

SAE MILWAUKEE

An SAE International Section

Upcoming Events

- September 28th – Briggs & Stratton

Future Events

- COMVEC – September 18th-20th, Chicago
- October – Harley-Davidson
- November 2nd – Student Night (Location: UW-Madison, Sponsored by Generac)

August 2017 SAE Newsletter

September 2017 Event



Briggs & Stratton

Thursday, September 28th, 4:30pm

12301 West Wirth Street
Wauwatosa, WI 53222

About Briggs & Stratton

Briggs & Stratton Corporation, headquartered in Milwaukee, Wisconsin, is focused on providing power to get work done and make people's lives better. Briggs & Stratton is the world's largest producer of gasoline engines for outdoor power equipment, and is a leading designer, manufacturer and marketer of power generation, pressure washers, lawn and garden, turf care and job site products through its Briggs & Stratton®, Simplicity®, Snapper®, Ferris®, Vanguard™, Allmand®, Billy Goat®, Murray®, Branco® and Victa® brands. Briggs & Stratton products are designed, manufactured, marketed and serviced in over 100 countries on six continents.

About the Event

This event will feature a tour of Briggs & Stratton's lab facilities (including sound and vibration) and presentations on their new product development process using the development of Oil Guard as a case study. Oil Guard, an innovation from Vanguard launched in October 2016, offers major productivity gains to commercial mowers by extending recommended oil change intervals from 100 hours to 500 hours. In addition to increased productivity, users see more than 60% annual cost savings when compared with 100-hour oil maintenance.



Finally, oil changes were made to be faster and easier, further reducing downtime for commercial cutters. The system is currently offered on Vanguard 810 and Big Block V-Twin engines on Ferris brand mowers.

Event Agenda

Registration	4:30-5:00pm
Tours	4:45-6:30pm
Dinner	6:30-7:30pm
Presentations	7:30-8:30pm

Registration Fees

SAE Members	\$25
Retirees	\$20
Students	\$5
Non-members	\$35

Registration

Registration Deadline: September 21st

Maximum Attendance: 120

Ways to Register:

- Online via the [SAE Milwaukee website](#)
- By phone: Garrett Herning – (856) 313-0581
- By email: Garrett Herning – herningg@hotmail.com

About the Presenters



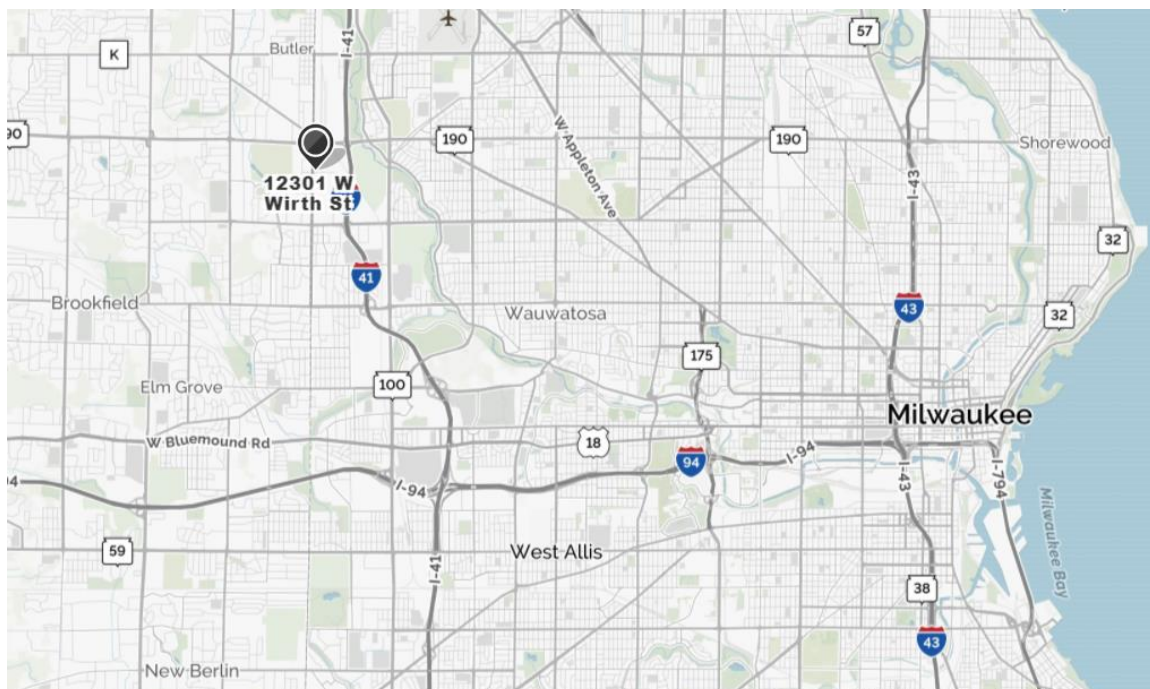
Paul Leech started his career at Briggs & Stratton in 1987 as a Co-op student from Marquette University. He held various engineering roles at the company ranging from Warranty engineer to Lead Product Development engineer. He then assumed the role of Manager of the NPD engineering department. During his time in this role he worked with others to revamp and modernize the NPD process, incorporating Stage Gate, Lean and DFSS ideas into the process. Paul is now the Director of Product Engineering for the Engine Power Products Group responsible for all production support and NPD engineering design activities.

