



Inspiring Curiosity in STEM

A FORMULA FOR SUCCESS

2016 SAE FOUNDATION ANNUAL CELEBRATION



“Before everything else,
getting ready is the secret of success.”

—Henry Ford

As a company born in the imagination of a young thinker and tinkerer, we believe in the power of creativity and hands-on learning. That’s why we support STEAM initiatives that grow smart kids. We want to help kids get ready, so they can go as far as their dreams take them.

Find out more about the ways Ford supports STEAM education
at fordsteamexperience.com.



WELCOME...

What's the first time that you recall being curious enough to continue the pursuit of something new? Was it trying to make a paper airplane go farther? Was it understanding the methods to make a kite fly higher? Was it determining how many pebbles were required to displace the water in a glass?

Each of us learns the joy of discovery in so many ways throughout our lives. And that joy of discovery, of learning and growing, is exactly at the core of the SAE Foundation's work. Encouraging curiosity is the underlying purpose of AWIM®, F1 in Schools™, and Collegiate Design Series® programs. Supporting and nurturing curiosity can lead to a lifetime of love for science, technology, engineering and math.

Your support of the Foundation and SAE's educational programs, awards and scholarships are critical to the future of the global automotive, aerospace and commercial vehicle markets. In classrooms around the world, SAE-trained educators are addressing the crisis in STEM education, bringing to life these basic STEM principles through creative and fun projects that encourage discovery, creativity and innovation. So many "aha" moments can begin at the very point you provide your support.

Tonight, we pay tribute to leadership, dedication and service with Mark Fields of Ford Motor Company receiving the prestigious Industry Leadership Award. We honor Cuneyt Oge with the Ableson Award for dedication to the SAE Foundation over many years. The AVL-sponsored Gordon Millar Award – recognition for an individual's or company's philanthropic support – goes to John Deere. We will acknowledge the future through our Young Industry Leader awardees, Jamal Madni of The Boeing Company and Shahjada Pahlovy of Dynax Corporation.

Most importantly, we honor all of you who help make real the work of the Foundation. You may be a volunteer, a donor, a teacher, an executive, or a company that has been generous in your support. Individually and collectively, the future STEMs from you. You are helping us as we encourage curiosity in STEM fields and help young people discover the joy in learning – a true formula for success. For that, we salute you, and we thank you.

Together, we can look forward to many more years of successfully giving our children the drive, desire and joy for inventing the future. Tonight, we celebrate the natural curiosity of our young people and the moments of discovery that keep them interested in science, technology, engineering and math. Many of those moments begin with you and we thank you for being here. Enjoy your evening!

Mazen Hammoud
Chairman
SAE Foundation Board of Trustees

Karen L. Healy & Joyce Weishaar
Co-Chairs
2016 SAE Foundation Annual Celebration

Balance.

Through hands-on experience, guidance and mentorship Aisin understands the importance of a balanced and seasoned team.

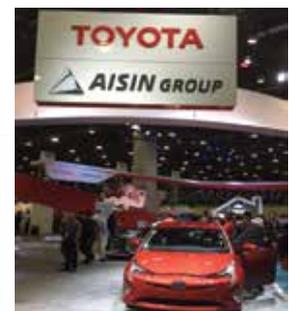
Successful companies inspire excellence and future generations of leaders. They act responsibly and in harmony with the values of customers, suppliers, team members, and community.



Aisin stands proudly with the SAE Foundation for Science and Technology for the bridges it builds between industry and the community of young people.



*Proud to have been selected as Toyota's
Tier One Strategic Partner for the
2016 SAE World Congress & Exhibition.*



SYSTEMS SOLUTIONS • FUEL EFFICIENCY • SAFETY • COMFORT and CONVENIENCE

AGENDA

Master of Ceremonies

John McElroy, Host of Autoline.tv

Welcome and Introductions

Dinner

Presentation of Donald W. Ableson Award for Visionary Leadership

2016 Recipient

Cuneyt L. Oge

SAE International President

Presentation of Gordon Millar Award

2016 Recipient

John Deere

Presentation of Young Industry Leadership Awards

2016 Recipients

Jamal Madni

The Boeing Company

Dr. Shahjada Pahlovy

Dynax Corporation

Presentation of SAE Foundation Industry Leadership Award

2016 Recipient

Mark Fields

President and Chief Executive Officer

Ford Motor Company

Sponsored by





Thanks to the SAE Foundation, The Future Looks Bright!

**YOUR DEDICATION TO SCIENCE AND TECHNOLOGY EDUCATION
INSPIRES US ALL.**

Our industry is highly dependent on the next generation of engineers to lead us into the future. Thank you, SAE Foundation, for encouraging young people to participate and excel in science, technology, engineering and math (STEM), and showing them the promise and possibilities of our dynamic industry.

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Q: Why did **TOYOTA** donate \$1 Million to the AWIM[®] Learn Twice initiative?

A: It's simple math...



engineer

+ future
engineer

awesome

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Corporate Tables

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Cooper Standard	Rassini
DSM	Roush
Federal-Mogul Corporation	Society of Plastics Engineers
GKN Driveline	Tower International
Intellcosting	Trinseo

Inspiring a new generation of innovation.



As a technology-driven company, BorgWarner actively invests in STEM education, igniting the spirit of innovation in students of all ages. We are proud of our long standing commitment to the SAE Foundation and their efforts to develop educational programs that lead to those truly AHA! moments.

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MENTOR SPONSORS

The following companies have expressed their commitment to nurturing emerging engineers by agreeing to be Mentor Sponsors. Mentor Sponsors provide an opportunity for university students to attend this evening and to network among industry executives. Mentor Sponsors share their tables with five college students who aspire toward careers in engineering.



2016 SAE FOUNDATION CHAIRMAN'S CIRCLE



The SAE Foundation is honored to have these companies bear the distinction of admission to the Chairman's Circle in recognition of their support of the Foundation's programs and goals. Each company has supported our efforts with a minimum gift of \$100,000 to the Foundation over the past year. For your support, we salute you. For your passion, we thank you.

Inspiring curiosity in STEM.



Delphi Foundation, Inc. is a proud supporter of the SAE Foundation and its efforts to help students succeed, educators excel and companies achieve business goals.

THE DONALD W. ABLESON AWARD FOR VISIONARY LEADERSHIP

- Recipient must have more than 20 years of service to the mobility community, representing industry, academia or government and must have made notable contributions serving in a leadership capacity.
- Recipient must have served on the SAE Foundation Board or the SAE Foundation Canada Board of Directors for more than three years or be a leader who has made significant contributions toward improving science, technology, engineering and math (STEM) education.
- Recipient must have led at least one initiative that resulted in noteworthy advancements of the SAE Foundation's mission.

