
ASME
FOUNDATION
Engineers build the future.
Help us build theirs.

The American Society of Mechanical Engineers Foundation's mission is guided by the belief that engineers make our lives better, safer, and more enriching.

The Foundation is dedicated to sparking and supporting a lifelong passion for engineering in young people and nurturing brilliant, innovative solutions.

The Foundation believes that the great talent needed to create a better world must be harnessed from the full diversity of humanity.

ASME was founded in 1880 as a professional community where mechanical engineers could exchange ideas and share information. One of ASME's first contributions to the public good was to set safety standards for steam boilers. Today, ASME sets the global standards across mechanical engineering and related disciplines with an unwavering commitment to public safety and engineering excellence.

ASME is also the central information and learning hub for more than 100,000 professional and student members in 140 countries. The Society's programs, forums, conferences, research, and rich digital ecosystem accelerate engineering innovation for the greater good.

With its multidisciplinary focus and engagement with industry, academia, and government, ASME is uniquely positioned to nurture the next generation of engineers and the life-changing breakthroughs they will create.

ASME INDIVIDUAL MEMBERS

100,000+

ASME AROUND THE WORLD

140+

COUNTRIES

Engineers are visionaries and problem-solvers.

They are creators and inventors whose ingenuity drives progress and enhances quality of life for all of us. Engineers meet humankind's most serious challenges with practical, real-world solutions.

Today, clean water is readily available to 2.5 billion more people than it was just a generation ago. Nearly a quarter of global electricity now comes from clean, renewable sources. Self-driving vehicles, 3D printing, and automated glucose monitors—these are all engineering feats.

But there is so much more to do.

So many problems can't wait.

At a moment when climate change, poor sanitation, and disease, among many other critical challenges, pose an urgent threat to billions around the world, engineers will deliver powerful new solutions to humanity's most pressing needs.

And it will be engineers who invent as yet unimagined ways to empower people and improve quality of life.

With the right support, the possibilities are infinite.

The world needs qualified engineers now more than ever.

More diversity, because too few young women and men, particularly those from underrepresented communities, are inspired to join the global engineering profession

More interdisciplinary training to address complex global challenges

More mentoring, recognition, and early-career support for socially conscious innovators to help them advance ideas that will help underserved communities globally

ASME has the unrivaled depth, know-how, and global volunteer community to launch tomorrow's diverse, multidisciplinary engineering workforce and advance world-changing ideas for the benefit of all humankind.

But engineers alone cannot save the world. It takes all of us.

Campaign For NEXT GENERATION ENGINEERS

WHO TRANSFORM THE WORLD

The Campaign for Next Generation Engineers is the ASME Foundation's ambitious fundraising effort to support a scalable arc of programs that address every stage of an engineer's journey, from early inspiration and learning to career engagement and world-changing innovations.

Education That Inspires

Igniting a lifelong passion for engineering in K-12 through college and graduate school

Careers That Matter

Propelling early-career engineers toward a lifetime of meaningful work and engagement

Ideas That Innovate

Nurturing breakthrough ideas to improve quality of life in underserved communities

Three Pillars of Support

Expanding Young Minds

ASME INSPIRE

STEM Readiness

What happens when a 12-year-old learns how to 3D-print her own sneakers?

Classroom-based ASME INSPIRE is a scalable STEM education program that delivers a mind-expanding learning experience primarily to middle and high school students who might otherwise never be exposed to the opportunities in engineering.

The standards-aligned program introduces students to the potential rewards of an engineering career, emphasizing that it is a meaningful profession that can dramatically contribute to improving quality of life.

ASME INSPIRE is offered free to schools. Two-thirds of schools that currently use ASME INSPIRE are designated as Title I, meaning that at least 40% of their students come from low-income households.