Chris Meyers graduated from the University of Wisconsin – Madison in 2010 with a BS in Mechanical Engineering. After college, Chris was hired as an engineer for Watlow Electric Manufacturing Company at their facility in Richmond, IL, where he worked in New Product Development on products ranging from temperature sensors to heaters targeted for the Diesel industry. For the last four years, Chris has worked at Briggs & Stratton as a Program Manager in the Engines Group, focused on launching new innovations into the market.



Jeff Feist earned a BA in Physics from Lawrence University and a MS in Mechanical Engineering from Purdue University. Prior to joining Briggs & Stratton, he worked as a Test Engineer for Polaris Industries. Within Briggs & Stratton, his initial focus was NVH, and later shifted to business process improvement. Jeff lead the team that developed and launched the Briggs & Stratton NPD process, and he worked with Corporate Development to define and launch the Briggs & Stratton M&A process. Jeff is currently a Staff Engineer within Briggs & Stratton focused on improving product portfolio management.

Map



SAE Milwaukee Section at the Chicago Region SCCA June Sprints

While at the June Sprints at Road America this summer, the SAE students in attendance from two schools (MSOE and UW-Milwaukee) and some high school students were given a SCCA behind-the-scenes-tour. During the first part of the tour the students visited the Race Control room, the Timing and Scoring area, the Media Area and the Press Boxes along with the VIP boxes/lounge area in the large building outside of the track at the start/finish line and the flag stand at the start/finish line at the start of the qualifying race for the Group 6 Camaros, Mustangs, Jaguars, Shelbys, and Corvettes. From the VIP area, you are elevated above the track and can see a large portion of the middle pit area.

On the second part of the tour the students walked through the pits and stopped at the quarantine area where race winners are inspected after a race to be sure they were legal. The students were invited to a couple of the large race teams and to one of the teams that furnish cars to various drivers – these are rent-a-racer businesses. The students were encouraged to ask questions at all the stops we made.

The SAE Milwaukee Section Display consisted of the MSOE Super-Mileage car and the UW –Milwaukee Baja Car. The students were on hand to answer spectator questions regarding the design, engineering, and performance of the vehicles they built.

Every trip to the track will give you a new insight into some aspect of racing and it's easy to see why Road America is known as "America's National Park of Speed."

Generac Engineering Speaker Series

Generac Power Systems has invited SAE members to attend an upcoming 2017 Engineering Speaker Series event at their Waukesha headquarters. The Speaker Series was established to provide a venue for socializing with fellow technical professionals in a casual setting. Food and refreshments will be provided. Presentation topics are applicable to Generac engineering activities, general industry and community interests.

Date: **Wednesday, September 13, 2017**

Location: Generac Power Systems
S45 W29290 Highway 59
Waukesha, WI 53189

Agenda: 5:30 – 6:15pm: Arrival and Social
 6:15 – 6:30pm: Introduction to Generac Power Systems
 6:30 – 7:30pm: *The Application of Finite Element Analysis to Mechanical Design of Engine Components*
 Speaker: John Crudden, Staff Engineer – Engine Group
 John will discuss Finite Element Analysis (FEA) and how Generac uses this technology early in our design process to develop even better products, faster.

 7:30pm Prize Raffle and Conclusion

Attendance is limited to 80 so **please RSVP by September 11** to <http://www.cvent.com/d/p5q7fg>.

Map and Directions: <https://www.generac.com/service-support/contact-us/generac-worldwide-locations>

Milwaukee Section 2017-2018 Governing Board

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ANSYS Sponsorship of Milwaukee SAE Competition Teams - 2017-2018 Season

ANSYS, Inc. is happy to announce a sponsorship open to all SAE Competition Teams including the Formula SAE, Aero Design, Supermileage, Hybrid, Clean Snowmobile Challenge and Baja teams.

Teams can be provided a package of ANSYS Academic Products to explore the power and performance of ANSYS structural, fluid, composites and electronics based simulations. Using these tools to design suspensions, steering systems, composite structures, or determining antenna placement, the engineering teams are gaining real-world experience that will help them succeed as professionals.

Student teams can apply for this sponsorship by contacting Jack Malluege (jack.malluege@ansys.com) at ANSYS, Inc.

Here are a few steps that will help you to make the most of using ANSYS tools for your design. Depending upon your experience with ANSYS, you can decide to skip the first 2 steps.