Past Recipients Include:

- 2015 Mark A. Johnson, General Motors Corporation
- 2014 Joseph B. Anderson Jr., TAG Holdings LLC
- 2013 Neil A. Schilke, Schilke Systems Engineering, LLC
- 2012 Joseph M. Colucci, Automotive Fuels Consulting
- 2011 Rodica Baranescu PhD, Navistar International Corp. (Retired)
- 2010 Daniel M. Hancock, General Motors Corporation
- 2008 Arnold W. Siegel, UCLA (retired)
- 2007 Neil De Koker, Original Equipment Suppliers Association
- 2006 William T. Birge, Honeywell (retired)
- 2005 Fred Nader, AutoTech Technology Development, Inc.
- 2004 Raymond A. Morris, SAE International
- 2004 William G. Agnew, General Motors Corporation (retired)

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**drive
innovation**

2016 RECIPIENT OF THE DONALD W. ABLESON AWARD FOR VISIONARY LEADERSHIP



Cuneyt Oge

For his nearly 10 years of dedicated service as a member of the SAE Foundation Board of Trustees, and his continuous support of SAE's STEM programs, Mr. Cuneyt L. Oge is named the 2016 recipient of the Donald W. Ableson Award for Visionary Leadership.

Cuneyt is a retired partner of PWC's PRTM Management Consulting business. For 34 years, he was a consultant in strategy and operations to leading firms in North America, Western and Eastern Europe, and South America. In recent years, he has been active in the emerging sectors for Clean Technology and Electric Vehicles. He currently serves as SAE International President and as a member of the Board of Directors for Deltawing Technologies -- a company

working to transform a highly efficient race car into a road car. He continues to consult automotive industry clients.

Prior to joining PRTM, Cuneyt was a vice-president in the worldwide automotive consulting practice of A. T. Kearney. He worked previously as a consultant with Booz Allen and Hamilton, and also worked for the Olin Chemical Corporation.

He is a graduate of the University of Massachusetts where he earned a bachelor's degree in Industrial Management and a master's degree in Industrial Engineering and Operations Research. Cuneyt also spent time at Stanford University's Graduate School of Business doing post-graduate research on Technology Management.

Oge is a frequent speaker on globalization, product strategy, technology management and developments in Asia. He has published several articles on the subject areas and speaks several languages.

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THE GORDON MILLAR AWARD

Sponsored by:



The Gordon Millar Award provides special recognition of the individual or organization that best demonstrates continuous philanthropic support of the SAE Foundation's mission to encourage and increase student participation and achievement in science, technology, engineering, and mathematics. The award is funded by AVL.

Past Recipients:

- 2015 Kia Motors Manufacturing Georgia
- 2014 Toyota USA Foundation
- 2013 GM Foundation
- 2012 Dan and Vicky Hancock
- 2011 Arne and Steffi Siegel

John Deere



Pat Barnes

John Deere

Well over 9 billion people are expected to live on our planet by 2050. Feeding, clothing, and housing them all will pose of the greatest challenges our world has ever known. This is the main reason that John Deere launched "John Deere Inspire," its global initiative committed

to increasing the number of high quality, diverse young women and men who love, study, and pursue careers in STEM (science, technology, engineering, and math).

"Innovation has been one of John Deere's core values over its almost 180-year history," says Pat Barnes, program director for Deere's global STEM initiative. "For our business to be successful for the next 180 years, and for John Deere to serve its higher purpose of improving living standards for people across the world, we must grow a global technical workforce with the necessary skills to create the innovations upon which our world will depend."

Today, John Deere invests over \$1 million in global STEM education programs each year to inspire thousands of future innovators who will help overcome our global challenges. A proud supporter since 1994 of SAE International's A World in Motion program, John Deere has invested more than \$1 million in this program over its



history. To complement and strengthen these investments, John Deere also strives to inspire its employees to add their time and talents as volunteers for STEM activities, including as classroom speakers, mentors, and coaches.

"John Deere has a proud heritage of community service going back to our founder," says Barnes. "This heritage becomes stronger each and every year. In 2015, thousands of John Deere employees volunteered more than 115,000 hours in their home communities - a record for us - with almost 20 percent of these hours dedicated to supporting STEM activities."

Pat Barnes, Program Director, Global STEM for John Deere, will accept the Millar Award on behalf of the company.



JOHN DEERE

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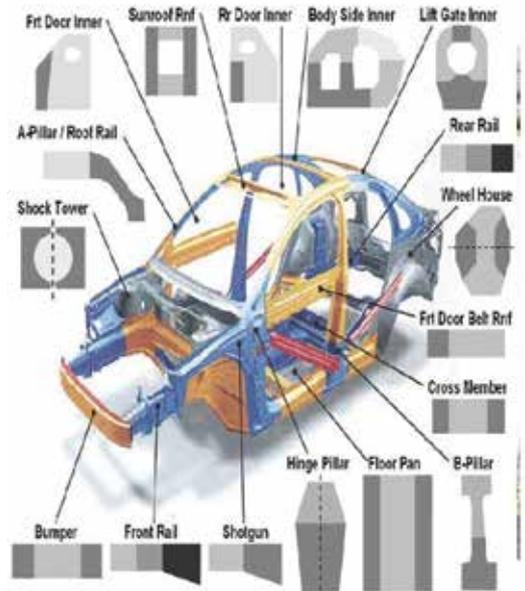
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Proven Cost Reduction Initiatives

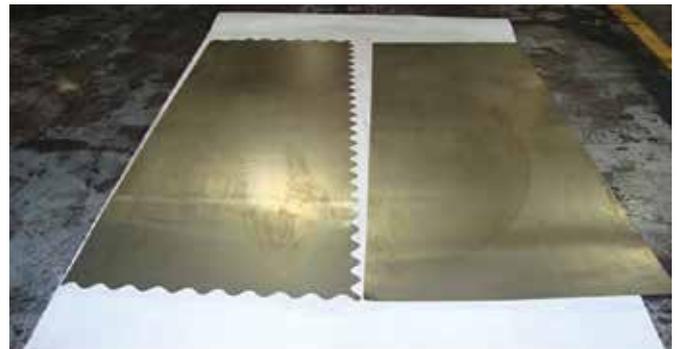
Locations:

**(2) Dearborn and (2) Woodhaven, MI /
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2016 RECIPIENT OF THE YOUNG INDUSTRY LEADERSHIP AWARD

The Young Industry Leadership Award recognizes professionals with less than 12 years of industry experience, who have significant accomplishments and potential for leadership growth.

