

Donor Developments

Become a Member of the Sustainers Club Today!!!

The SAE Foundation is kicking off a new donor recognition program: The *SAE Sustainers Club*. This new **cumulative giving donor recognition program** acknowledges the philanthropic spirit of **individuals** who have given to the SAE Foundation throughout their lifetime. Qualifying donations are gifts of cash, pledge payments, stock, cash prizes, gifts of royalties and donor advised funds.

It is easy to become a member of the Sustainers Club. Just contribute to the SAE Foundation's Annual Fund. This annual gift will be added to your lifetime giving total to date. Once your lifetime giving total reaches \$1,000 your name will appear as a member of the Sustainers Club. Of course, your yearly gift will continue to be recognized in the annual report each April. Each time you reach a new giving total, you receive a recognition reward too!

A letter will arrive in your mailbox within the next few months with your cumulative giving total to date. Please consider activating and maintaining your membership in the Sustainers Club by making a gift to the SAE Foundation's Annual Fund.

Annual Fund gifts are important to the ongoing success of the SAE Foundation and provide the backbone of our operating and program development budgets. These contributions provide the Foundation with a pool of funds to use where the need is greatest. Dedicated and consistent support from individuals is what sustains the educational programs of the SAE Foundation for future generations of science, technology, engineering, and math (STEM) professionals.

Other Ways You Can Contribute

The SAE Foundation has established two new ways for individuals to give through the introduction of the **SAE Foundation Women's Giving Circle and SAE Fellows Giving Circle**.

What is a Giving Circle? A giving circle is a group of people who share an interest, activity, or achievement. It is a collection of individuals bonded by their support of a cause; they pool their funds and then decide who receives their combined contribution as determined by the policies set forth. Each Giving Circle established a steering committee to create a model and policies to ensure long-term success.

The **SAE Foundation Women's Giving Circle (WGC)** and the **SAE Fellows Giving Circle (FGC)** share the same goals to:

- 1) Provide financial resources to the SAE Foundation,
- 2) Educate donors and prospects about the SAE Foundation and its mission,
- 3) Inform constituents about the power of philanthropy,
- 4) Increase frequency of communication with Circle members and,
- 5) Leverage relationships and connectivity to open new doors and funding opportunities.

The power of a Giving Circle is to pool resources so the group can make a larger impact on the programs and services offered by the SAE Foundation. In addition, Giving Circle members have the opportunity to network with others who share similar values while participating in a dynamic and philanthropic group.

For more information on these, and other ways to give, please go to www.sae-foundation.org/individual.

Upcoming Events

The SAE Foundation Women's Giving Circle will host two events:

Tuesday, October 5

Noon - 1pm @ the Donald E. Stephens Convention Center; Rosemont, IL

Tuesday, November 16

7:30 am - 8:30 am @ the Skyline Club; Southfield, MI

Tracy Gary, author of *Inspired Philanthropy* will be the keynote speaker. Tracy has appeared on numerous television shows including *The Today Show* and *Oprah Winfrey*.

For information and registration, please contact the SAE Foundation at womensgivingcircle@sae.org.

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I am pleased and honored to present you with this inaugural issue of the SAE Foundation newsletter!

After nearly 25 years of supporting programs that increase student achievement and participation in science, technology, engineering and math (STEM), you may be wondering, "Why start a newsletter now?" That question is best answered through the objectives established for this newsletter by the SAE Foundation staff:

1. Better Connect with our Donors

For years, donors like you have been making charitable contributions to the SAE Foundation because you believe in our mission. Are you aware of the personal success stories that result from your contributions? We want you to learn about the Collegiate Design Series (CDS) student, recently hired at a CDS competition, or the AWIM teacher that tearfully tells how the AWIM program "made me a better teacher." Your contributions impact real lives and you deserve to know about them.

2. Keep Donors Informed about our Programs

At the SAE Foundation we believe that people don't just donate - they invest. As with any investment, people want to understand the return on their investment. This newsletter will serve as one source of information that will

demonstrate to you, the donor, the impact our programs are making. You'll receive information such as how many students are being reached through AWIM, how many teams are competing in the Collegiate Design Series, as well as information on our numerous awards and scholarship programs.

3. Update Donors on the Crisis in STEM

It is no secret that there is a rapidly emerging crisis in STEM education. For example, did you know that that *fewer than one-third of U.S. 4th grade and 8th grade students performed at or above the "proficient" level in science, and nearly one-fifth of the 4th graders and one-third of the 8th graders lacked the competence to perform basic mathematical computations¹*? Or that *over the last several decades the U.S. has experienced a decline of over 20% in the number of degrees granted in engineering²*? We will keep this type information at the forefront for you and let you know how our programs are serving as a solution to this crisis!