Step 1 - Discover how ANSYS Technology is key for your design

Here are some examples of how other competitive teams use ANSYS technology for their designs:

[Texas Guadalupe team](#) | [UC Irvine Hyperxite team](#) | [U Wisconsin BadgerLoop team](#) | [MUR motorsports](#) | [RIT SEA Team](#)
[Berkeley Solar Team](#) | [U Toronto Solar Team](#) | [Washington U Team](#) | [Berkeley Hyperloop](#)

Step 2 - Start learning the tools

Freely available software to get started: Discover the ANSYS tools via the free student download at www.ansys.com/student - You can select **ANSYS Student** if you want to have access to products like Fluent and Mechanical but we recommend you try our newest user interface - fully integrated and easier to use: **AIM Student**

Getting started - YouTube tutorials: See all AIM Student How-To videos on YouTube [here](#)

Make sure to use SpaceClaim for your geometry simplification - Discover the top 10 reasons to use SpaceClaim [here](#)

Cornell University MOOC and tutorials: Free and on-demand MOOC (Massive Online On-demand Class) from Cornell University. Learn how to analyze real-world engineering problems using ANSYS simulation software and gain important professional skills sought by employers. Enroll [here](#).

A large number of tutorials and resources are just a click away. For example, [Cornell University - SimCafe](#) - (Prof. Rajesh Bhaskaran)

Step 3 - Getting Full Capability Licenses

Ready to use the full capability ANSYS software? A few things to know:

- 1) We will send you licenses to be installed on a university license server. You can download ANSYS tools on any computer, connect to the license server and you are ready to go. If you do not have good hardware/computer setup, ask your IT department for help
- 2) We will need to create a license form. For this we need the name, address and e-mail of your team faculty mentor (usually it is a Professor). We will also need information about the computer where the license will be installed. The information needed can be found by starting [here](#). Forward the resulting file to Jack Malluege (jack.malluege@ansys.com).
- 3) You will receive licenses as well as a login to the ANSYS Customer Portal where you can download the full capability tools, and access other valuable information.

A few tips!

From our experience working with many teams for years, here are some best-practices we have learned:

- 1) Start by learning the tools and doing many tutorials
- 2) Start small! Simplified models first, larger models once you master the tools
- 3) Work with your Professors using ANSYS tools; ask them for help; ask graduate students using ANSYS for their support.

We look forward to working with you on the 2018 Competition!

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SAE Board Member Shadow Program

Members, your board of directors has created a new way for you to get involved in the activities of the SAE Milwaukee Section!

Do you like the service and support that your SAE Milwaukee Section provides to you? Do you have some fresh ideas to make your section better? Or.....would you like to just get involved?

If you would like to participate but do not know how to get started, we have the program for you. This new program allows you to shadow a board member to learn the details of what they do for this section. With this opportunity you can investigate/help a position that interests you without jumping in with both feet. This will allow you to participate to the level you are comfortable with, find the position that suits your talents and/or interests, or to serve in a committee with others.

We would like to invite you to Shadow a Board Member.

If you are interested in this opportunity, please contact Randy Hoffman at (920) 397-6644.



SAE Milwaukee STEM/AWIM program

Inspiring Today's Students to Become Tomorrow's Engineers and Scientists

OUR K-8 STEM EDUCATION SOLUTION, A World in Motion (AWIM), is a teacher-administered, industry volunteer-assisted program that brings science, technology, engineering and math (STEM) education to life in the classroom for students in Kindergarten through Grade 8. Benchmarked to the national standards, the AWIM program incorporates integrated STEM learning experiences through hands-on activities that reinforce classroom STEM learning.

Program Highlights & Benefits

- It's interdisciplinary in nature, which helps students learn to make meaningful connections among disciplines
- All activities correlate with the Next Generation Science standards and the Common Core standards
- It builds bridges between corporations and classrooms by giving teachers, volunteers, and students the opportunity to work together and learn from each other
- More than 72,000 curriculum/challenge kits have been provided; over 4.5 million students participate; more than 30,000 volunteers.



Industry Support & Volunteers

- Industry support is essential to this program. Corporations and their employees can influence the ways in which youth are prepared to meet the future by sponsoring schools in their communities. By doing so, schools can qualify to receive free or low cost AWIM program Challenge kits.
- Industry volunteers provide students with first-hand impressions and information about careers in their chosen profession and serve as an in-classroom resource for teachers.

Accordingly, Johnson Controls has been supporting certain Milwaukee county schools by providing the kits and volunteering hours over the past 8 years. This year, the “Jet Toy” challenge will be held for three Elementary schools – Atwater, Lake Bluff, and Kluge – proudly in collaboration with SAE - Milwaukee Section and broader SAE members as of the volunteers to enrich the students’ hands-on experience.

The program will be started in early February.

For more information on volunteering, please contact Negin Salami:

negin.salami@jci.com

Section Sponsors



TESTING & ENGINEERING



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