Past Recipients:

- 2015 Dr. Maria Cristina Herrera (Caterpillar Inc.) and Dr. Scott Curran (Oak Ridge National Laboratory)
- 2014 Dr. Yanping Xia (Delphi Automotive Thermal Systems) and Sridhar Raveendran (Caterpillar Electronics)
- 2013 Adam Timmons, PhD (Chrysler Group LLC) and Kaustav Sinha, PhD (The Dow Chemical Company)
- 2012 Shady El Safty (General Motors) and Kumar Prasad Telikeypalli (Eaton Corporation)
- 2011 Stacy Martin (General Motors) and Jennifer C. Wheeler (AVL Powertrain Engineering, Inc.)

subject matter expert, authoring more than 100 technical software milestone reviews – more than double any other member of the integrated team. He also created a user’s manual for all integrated teammates, and was involved with three error-free software builds. His team was honored as Boeing’s Satellite Development Center’s Team of the month for May 2015. Madni served on several other project teams, and currently leads the Laser Communications business development for Boeing’s Network and Space Systems unit. Additionally, he has helped garner more strategic partnerships and investment collaborations than the previous six years combined. He is spearheading strategy efforts for new and advanced technologies such as cloud computing, deep learning analytics and phased arrays. He continues to be involved in leading a number of Boeing’s efforts in employee development, including a mentoring process, a points-based engagement system, and unique monthly events of interactive panels and speakers.

Jamal has been influentially involved in the Upward Bound Math Science (UBMS) program at Cal State Long Beach, and served as a professor of the flagship Biomedical Engineering course. He also created and led the College Application Preparatory Program (CAPP) mentoring over 50 low-income, first generation, and under-represented minority students, successfully placing students majoring in STEM at Harvard, MIT, Cornell and campuses across Cal State and the University of California. He has spearheaded a virtual school program, enabling Boeing employees to present to and mentor more than 100 students on three-month long projects using both teleconferencing and webcams.



Jamal Madni

The Boeing Company

A unique skill for both technical and cultural leadership helps Jamal Madni navigate equally between the demands of his engineering assignments and Boeing’s efforts to build teamwork and cross-functional project success. Based in El Segundo, California, Madni has

been recognized for his leadership over a broad range of efforts that garner both a return on investment and a return on the company’s culture.

Colleagues describe Jamal as “dedicated to paving the intercession of the product and people – work that often involves infusing art with engineering.” He has been impactful in both his work for Boeing and work done on behalf of SAE. At Boeing, he initially was a flight software engineer for a classified program, responsible for design, development and testing of space vehicle altitude, determination and navigation of flight software. He is a

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2016 RECIPIENT OF THE YOUNG INDUSTRY LEADERSHIP AWARD



Dr. Shahjada Pahlovy
Dynax Corporation

A multi-cultural and multi-lingual leader, Dr. Pahlovy navigates the global engineering community with relative ease. He has published more than 30 papers in national and international journals, and also invented

the 3S terminology (Save materials, Save energy, Save environment) for the transmission clutch industry. He speaks six languages and has a broad-based global education, with degrees from universities in Japan, China and Bangladesh. In addition to his responsibilities with Dynax, he also is an assistant professor with the Industrial Science and Technology faculty / Advanced Engineering Department of Tokyo University of Science.

Dr. Pahlovy has received a number of awards from several countries for his work. Colleagues describe him as “visionary, creative, possessing extraordinary skill and performance, self-controlled, modest, and dynamic.” Among his career highlights are:

- Working for reduction of CO-2 emissions by improving efficiency of transmission clutches, with a goal of reducing drag, torque or spin loss in disengaged wet clutch
- Developing a mathematical model to estimate drag torque or spin loss, helping to optimize groove design information
- Receiving the SAE SQ Quality Leadership Award for 2015
- Leading a joint research project with the University of Michigan, Ford Motor Company and Dynax, with focus on new models, and driving a multicultural team
- Chairing several industry sessions for the International Tribology Conference in Tokyo
- Serving as a reviewer of the SAE Journal and other industry publications

Dr. Pahlovy will continue to serve as a volunteer reviewer for the SAE Journal, and to both lead or speak at SAE forums and conferences. He hopes to become a member of the SAE Transmission Clutch Steering Committee and to provide support to the Japan-China Advanced Tribology Forum.



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INNOVATION IS THE FACE OF CHANGE.

Nissan is proud to support the SAE Foundation and its ongoing contributions to science and technology education.

Nissan. Innovation that excites.



NISSAN

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INDUSTRY LEADERSHIP AWARD

The Industry Leadership Award recognizes individuals who have made meaningful contributions to the mobility industry. Nominees must have achieved the following:

- a significant level of success in their STEM careers
- demonstrated innovation and risk taking
- established a new direction or developed a position which challenged their industry
- made contributions outside of their industry, exemplified through community education, philanthropic or government activities

Past Award Recipients

- 2015 Sergio Marchionne, Fiat Chrysler Automobiles
- 2014 Osamu “Simon” Nagata, Toyota Motor Engineering & Manufacturing North America
- 2013 Mary T. Barra, General Motors
- 2012 Edsel B. Ford, II, Ford Motor Company
- 2011 John Krafcik, Hyundai Motor America
- 2011 Peter Marks, Chairman, President and CEO, Robert Bosch LLC
- 2010 Rodney O’Neal, Delphi
- 2009 Jim Press, Chrysler LLC
- 2008 Alan Mulally, Ford Motor Company
- 2007 Carlos Ghosn, Nissan Motor Co., Ltd.
- 2006 Robert A. Lutz, General Motors Corporation
- 2005 Dr. Shoichiro Toyoda, Toyota Motor Corporation
- 2004 J.T. Battenberg, III, Delphi Corporation
- 2003 Gary L. Cowger, General Motors Corporation
- 2002 Heinz C. Prechter, ASC Incorporated (posthumous award)
- 2001 Shamel T. Rushwin, Ford Motor Company
- 2000 Donald E. Hackworth, General Motors Corporation
- 1999 James J. Padilla, Ford Motor Company
- 1998 Dennis K. Pawley, Chrysler Corporation
- 1997 G. Richard Wagoner, Jr., General Motors Corporation



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2016 RECIPIENT OF THE INDUSTRY LEADERSHIP AWARD



Mark Fields

PRESIDENT AND CHIEF EXECUTIVE OFFICER
FORD MOTOR COMPANY

Mark Fields was named president and chief executive officer of Ford Motor Company on July 1, 2014. He is also a member of the company's board of directors.

Under Fields' leadership, Ford is expanding its business model to be both an auto and a mobility company. The company is committed to growing and investing in its core business of designing, manufacturing, marketing, financing and servicing a full line of Ford cars, trucks, SUVs and electrified vehicles, as well as Lincoln luxury vehicles. At the same time, Ford is aggressively pursuing emerging opportunities through Ford Smart Mobility – the company's plan to be a leader in connectivity, mobility, autonomous vehicles, the customer experience and data and analytics.