By achieving these objectives, we believe our donors will remain dedicated to the SAE Foundation and its programs and help spread the word of our important work to others. The theme of this inaugural issue is "Back to School" and will

Name our Newsletter!

We need your help to name our newsletter! Send your submission to rhayes@sae.org by October 1, 2010. Please enter "Newsletter Contest" in the subject line and be sure to include your name and contact information in the email. The winner will be featured in the December issue of the SAE Foundation Newsletter. THANK YOU!!!

focus on the SAE Foundation's efforts in preparing students, teachers, and volunteers for exciting and engaging, STEM educational experiences. As a former educator, I can assure you, the programs that the SAE Foundation supports are unmatched. I look forward to sharing our successes (and challenges) with you several times a year through this newsletter. In the meantime, please feel free to contact me directly with your questions, comments and concerns.

Matthew M. Miller
Director, SAE Foundation
matt.miller@sae.org or 724-772-7504

¹ U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), various years, 1990–2007 Mathematics & Science Assessments.

² National Science Foundation, Science and Engineering Indicators, 2006 <http://www.nsf.gov/statistics/seind06>

Corporate Partners and Programs

Learn Twice Initiative Connects CDS students to AWIM Classrooms

It is often said that “to teach is to learn twice.” It is through this philosophy that John Deere and SAE International engage university students by facilitating opportunities to volunteer in *A World In Motion*® (AWIM) classrooms through *John Deere/SAE International’s Learn Twice Initiative*.

For 20 years, the AWIM program has focused on delivering science, technology, engineering, and mathematics (STEM) education programs to students at the K-12 level. Practicing STEM professionals, who participate as mentors and content experts in AWIM classrooms have supported much of this work. With the creation of the *Learn Twice Initiative*, university students now have the opportunity to serve in this volunteer role.

University students who are members of a Collegiate Design Series (CDS) team will have the opportunity to teach and advise young learners in their communities on concepts like force, friction, and motion – while increasing their own understanding of how these concepts integrate into and apply to their own studies.

In return, John Deere will reimburse that university student the cost of one CDS event registration fee during the school year in which they volunteer. With registration fees for SAE collegiate competitions continuing to increase, a registration fee reimbursement to a competition in which they will participate allows students to focus their existing resources on designing their vehicles. The unique struc-

ture of the *Learn Twice Initiative* provides for a memorable learning experience for the elementary school students as well as the university students. In addition, it encourages university students to give back to their local area while meeting community service hours that an increasing number of universities require for graduation.

John Deere’s generous corporate gift enables the SAE Foundation to provide the necessary training, curriculum, and materials to teachers and university students in the U.S. and Canada interested in participating in this special initiative. Any student associated with a CDS team can register for the Learn Twice Initiative with preference given to university students located within a 100-mile radius of John Deere facilities.

If you know students who are a part of a CDS team and may be interested in participating in this exciting program, please tell them to: www.awim.org/about/si/learntwice/

A special thanks to the folks at Deere & Company - who truly are “twice” as nice!



Five-Year Study Finds AWIM Effective

In 2010, SAE completed a five-year, multi-tiered longitudinal study to examine the long-term impact of the AWIM program on students and teachers. Goodman Research Group, a research firm specializing in the evaluation of educational programs, materials, and services, conducted the evaluation.

Among the conclusions, the AWIM longitudinal study found that:

- Participation in one AWIM Challenge, including working in student teams to complete an authentic engineering design experience, is enough to start students on a path of knowledge and interest in engineering.
- AWIM activities successfully teach students scientific concepts and specific challenge contents.
- AWIM use has a positive cumulative impact on teachers’ knowledge and comfort level teaching physical science concepts.
- Involving an industry professional volunteer in the classroom during the AWIM Challenge activities enhances both teachers’ and students’ short term experience, and has a lasting effect on students’ increased knowledge of engineering.
- Teachers’ comfort with the AWIM Challenge and with the inclusion of an industry volunteer has a positive long-term effect on student outcomes.

To view the AWIM Report Card or the Executive Summary of the SAE AWIM Evaluation please go to: awim.org/about/reportcard/

A World In Motion Highlights

SEEK Academy Fills Summer with Learning and Fun



If you were to ask a group of students who participated in the Summer Engineering Experience for Kids (SEEK) Academy what they did this summer, you might be surprised by their answers. You might hear a fifth grader exclaim that they learned about friction and what it does to the drag of a skimmer or a sixth grader boast how their “design team” built a glider and tested the effects of weight and lift on the distance it would fly.

This summer marked the fourth year of the SEEK Academy, a unique science, technology, engineering, and math (STEM) program co-created by SAE International and the National Society of Black Engineers (NSBE). This free, three-week program utilizes the A World In Motion® (AWIM) curriculum to take students through an accelerated STEM education experience. Students learn how to work in teams to design, build, and test a vehicle. The session culminates in a competition with teams racing their vehicles to earn medals, and cheers from family members.



