

# SAE MILWAUKEE

An SAE International Section

## Upcoming Events

Ford F-150

- April 23<sup>rd</sup>

Falk

- May

Road America – SCCA

June Sprints

- June

## April 2015 Newsletter

Next Event:



## 2015 Ford F-150

Thursday, April 23<sup>rd</sup>  
Uptown Ford/Dave and Buster's  
Milwaukee, WI

## About the Event

Join SAE Milwaukee for April's event, featuring the all-new 2015 Ford F-150. The 2015 F-150 is notable for its extensive use of aluminum in its construction, a first in modern pickup trucks.



We will begin the event by taking a look at the new F-150 at Uptown Ford/Lincoln in Milwaukee. Following the vehicle viewing, we will travel to Dave and Buster's for dinner and the presentation.

The presentation will feature Devarrio Raines, a senior sales representative and Lincoln Brand Champion at Uptown. Devarrio was recently named the top 2015 Ford F-150 product walk-around champion for Wisconsin based on his knowledge of the new F-150. Devarrio will review the new components on the truck.

The event will also feature Scott Dominski, an estimator and assistant manager at Uptown, who will discuss the upgrades that Uptown has invested in to be able to service the new aluminum-bodied F-150.

This promises to be an interesting event about a vehicle that's creating a lot of noise in the automotive community! We hope to see you there!

# Event Agenda

## Event Agenda

Registration .....	5:00–6:00pm
Vehicle Viewing .....	5:00-6:00pm
Dinner.....	6:00-7:00pm
Presentation.....	7:00pm-8:00pm

## Registration Fees

SAE Members .....	\$20.00
Retirees.....	\$20.00
Guests/Non-members .....	\$30.00
Students.....	\$10.00

## Registration

**Registration Deadline:** April 20<sup>th</sup>

**Maximum Attendance:** 100 attendees

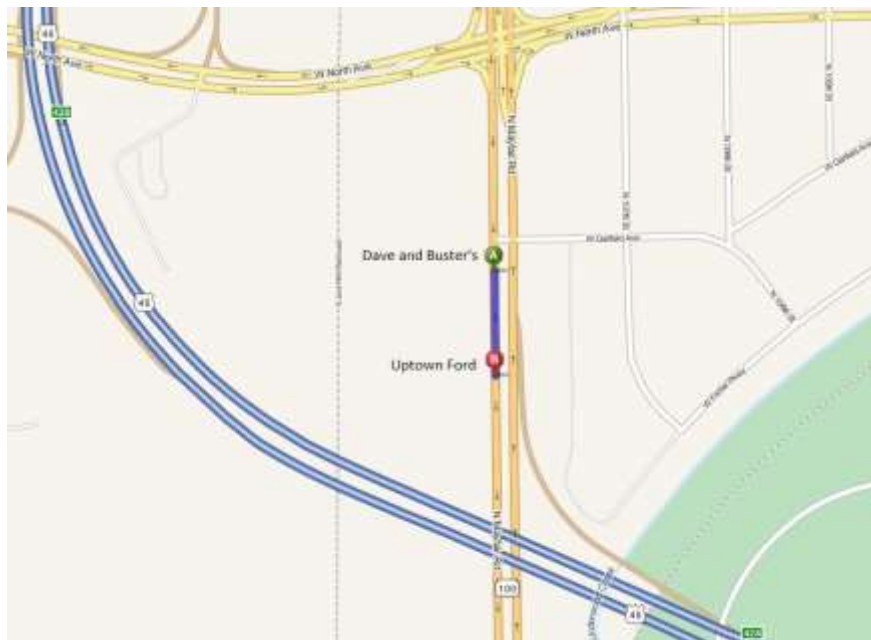
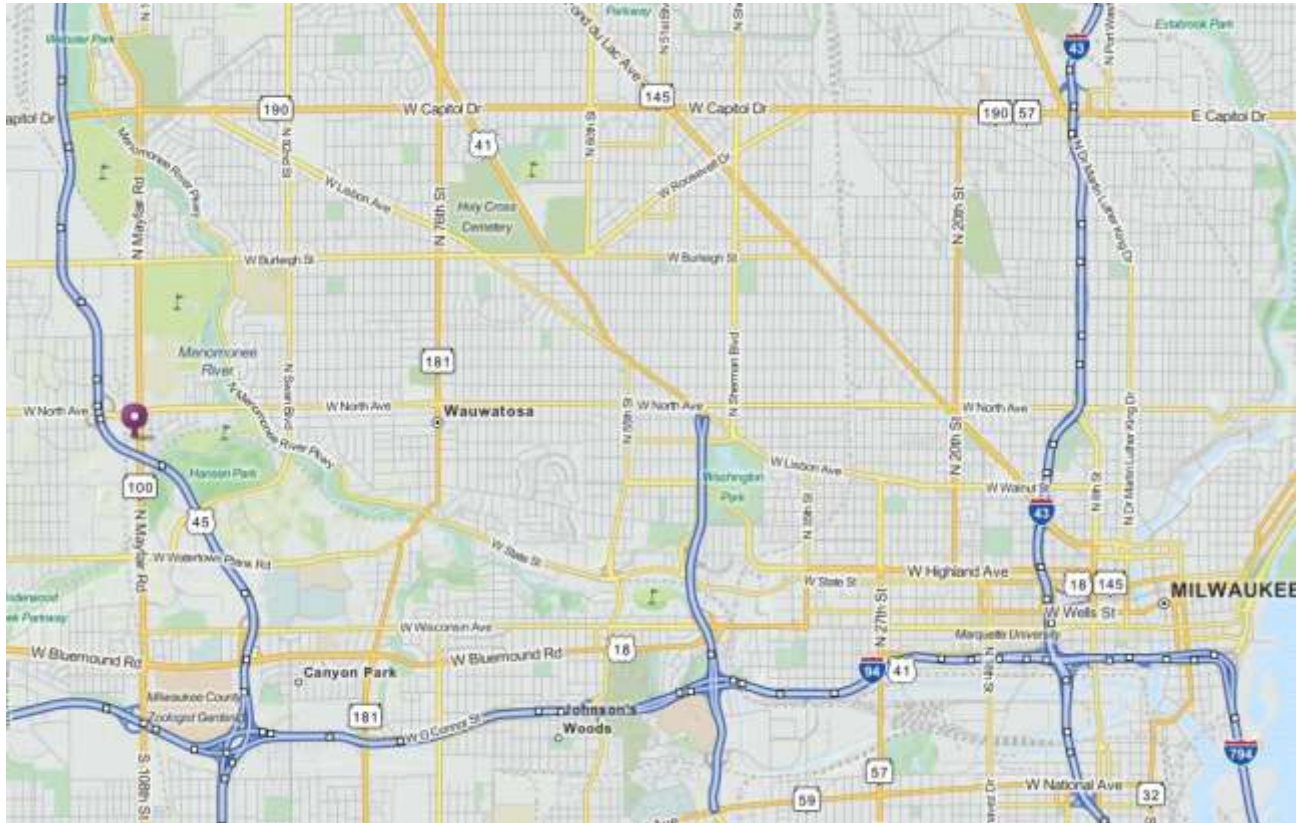
### **Ways to Register:**