- Currently in use by nearly 1,800 teachers at over 1,300 K-12 schools in all 50 states and D.C.
- 100,000 students participating this year; nearly 300,000 since inception in 2014
- NPS (net promoter score) of 76 from participating teachers, making it a "world-class" program

ASME INSPIRE works

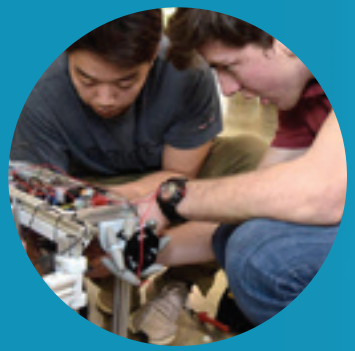
Blending digital and in-person activities, videos, animations, and gaming scenarios, INSPIRE has been shown to boost participants' knowledge of STEM skills by 112%, interest in STEM careers by 72%, and interest in engineering fields by 71%.

ASME 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, and engineering. It's really cool."

Leylanie, 7th grader

Opening Windows of Discovery

ASME E-Fests™



The DHL for moon deliveries?

At E-Fest, aspiring engineers met the people building it. Now they want careers in space.

At E-Fest, college-age students participate in challenging competitions, skill-building workshops, and opportunities to meet professional engineers and mentors (like the industry executive whose company is building a lunar delivery service). Students engage in a jam-packed, three-day interdisciplinary engineering experience where teams compete in categories like Human-Powered Vehicles, Robotics, 3D Printing, and even Oral Presentation skills.

“The competitions enhance our skills and push us to put our knowledge to maximum utility. It’s a room full of broad and bold ideas. It was an amazing experience.”

There are currently four regional ASME E-Fest™ engineering festivals annually: two in the U.S., one in India, and one in South America. These events give students hands-on experience and include competitions that are often the culmination of a year's worth of classroom work. More than 5,000 engineering students participate in E-Fest or one of the locally run ASME EFx™ versions of the program, enabling any engineering school in the world to host its own customized event.

Making an Engineering Education Possible

ASME Foundation Scholarships

It is impossible to know how many would-be engineers will never realize their fullest potential because they could not afford an engineering education. ASME Foundation Scholarships provide direct financial support for the brightest and most deserving engineering students in the U.S. and abroad.

72 scholarships awarded this year

Over $350,000 awarded in 2019-2020 academic year

63% awarded to women and underrepresented minority students

Currently, only 30% of engineers in the workforce are people of color and only 13% are women. ASME is working to increase diversity and inclusion by awarding nearly 45% of scholarships to students of color and 40% to female students based on income level. Awards are made to high-achieving student members enrolled in two-year, four-year, and graduate degree programs.

"The thought of delaying my senior year indefinitely until I could save up the money was heartbreaking. But thanks to the ASME Foundation Scholar Award, I was able to afford tuition and graduate with my B.S. in mechanical engineering."

Meredith Campbell, ASME Foundation Scholar

Aligning Academia and Industry

Transforming Engineering Education

ASME is leading a conversation among representatives of industry, academia, government, and the NGO sector to ensure that engineering school curricula address each stakeholder's perspectives and priorities. The principal forum for that work is the Accreditation Board for Engineering and Technology (ABET). In addition, ASME produces the International Mechanical Engineering Education Leadership Summit (MEED), where industry and academic leaders come together to chart engineering education's multidisciplinary future. Additionally, ASME uses its Mechanical Engineering Department Heads (MEDH) digital platform to keep academia up to date on the changing needs of industry.

Nurturing the Innovators

ASME Career Engagement Center

Where can engineers turn for a community—local, national, and global—that will provide opportunities for mentoring and being mentored, a platform for sharing and gaining engineering knowledge, and insights about licensing, certifications, volunteer work, and the constantly changing landscape of the profession?

The new ASME Career Engagement Center (CEC), a hybrid model of online and in-person participation, will fill a critical gap in resources available to engineers as they move through the stages of their careers. The CEC is premised on the idea that connection and information are the keys to sustaining a diverse, robust, innovative, and socially engaged engineering workforce.

The CEC will help engineers find mentors and become mentors, learn how to develop their professional profiles, explore career roadmaps and volunteer opportunities, pursue education that will improve their credentials, and gain a better understanding of how the profession is changing. Leveraging machine learning, the CEC will enable each user to gain personalized insights appropriate to the user's location, career stage, and experience. At the same time, by being part of ASME's global community of engineers, users may discover ways to connect and share ideas in person, both in the towns, cities, and regions where they live and through areas of technical interest.