Previously, Fields served as chief operating officer, Ford Motor Company, a position to which he was named in December 2012. In this role, and as CEO, Fields was responsible for overseeing Ford's fastest global manufacturing expansion in 50 years and managing the most aggressive global product introduction schedule in the company's history.

Prior to this, Fields served as executive vice president, Ford Motor Company, and president, The Americas, a position to which he was named in October 2005. In this role, he led the development, manufacturing, marketing and sales of Ford and Lincoln vehicles in the United States, Canada, Mexico and South America, and was responsible for the transformation of the company's North America operations and record profitability.

Fields also formerly served as executive vice president, Ford of Europe and Premier Automotive Group, where he led all activities for Ford's premium vehicle business group and for Ford brand vehicles manufactured and sold in European countries. Prior to that, Fields was chairman and chief executive officer, Premier Automotive Group.

Fields joined Ford Motor Company in July 1989. From 2000 to 2002, he was president and chief executive

officer, Mazda Motor Corporation, leading the company through a period of significant transformation. During this time, Fields was named a Global Leader of Tomorrow by the World Economic Forum in 2000 and CNBC Asia Business Leader – Innovator of the Year in 2001.

Prior to this, he held a number of positions in both North America and South America, including managing director, Ford Argentina.

Fields was elected to the IBM board of directors in January 2016. He also currently serves as chair of the US-China Business Council.

Born January 1961, Fields holds an economics degree from Rutgers University and an MBA from Harvard Graduate School of Business.



Together, we can be a vehicle for change.

Faurecia is proud to support the SAE Foundation and its STEM programs. We offer our congratulations to Mark Fields and all those being honored. Never stop being curious -- following new roads makes for an exciting journey.

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THE TOTAL STEM SOLUTION

Bringing students, teachers and industry together for a more innovative future

1

K-3 PRIMARY

Five hands-on science and literature units that introduce the earliest of learners to science, technology, engineering and math (STEM) concepts.



2

ELEMENTARY 4-6

Uses more analytical skills to work through the Engineering Design Experience.



3

MIDDLE SCHOOL 6-8

Capitalizes on acquired problem solving skills and further illustrates the real-world application of age appropriate math and science concepts.



4

HIGH SCHOOL

The unique F1 in Schools™ Challenge introduces middle and high school aged students to the engineering process. From business planning, design, manufacturing, analyzing and marketing to racing, students get to participate in a true hands and minds-on activity.



5

COLLEGE

SAE Collegiate Design Series™ (CDS) is an interdisciplinary real-world learning experience that prepares both graduate and undergraduate students for the workforce.

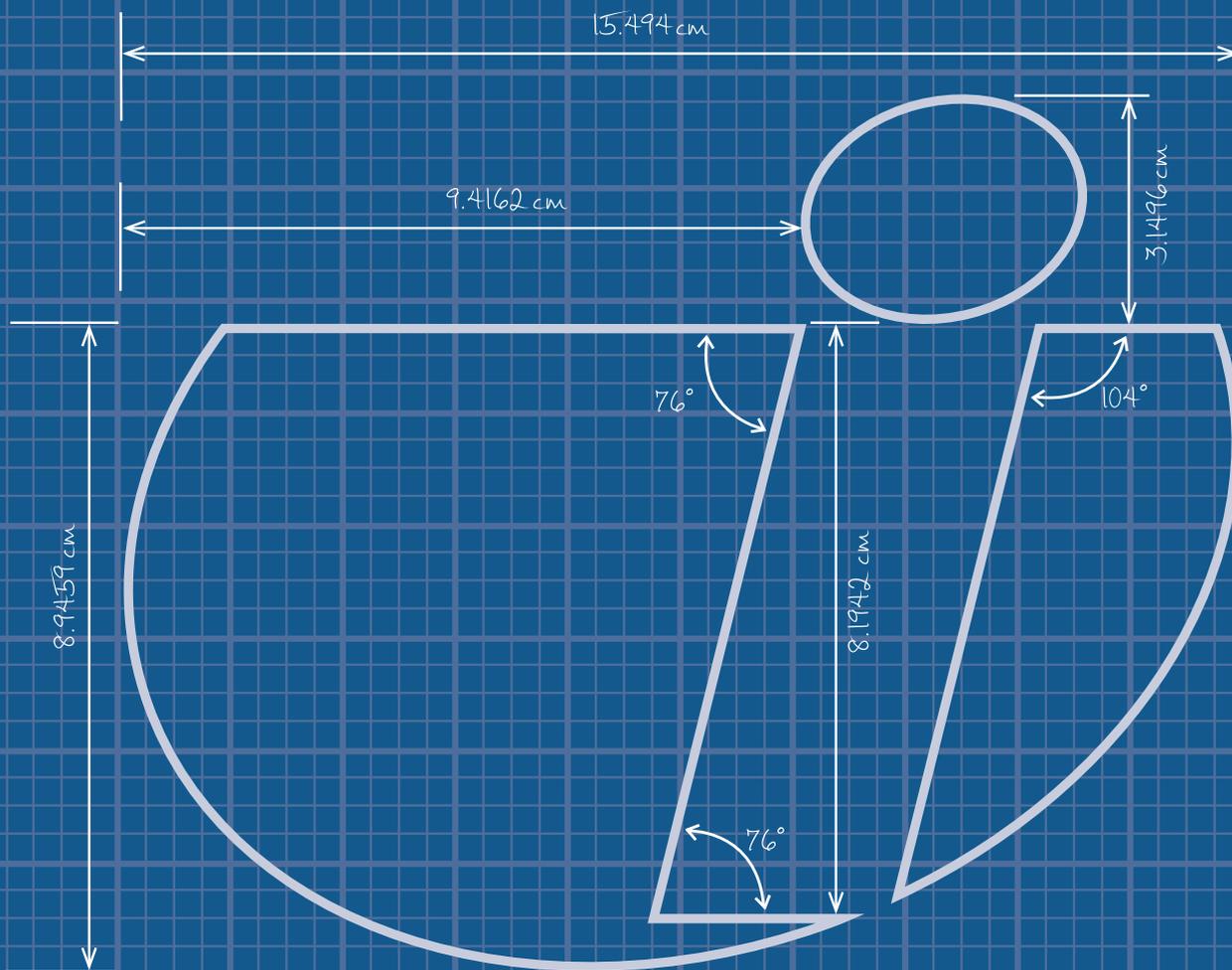


6

PROFESSIONAL SUPPORT

Many industry professionals return to volunteer with the programs they credit for their success.





There's a science to elevating the driving experience.

