  
Tsinghua University

Yihui Zhang, Ph.D., Member  
Tsinghua University

## **EDWARD F. OBERT AWARD**

Luca Rivadossi  
RVD S.r.l.

Gian P. Beretta, Sc.D., Fellow  
Brescia State University

## **PRIME MOVERS COMMITTEE AWARD**

Darren M. Nightingale, Member  
Thermal Engineering International (USA) Inc.

## **WORCESTER REED WARNER MEDAL**

Michael P. Paidoussis, Ph.D., Fellow  
McGill University

## **ARTHUR L. WILLISTON MEDAL**

Austin P. Kraus, Member  
University of Evansville

## **HOOVER MEDAL**

John Staehlin, Member  
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# 2017 ASME Honors Assembly

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