To thrive as an engineer requires a sense of belonging—a meaningful and enduring connection to a wider professional community and a cause greater than oneself.

Engineering the Greater Good

ASME Fellowships

ASME Federal Government Fellows

For the past 46 years, ASME Federal Fellows have provided technical expertise to policymakers in the U.S. Congress, the White House, and federal agencies, advising on legislation and policy relating to energy, manufacturing, research, infrastructure, and technology, among other topics.

- **46 years** since program inception
- **130** total ASME Federal Fellows to date
- Only **4.2%** of members of U.S. Congress are engineers

“It is gratifying to know that, as engineers, we can serve the greater good through carefully crafted policy.”

Laurel Kuxhaus, PhD, 2018-2019 Federal Fellow, Associate Professor of Mechanical & Aeronautical Engineering at Clarkson University

engineering FOR CHANGE FELLOWS

16 Countries Represented

Bosnia| Lebanon | Australia | Uganda
India | Colombia | Sweden | Brazil
Tunisia | Canada | Panama | USA
Kenya | Spain | Venezuela | Guatemala

Engineering for Change Has Welcomed

61

Fellows to Date

57% Engineering for Change Fellows are Women

Gender Distribution

35 Women
26 Men

Engineering for Change (E4C) Research Fellows

E4C Research Fellows receive ASME support to better understand the issues and market conditions encountered by engineers who are addressing critical qualify-of-life challenges in underserved communities. These Fellows expand the knowledge base through technology reports, market models, and user experience analyses, among other projects. All E4C Research Fellows' work product is shared on ASME's public digital global development platforms, amplifying its use and impact.

Graduate Teaching Fellows

This program is a collaboration between ASME and university mechanical engineering departments to encourage outstanding doctoral candidates in mechanical engineering education, particularly women and minorities. Fellows are PhD candidates in mechanical engineering with a demonstrated interest in pursuing an academic career.

Recognizing Engineering Excellence

Honors & Awards

Through over 100 endowed honors and awards, ASME recognizes the work of the great engineering minds and the rising leaders on the cusp of major breakthroughs. Many of these distinctions—awarded annually—are for exemplary technical work, while others honor recipients' commitment to developing and supporting the next generation of engineers.

Photo courtesy of Northwestern University

Gwynne Shotwell, president and chief operating officer of SpaceX, receives the 2018 Ralph Coats Roe Medal from ASME Executive Director/ CEO Thomas Costabile. The award recognizes outstanding contributions toward a better public understanding and appreciation of the engineer's worth to contemporary society.

Globally Connected

E4C Digital Community

Engineering for Change (E4C) Digital Community, with more than one million active followers worldwide, is an open-access network and knowledge hub dedicated to sharing engineering advances in support of important global development issues.

Serving a largely younger audience in the early stages of their careers, the E4C platform enables members to engage with peers, learn from experts, seek and share information, gain insights on technology successes, and connect to opportunities.

From Concept To Prototype

ASME ISHOW Idea Lab

ASME ISHOW Idea Lab is a new initiative that will invite applications for entry into a rigorous program where participants will learn firsthand how the most promising, socially conscious engineering ideas move from concept to prototype. Leveraging the professional expertise and advice available through the global community of ASME volunteers, ASME ISHOW Idea Lab will help social innovators address technical issues and develop prototypes that address quality of life in underserved communities around the world.

The Idea Lab initiative is designed to add value through mentorship, technical guidance, and proof-of-concept funding.