The feel of the interior, the overhead view through the sunroof, the excitement that arises when the door closes and the drive begins ... these are the moments that make those of us in the auto industry proud of what we do. And it all starts with the ingenuity of men and women educated in science, technology, education and math. We're honored to help recognize Mark Fields and his commitment to advancing STEM education and supporting future leaders.



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WHY STEM MATTERS

Compared to other countries around the world, according to the World Economic Forum, the United States ranks:



IN EDUCATIONAL SYSTEM QUALITY.



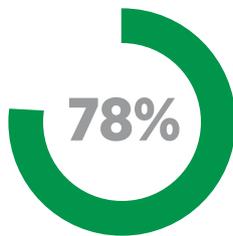
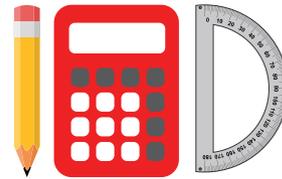
IN PRIMARY EDUCATION QUALITY.



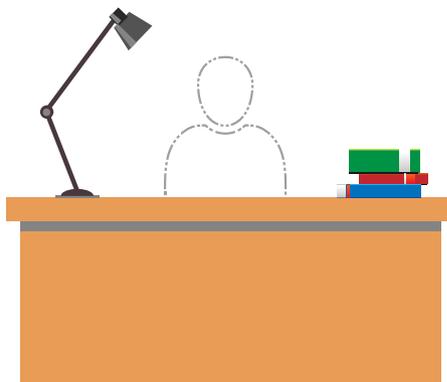
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ONLY 26% OF AMERICAN HIGH SCHOOL SENIORS ARE CONSIDERED PROFICIENT IN MATH.



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A WORLD IN MOTION

Primary School Challenges

The unique feature of this program is the use of portions of a problem-solving process employed by engineers working in teams. The “Engineering Design Experience” for Primary students consists of: Set Goals, Build Knowledge, Design, Build and Test and Present.

These activities for students in grades K-3 were developed through generous support from Nissan, North America.

Making Music

In the newest Making Music Challenge, students explore sound and vibrations. Students learn how the human eardrum works and explore concepts such as pitch and longitudinal and transverse waves. They collect information through hand on lessons and engineer a musical instrument according to specific criteria.

Rolling Things

Launching cars from ramps, students investigate the effects different ramp heights and car weights have on distance traveled, measuring and recording data gathered through variable testing.

Pinball Designers

Students design a homemade pinball game and explore the behavior of the different components, such as the pinball, ball traps, and bumpers.

Engineering Inspired By Nature

Students investigate methods of seed dispersal in nature and then use that knowledge to create paper helicopters and parachutes.

Straw Rockets

Students create a straw rocket that flies the farthest and highest through optimizing their own design.

Elementary School Challenges

Skimmer Challenge

Students construct paper sailboats and test the effects of different sail shapes, sizes and construction methods to meet specific performance criteria. Friction, forces, the effect of surface area and design are some of the physical phenomena students encounter in this challenge.

JetToy Challenge

Students make balloon-powered toy cars that meet specific criteria: distance traveled, weight carried, accurate performance and speed. Jet propulsion, friction, air resistance and design are the core scientific concepts students explore in this challenge.

Gravity Cruiser Challenge

Students focus on understanding the relationships between the “sweep” of a lever arm, the number of winds a string makes around an axle and the distance the gravity cruiser travels. Students also investigate how the diameter of the wheels and axles, and the amount of weight placed on the level, affect the gravity cruiser’s speed and distance. This challenge introduces a rich activity in critical thinking, and students learn how to use the experimental method to test hypotheses and solve a tricky engineering problem. This curriculum was developed through generous support from the GM Foundation.

Middle School Challenges

Fuel Cell Challenge

Student teams design a toy car that uses a PEM (Proton Exchange Membrane) fuel cell to power the electric motor. Elements of electrical currents, “Green Design” and transformations of energy are explored as the teams develop their project. This curriculum was developed through generous support from the GM Foundation.

Motorized Toy Car Challenge

Students develop new designs for electric gear driven toys. To meet a specific set of design requirements, students must write proposals, draw sketches and work with models to develop a plan. Force and friction, simple machines, levers and gears, torque and design are core concepts covered.

Glider Challenge

Students explore the relationship between force and motion and the effects of weight and lift on a glider. The glider activity culminates in a book-signing event where each design team presents its prototype, and the class presents its manuscript to Mobility Press “representatives” and members of the local community. Students learn the importance of understanding consumer demands and the relationships between data analysis and variable manipulations.

AWIM.SAE.ORG



Inspiring the Next Generation's Imagination in the Classroom and Lab

Lear Corporation proudly joins in sponsoring the **2016 SAE Foundation Award Celebration** honoring **Ford Motor Company CEO Mark Fields** as the 2016 SAE Foundation Industry Leadership Award recipient.

As one of the leading global suppliers of automotive seating and electrical systems, Lear Corporation proudly supports the SAE Foundation in its mission to promote student participation in the sciences and engineering.

By together raising funds today to nurture a passion for science, technology, engineering and math, we all build a future where tomorrow's advances can be realized by those the SAE Foundation assists.



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F1 IN SCHOOLS

High School Challenges

In the F1 in Schools® Challenge, groups of three to six students form a team, assume roles and prepare a business plan, develop budgets and raise sponsorships to support materials needed and team travel to regional and national competitions.

Using 3D CAD (Computer-Assisted Design) software the team designs a Formula One™ car of the future. The aerodynamics of their design is analyzed for drag co-efficiency in a Virtual Reality Wind Tunnel using CFD (Computational Fluid Dynamics) software. Then, using 3D CAM (Computer-Aided Manufacture) software, the team evaluates the most efficient machining strategy to make the car out of balsa wood using a CNC (Computer Numerical Controlled) Router.

The CO₂ cartridge-powered cars are tested using wind and smoke tunnel equipment to fine-tune designs to

optimize speed and drag co-efficiency. The cars are put to the ultimate test on an elevated 24-meter track. During the race, teams are judged on car speed as well as supporting evidence of their design in portfolios. Each team's presentation and marketing display in 'the pits' is factored into their performance.

A large advertisement banner for Toray Automotive Solutions. The background features a blurred, high-speed image of light trails in shades of blue, white, and orange, suggesting motion and speed. In the top right corner, the Toray logo is displayed in blue, with the tagline "Innovation by Chemistry" underneath. At the bottom, the text "TORAY AUTOMOTIVE SOLUTIONS" is written in large, white, sans-serif capital letters.

TORAY Innovation by Chemistry

TORAY AUTOMOTIVE SOLUTIONS

Toray congratulates Ford CEO Mark Fields for receiving the 2016 Industry Leadership Award and salutes SAE International for supporting the next generation of STEM students.