Approximately 600 students annually attend the SEEK Academy from Friendship Charter Schools in Washington, DC. An additional 250-300 students from the Columbus Public School District attend the annual SEEK Academy in Columbus, Ohio. To date, more than 3,300 fifth through eighth graders have participated since the program began in summer 2007.

In addition to introducing students to STEM subjects, the SEEK model also introduces students to collegiate members of NSBE who serve as mentors. These mentors not only help the students work through the AWIM challenge, but also serve as role models who inspire and encourage these younger students to follow in their footsteps one day.

Feedback from pre- and post-student assessments, and parent and mentor surveys show the SEEK Academy is having a tremendous, positive outcome. Students are successfully improving their knowledge of the specific science

and math standards practiced, while gaining a greater understanding and interest in engineering. Parents indicate that their children gain self-confidence and exposure to African American and other minority role models has a positive impact.

While no child is turned away from SEEK because of race, SEEK has become the largest STEM program for minority children and mentors in the nation. With the beginning of the 21st century, a larger proportion of the U.S. population will be composed of minorities — blacks, Hispanics, and Native Americans, with the fastest growing minority group being Hispanics. Studies show that these minorities take fewer high-level science and mathematics courses in high school; earn fewer undergraduate and graduate degrees in science and engineering; and are less likely to hold science and engineering positions than white males.

The SEEK Academy aims to address these issues by reaching traditionally underrepresented groups – such as minorities and girls – in underserved, urban communities. In an effort to build on this success and expose a greater number of minority students to the SEEK experience, an additional SEEK Academy is planned for 2011.

AWIM Volunteer Recognition Breakfast

A World In Motion volunteers from the Michigan area were honored at a special breakfast on August 13, 2010. Johnson Controls Inc. graciously sponsored the event that thanked the volunteers for their yearlong dedication. Team Player and Energizer Awards went to volunteers who gave beyond expectations. Volunteers - usually science, technology, engineering, or math (STEM) professionals - are an essential part of the A World In Motion program. In addition to helping deliver the AWIM program, they serve as an in classroom resource for teachers and as a role model for students.

For more information on becoming an AWIM volunteer, visit www.awim.org.



Janet Kahan
from Plymouth
Canton Schools
with Russ Burgei,
AWIM Coordinator for
Johnson Controls Inc.

Collegiate Design Series News & Events

CDS News and Events



The Collegiate Design Series is a group of engineering design competitions, which challenge teams of university students to design, build, and demonstrate both technical and applied knowledge. Each competition presents students with a challenging project in which success requires striking the best balance between often-conflicting design requirements while managing the project to completion on time and on budget.

These competitions expand the educational experience of the students beyond the classroom – bridging the gap between theory and hands-on experience. From radio-controlled aircraft and electric snowmobiles to formula-style race cars and fuel-efficient vehicles, the Collegiate Design Series competitions provide students with the opportunity to enhance, apply, and demonstrate their engineering expertise.

Annually, thousands of engineering students are better prepared for employment in the mobility industries, thanks to their involvement in a CDS event. In 2010, more than 6,000 students, representing 700 teams from the United States, Canada and 18 other countries participated. To find out more about CDS event winners, team results, and how you can help in next year's events, please visit: students.sae.org/competitions/formulaseries/cdshistory.htm.

The SAE Collegiate Design Series Staff would like to thank everyone who helped make this year's events a great success.

To the volunteers and sponsors, thank you for all your contributions! To the students - thank you for your continued interest and participation in the SAE CDS competition events.



2011 SAE CDS UNITED STATES

Competition Schedule —

(Registration starts on 10/04/2010 at 10:00 AM EDT)

- 03/07/2011 through 03/12/2011
SAE Clean Snowmobile Challenge
Houghton, Michigan
- 03/18/2011 through 03/20/2011
Aero Design West
Fort Worth, Texas
- 04/14/2011 through 04/17/2011
Baja SAE Birmingham (WATER EVENT)
Birmingham, Alabama
- 04/29/2011 through 05/01/2011
Aero Design East
Marietta, Georgia
- 05/02/2011 through 05/05/2011
Formula Hybrid
Loudon, New Hampshire
- 05/11/2011 through 05/14/2011
Formula SAE Michigan
Brooklyn, Michigan
- 05/26/2011 through 05/29/2011
Baja SAE Kansas
Pittsburg, Kansas
- 06/08/2011 through 06/11/2011
Baja SAE Illinois (PRESENTATION EVENT)
Peoria, Illinois
- 06/09/2011 through 06/10/2011
SAE Supermileage
Marshall, Michigan
- 06/15/2011 through 06/18/2011
Formula SAE California
Fontana, California