Scaling World-changing Ideas

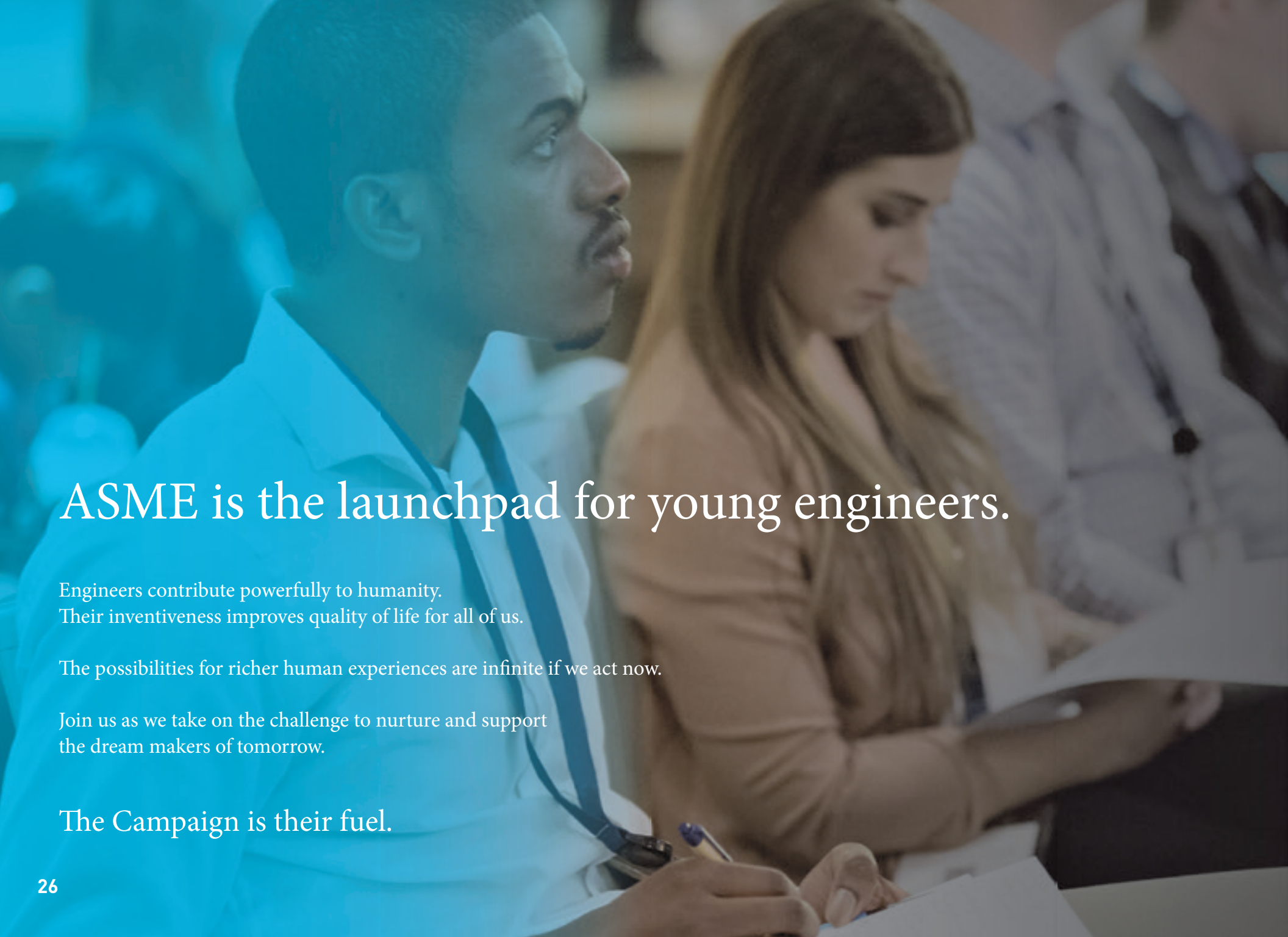
ASME ISHOW

ASME's Innovation Showcases, or ISHOWs, are highly prestigious competitions that occur three times per year, once each in India, Kenya, and the U.S., where social entrepreneurs compete for opportunities to scale prototypes that address one of the United Nations Sustainable Development Goals into products that will be technologically, environmentally, culturally, and financially sustainable. Each ASME ISHOW brings together eight to 10 carefully selected innovators, currently up to 30 annually, and provides targeted engineering expertise, seed capital, guidance on how to bring a suitable product into a market where it is needed, and a network through which the innovators can share globally the ideas that they have developed.