As a leading integrated chemical industry group developing its business worldwide, Toray offers a broad range of high-performing, cost-effective materials for the automotive industry, including solutions for weight reduction, engine downsizing, fuel efficiency and CO₂ reduction.

**For more information, contact Toray Resin Company
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COMMITTED TO MAKING A DIFFERENCE

Magna International is proud to sponsor the 2016 SAE Foundation Annual Celebration to honor industry leaders dedicated to supporting STEM education. Special thanks to all of the corporations, individuals and communities for making a difference and the SAE Foundation as they continue to inspire the next generation of innovators.

Together we can make a difference.

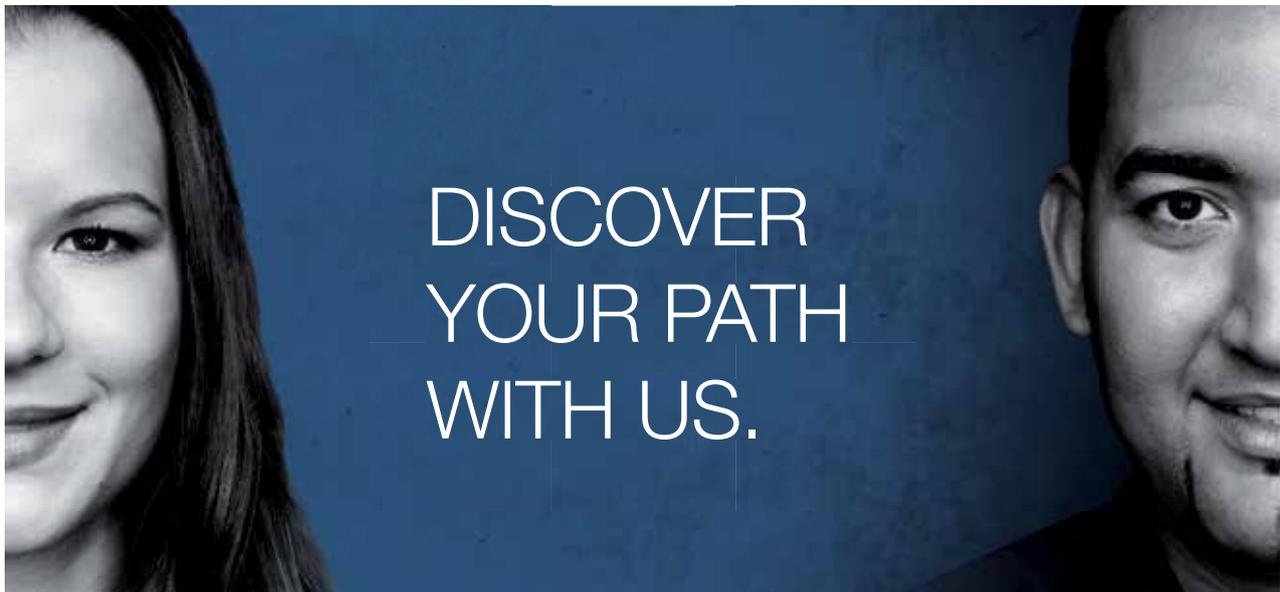


COLLEGIATE DESIGN SERIES PROGRAMS

The Collegiate Design Series™ (CDS) has set the standard for exceptional design competitions where engineering students obtain hands-on experience in the design, manufacture and testing of real vehicles. These college-level competitions have enhanced the educational experience of engineering students around the world and inspired the next generation of young talent.

These competitions include:

- **Formula SAE®:** The premier event for aspiring automotive engineers in which teams of college students design, build, and race mini-Formula-style race cars in either IC or electric class.
- **Aero Design®:** Teams of college students build and fly gas-powered aircraft models. The object of this competition is to design and build a model aircraft that can take off and land while carrying the predicted maximum cargo.
- **SAE Baja™:** These regional competitions pit student-designed off-road vehicles against one another, over rough terrain, and through water.
- **Supermileage®:** This competition provides students with the opportunity to set world fuel economy records while earning practical experience in design and fabrication. Some student-designed vehicles have delivered in excess of 2,000 m.p.g.
- **Clean Snowmobile Challenge®:** This competition provides students with the opportunity to design and build snowmobiles that perform at the same level as stock snowmobiles, but are “cleaner” and quieter.



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ADVANCING THE SOLUTION

Pushing for Excellence

SAE International and the SAE Foundation recognize the efforts of mobility industry professionals, STEM educators and both undergraduate and graduate students who have excelled in their areas with a robust Awards & Scholarships program.

SAE Medal of Honor

Established in 1986, this award recognizes and honors a living SAE member for unique and significant contributions to SAE which strengthen or add to SAE's ability to further its purpose. The significance of such contribution(s) shall have been tested over time and shall be regarded as a major factor in SAE's success. SAE Past Presidents are eligible for this award, but the contribution(s) for which they may be nominated must have been initiated and proven as major factors to SAE's success after their term of office has been completed; any initiated prior to, or during their Presidential term, are not acceptable as the basis for nomination.

A4A/SAE NDT "Better Way" Award

The A4A/SAE NDT Better Way award is sponsored by Airlines for America (A4A) and SAE International. The "Better Way" award recognizes a government-industry team that has developed and applied a technology, technique, process, or policy that advances inspection or test of civil/commercial aircraft structure, aircraft components, or aircraft systems. Improvements will be assessed as a function of process sensitivity, reliability, and cost effectiveness.

SAE/Arnold W. Siegel Humanitarian Award

Established in 2014 and made possible by a gift from Arnold and Stephanie Siegel, this award recognizes those whose mobility industry contributions have made a lasting benefit to humanity. The award honors individuals, teams or organizations who have made a significant, positive, multi-generational impact on the world such as, but not limited to: mobility safety or the environment, creating a safer healthier world.

SAE/Magnus Hendrickson Innovation Award

This award honors renowned inventor and businessman Magnus Hendrickson, who founded Hendrickson Motor Truck Company in 1913, by recognizing individuals or teams (SAE members or non-members) whose efforts in commercial vehicle dynamics represent true innovation and have created significant, lasting change in the commercial vehicle industry.