> **“We designed it so that anyone anywhere can get an accurate prescription in 10 seconds.”**
>
> **Shivang Dave, PhD, CEO of the company that makes QuickSee**

ISHOW SUCCESS STORY: QuickSee™

Today, millions of people in underserved communities must forgo opportunities for education, work, and to improve their quality of life due to uncorrected eyesight. QuickSee™, a winner of the 2017 ASME ISHOW, solves this global development challenge by providing affordable eyeglass prescriptions on the spot. Before QuickSee, accurate vision exams were available only from highly trained professionals using costly and non-portable technology. QuickSee puts reliable, affordable vision correction literally in the palm of one’s hand.



ASME is the launchpad for young engineers.

Engineers contribute powerfully to humanity.
Their inventiveness improves quality of life for all of us.

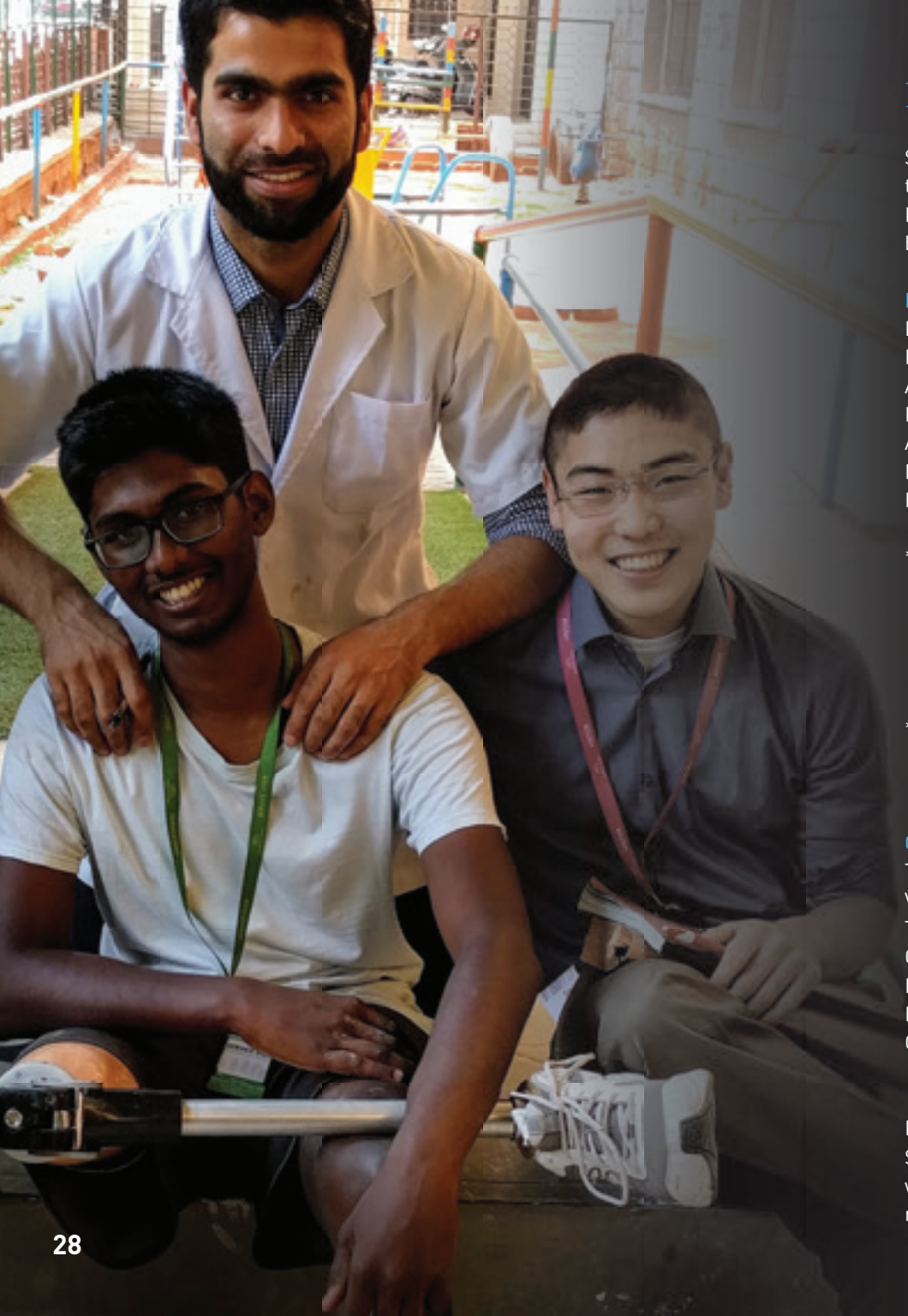
The possibilities for richer human experiences are infinite if we act now.