Other Awards Include:

Ableson Award for Visionary Leadership
Arch T. Colwell Cooperative Engineering Medal
Arch T. Colwell Merit Award
Arnold W. Siegel International Transportation Safety Award
Award for Research on Automotive Lubricants
Barry D. McNutt Award for Excellence in Automotive Policy Analysis
Bill Agnew Award for Outstanding AWIM Volunteers
Charles M. Manly Memorial Medal
Clarence L. (Kelly) Johnson Aerospace Vehicle Design and Development Award
Cliff Garrett Turbomachinery Engineering Award
Daniel Guggenheim Medal
Distinguished Section Member Award honoring Noble R. Patterson
Distinguished Younger Member Award honoring Edward N. Cole
Edward N. Cole Award for Automotive Engineering Innovation
Elmer A. Sperry Award
Environmental Excellence in Transportation Award
Excellence in Engineering Education - Triple "E" Award
Forest R. McFarland Award
Franklin W. Kolk Air Transportation Progress Award
Franz F. Pischinger Powertrain Innovation Award
Gary Dickinson Award for Teaching Excellence
Harry L. Horning Memorial Award
Henry Ford II Distinguished Award for Excellence in Automotive Engineering
Henry O. Fuchs Student Award
International Leadership Citation
J. Cordell Breed Award for Women Leaders
James M. Crawford Technical Standards Board Outstanding Achievement Award
L. Ray Buckendale Lecture
Lloyd L. Withrow Distinguished Speaker Award
Lloyd Reuss Award for Teaching Excellence
Marvin Whitlock Award
Max Bentele Award for Engine Technology Innovation
Myers Award for Outstanding Student Paper
Honeywell Outstanding Collegiate Branch Award

Ralph K. Hillquist NVH Lifetime Achievement Award
 Ralph H. Isbrandt Automotive Safety Engineering Award
 Ralph R. Teetor Educational Award
 Rodica Baranescu Award for Technical & Leadership Excellence
 Rumbaugh Outstanding Student Leader Award
 Russell S. Springer Award
 SAE Aerospace Engineering Leadership Award
 SAE Delco Electronics Intelligent Transportation Systems Award
 SAE Emeritus Recognition
 SAE Engineering Meetings Board Outstanding Oral Presentation Award
 SAE Faculty Advisor Award
 SAE Fellow Grade
 SAE Foundation Industry Leadership Award
 SAE Foundation's Young Industry Leadership Award
 SAE Heinz C. Prechter Award for Automotive Excellence
 SAE John Johnson Award for Outstanding Research in Diesel Engines
 SAE John Melvin Award for Motorsport Safety
 SAE Sid Olsen Engineering Executive of the Year Award
 SAE/AEM Outstanding Young Engineer Award
 SAE/AISI Sydney H. Melbourne Award for Excellence in the Advancement of Automotive Sheet Steel
 SAE/InterRegs Standards and Regulations Award
 SAE/Timken-Howard Simpson Automotive Transmission and Driveline Innovation Award

Steven M. Atkins Ability and Achievement in Science, Engineering, and Technology (AASET) Award
 Subir Chowdhury Medal of Quality Leadership
 Thomas H. Speller Award
 Vincent Bendix Automotive Electronics Engineering Award
 William Littlewood Memorial Lecture
 William R. "Bill" Adam Formula SAE Vehicle Development Grant
 Wright Brothers Medal

Scholarships

Last year, SAE awarded \$85,000 in scholarships to aspiring engineers.

BMW / SAE Engineering Scholarship
 Ford / SAE Foundation Scholarship Fund
 Dan and Vicky Hancock Scholarship for Mechanical Engineering Excellence
 Edward D. Hendrickson / SAE Engineering Scholarship
 Donald and Barbara Mozley Scholarship
 Tau Beta Pi / SAE Engineering Scholarship
 TMC / SAE Donald D Dawson Technical Scholarship
 Fred M Young Sr/SAE Engineering Scholarship
 Ralph K. Hillquist Honorary SAE Scholarship
 SAE / David Hermance Hybrid Technologies Scholarship
 SAE Long Term Member Sponsored Scholarship
 Yanmar/ SAE Scholarship

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Congratulations to Mark Fields for being honored with the SAE Foundation Industry Leadership Award.

AAM designs, engineers and manufactures driveline systems and solutions that are smarter, smaller, lighter, electric, more powerful and more efficient. We're in the business of Delivering POWER that keeps the world moving.
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2016 SAE FOUNDATION ANNUAL CELEBRATION COMMITTEE

The following leaders in the mobility industry have been strong stewards in promoting and supporting STEM education through their commitment to and planning of this evening's celebration.

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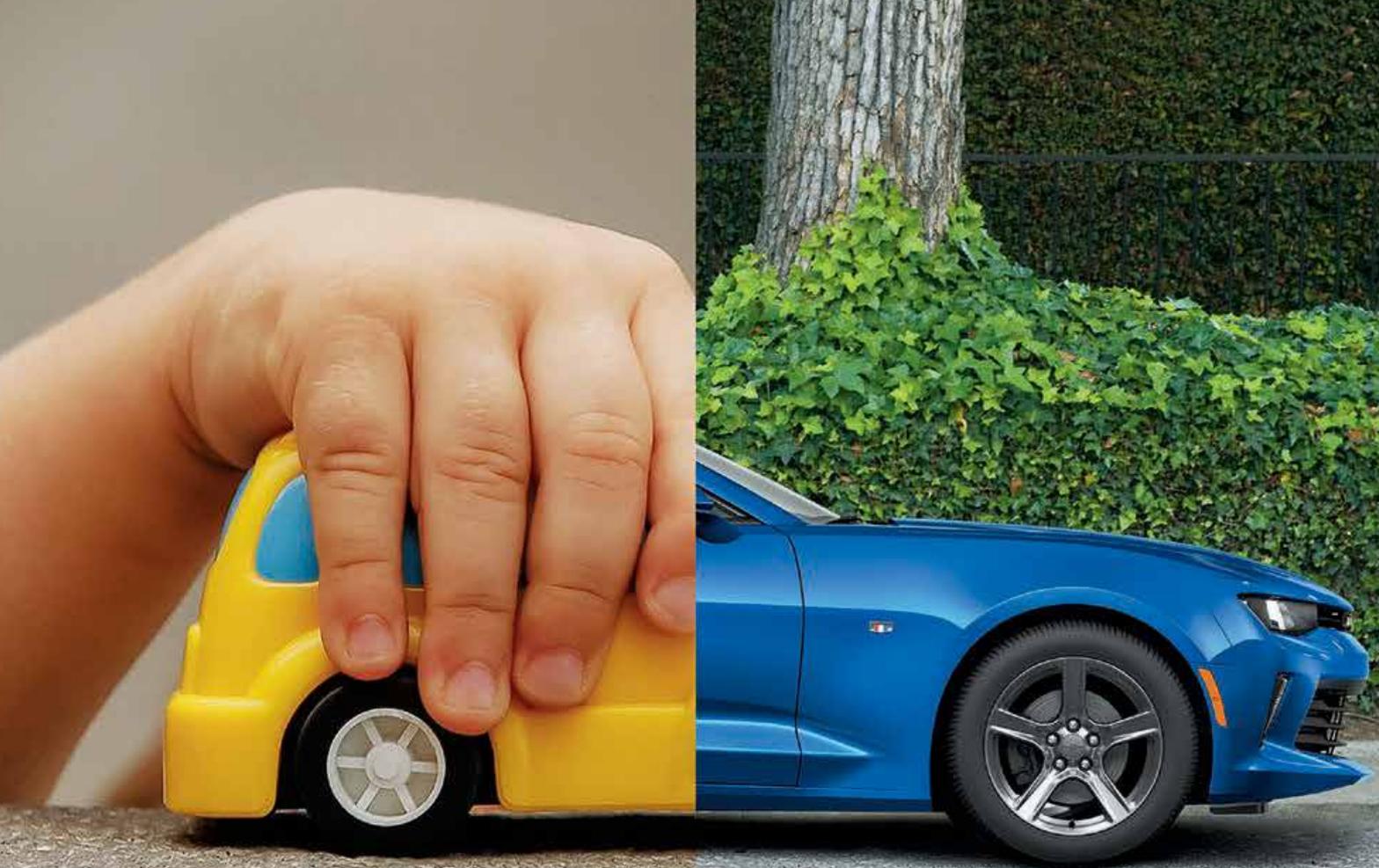


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STEM TAKES KIDS FROM PLAYING WITH CARS, TO BUILDING THEM.

General Motors proudly supports the SAE Foundation. Our future innovators are never too young to benefit from the Science, Technology, Engineering and Math educational programs you're developing.

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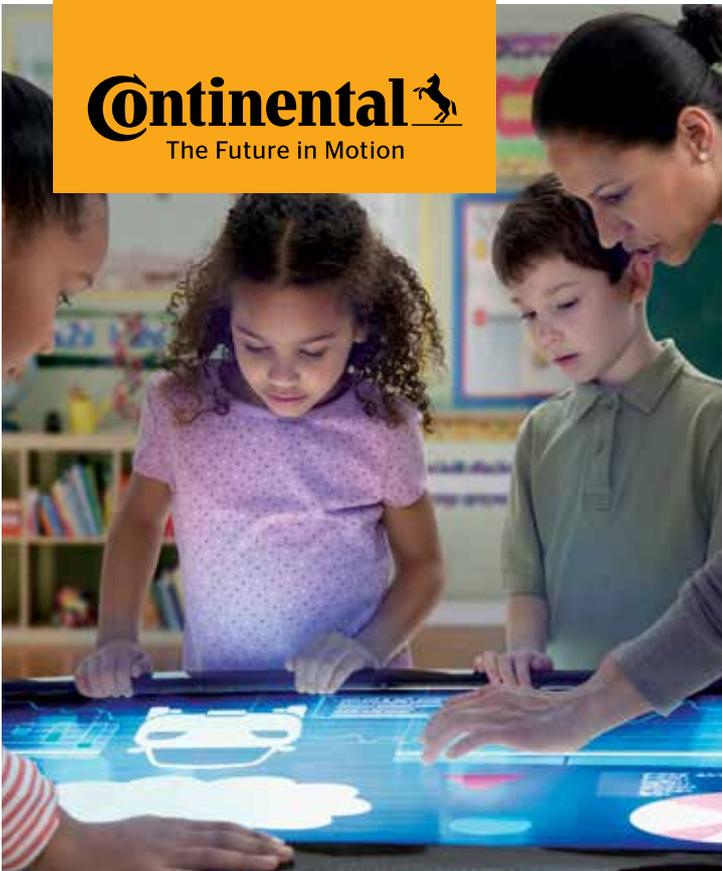
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Continental strongly supports the SAE Foundation's unique partnership with schools to inspire a passion for science, technology, engineering and mathematics. Our global team is proud to be a Gold Sponsor of this engaging, educational program.

Thanks to the commitment and vision of the SAE Foundation, kids are exploring the universe in new ways and discovering the power of innovation to move the world.

www.continental-automotive.com

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***Continental Structural Plastics congratulates Mark Fields, the
2016 SAE Foundation Industry Leadership Award winner.
Thank you for inspiring the next generation of innovators.***

As the challenges facing the auto industry become increasingly complex, automakers and suppliers alike will turn to today's youth to discover new ways to make our vehicles lighter, safer, smarter and more fuel efficient. We salute these aspiring engineers and technical experts and all those who support them.



www.cspplastics.com

Tenneco Congratulates Mark Fields, Recipient of the 2016 SAE Foundation Industry Leadership Award

Your achievements as a business and civic leader are helping to shape and inspire future generations of innovators.

Tenneco is proud to support Ford Motor Company in its mission of driving greater science, technology, engineering and math education for students everywhere.



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Reception	\$10,000	10	VIP+GEN	Full	Special recognition in all print materials w/logo, visual screens & script + reception signage
Platinum	\$10,000	10	VIP+GEN	Full	Recognition in printed program w/logo
Mentor	\$10,000	5	VIP+GEN	Full	Recognition in printed program w/logo + engraved memento; sponsor shares table with 5 students
Gold	\$8,000	5	VIP+GEN	Half	Recognition in printed program w/logo
Valet	\$7,500	4	VIP+GEN	Half	Recognition in printed program w/logo, signage in valet area, opportunity to place promo items in vehicles
Silver	\$5,000	2	VIP+GEN	Quarter	Recognition in printed program w/logo
Bronze	\$2,500	0		List	Recognition in printed program w/logo
Table	\$3,200	10	GEN	List	Recognition in printed program (list)
Ticket	\$350	1	GEN		

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Contact Email: Contact Phone:

Level of Support:

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400 Commonwealth Drive, Warrendale, PA 15096**



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TOGETHER WE MOVE MOBILITY FORWARD

Collaboration. Despite today's highly competitive world, it's still how problems are solved, challenges overcome, and advances are made.

Since 1905, SAE International, a professional society, has been providing the platform for that collaboration among those who want to advance mobility.

In fact, the sharing of knowledge to solve common problems was the impetus of SAE's earliest standardization efforts—efforts that benefit all of industry by setting expectations for quality, safety, and efficiency and allow for focus on innovation.

Yet, while today's mobility challenges are very different from those of yesterday's, automotive, aerospace, and commercial vehicle engineers continue to look to SAE International to connect with each other and the technical resources needed to advance themselves, their companies, and industry.

SAE International is the authority on vehicle engineering—developing more vehicle technical standards than any other organization, offering the largest library of vehicle engineering content, and bringing together the largest global network of engineers in the world.

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SAE INTERNATIONAL

The SAE Foundation is the charitable arm of SAE International, which strives to encourage and increase student participation and achievement in science, technology, engineering and math (STEM).

A recognized leader for innovative programs, the SAE Foundation serves to help today's students become tomorrow's scientists and engineers.

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