Join us as we take on the challenge to nurture and support
the dream makers of tomorrow.

The Campaign is their fuel.

Campaign For NEXT GENERATION ENGINEERS

WHO TRANSFORM THE WORLD



How to Donate

Support of the ASME Foundation and the Campaign for Next Generation Engineers ensures a cleaner, healthier, and more sustainable future.

Individual Giving Levels

Pioneer $1,000,000 +
Benefactor $500,000 to $999,999
Activator $250,000 to $499,999
Mobilizer $100,000 to $249,999
Advocate* $25,000 to $99,999
Patron $5,000 to $24,999
Friend ** $1,000 to $4,999

* Early leadership commitments of $25,000 and above will be recognized with a special designation in all campaign materials.

** Individual gifts of $1,000 or more are recognized annually with membership in the Alexander Holley Society.

Corporate Giving Levels

Trailblazer $5,000,000 +
Visionary $2,500,000 to $4,999,999
Transformer* $1,000,000 to $2,499,999
Champion $500,000 to $999,999
Innovator $250,000 to $499,999
Energizer $100,000 to $249,999
Collaborator $50,000 to $99,999

Early leadership commitments of $1,000,000 and above will be recognized with a special designation in all campaign materials.

Corporate donor recognition benefits vary according to level of support and may include:

- A specific array of philanthropic program naming opportunities
- VIP access to special ASME and ASME Foundation events
- Invitation to join ASME Industry Advisory Board (IAB)
- Volunteer engagement opportunities for corporate employees wishing to participate in ASME or ASME Foundation programs, podcasts, and events
- Leadership recognition at ASME programs and on ASME and ASME Foundation websites, social media platforms, and in print materials, such as ME Magazine
- Leadership recognition in all ASME Foundation campaign material

Ways to Give

The ASME Foundation, Inc. is a 501(c)(3) non-profit organization, and your gift is tax deductible to the fullest extent of the law. (Tax ID # 13-3372934) As required by the Internal Revenue Service, we must mention that you will not receive any services in exchange for your contribution.

Gifts by cash, check, and credit card

Immediately support ASME programs by giving online at https://www.asmefoundation.org/donate or by sending a check (made out to ASME Foundation) to the ASME Foundation, 2 Park Avenue, 7th Floor, New York, NY 10016.

Electronic Funds Transfer (EFT)

You can direct your bank to make recurring payments on a monthly or annual basis to the ASME Foundation.

Planned Gifts

A planned gift to the ASME Foundation will leave a legacy that will benefit ASME for generations to come. Contact the ASME Foundation staff to learn more about the many creative ways to include ASME in long-term plans.

Memorial or Tribute Gifts

A memorial or tribute gift to the ASME Foundation is a meaningful way to honor a loved one or celebrate a special occasion while supporting our mission.

Stock Gifts

A gift of stock is a great way to help support the ASME Foundation, and it may provide you and your family with significant tax benefits.

Matching Gifts

Many employers encourage philanthropic contributions by matching or multiplying their employees' gifts to charitable organizations. Many corporations also offer matching gifts for volunteer hours donated. Please inquire whether a gift is eligible for an employer match.

ASME Philanthropy

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Connect With Us

The ASME Foundation invites individuals and corporate and institutional donors to inspire and advance the next generation of engineers as they build a better future for all of us.

For more information, visit www.asmefoundation.org or call:

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Campaign For NEXT GENERATION ENGINEERS

WHO TRANSFORM THE WORLD

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