- Online with a charge card via [www.milwaukeesae.com](http://www.milwaukeesae.com)
- By phone: 414-315-0919 (Drew Boyer)
- By email: [a.m.boyer@na.modine.com](mailto:a.m.boyer@na.modine.com) (Drew Boyer)

**Registration required – no walk-ins allowed**

# Location

We will meet at Uptown Ford (2111 N Mayfair Rd, Milwaukee) to check-in and look at 2015 Ford F-150s, as well as other cars, including the 2015 Mustang. At 6:00pm, dinner will start at Dave and Buster's (2201 N Mayfair Rd, Milwaukee). Afterwards, consider staying and playing some racing games with your fellow SAE Members!





# Clean Snowmobile Challenge 2015 Recap

## Clean Snowmobile Challenge Results at Keweenaw Research Center/ Michigan Tech. Univ.

Our University of Wisconsin-Madison took home the MacLean-Fogg Traveling Cup for their internal combustion sled in the challenge's most competitive category! North Dakota State placed first in the new Diesel Utility category. Lapland University of Applied Sciences team (from Finland) traveled over 27 hours to Houghton, MI, and celebrated their first year as the top Zero Emissions team.



The challenge was exceptional this year, with the most participants (20 teams) and successful sleds competing in events. As a SAE Student Design Competition, the Clean Snowmobile Challenge pushes teams to design, build and test cleaner, quieter snowmobiles.

Once the teams have passed inspection, which is overseen by professional engineers, the teams compete in a long-distance run, emissions and noise tests, handling, acceleration and technical presentations. Students enter their sleds in one of three categories: internal combustion, diesel utility and zero emissions.

### Internal Combustion

The lab emissions test tends to be the most nerve-wracking for the students. Here, the team's sled is partially disassembled and hooked up to equipment that reads the engine's force and the chemicals coming out of the exhaust. To do so, the lab volunteers go full throttle and push the snowmobile to its max. Sometimes the engines get red hot, and the test is commonly the only event with serious fire danger.

Our University of Wisconsin-Madison team won IC. Based on the results of their emissions test, they also had Lowest Emissions, Best Design and Sportsmanship awards. AVL North America oversees the emissions testing.

Kettering University won second place overall and was honored with Best Fuel Economy, Quietest Snowmobile, Lowest In-Service Emissions, and Most Practical Design awards.

Ecole de Technologie Superieure: won third place overall, Best Performance award for surpassing all noise and emissions requirements, and the highest scores in Acceleration and Handling.

The University of Idaho received awards for Best Handling and the Founder's Trophy for most Sportsmanlike Attitude. They also won the Best Engine Design award for how they addressed mechanical resonance and implemented an exhaust gas recirculation system.

University of Minnesota-Duluth was also recognized for their exhaust gas recirculation system and water breach dynamometer--winning the team an Innovation award. These same design elements won them an award for being the Most Likely to Be Manufactured.

The University of Wisconsin-Platteville won Best Acceleration, reaching a top speed of 69 mph.

Platteville, and Northern Illinois University gained a new advantage this year by incorporating Hayes Performance's Trail Trac system (advanced hydraulic and electronic-controlled power brakes); the implementation was recognized with a special award. NIU also won the Most Improved Snowmobile.

Clarkson University was recognized for the Best Static Display for their IC sled, which was part of a Wednesday night showcase, open to the public.

Iowa State University, first-time competitors, won the Rookie of the Year award. The University of Minnesota was honored for the team's safety.

A record-setting 11 teams completed the endurance run to Copper Harbor, MI (the most northern point). The event has historically weaned-out half the competition's sleds.

## **Diesel Utility**

The diesel category is this year, North Dakota State swept the board, taking home awards for Fuel Economy, Low Emissions, Noise, Design and the Bar-Pull contest. SUNY-Buffalo placed second.

While the CSC focuses on a particular kind of utility engine, innovations in cleaner and quieter technology could be important for use in agricultural, small engine and other diesel-based industries.

## **Zero Emissions**

The Lapland University team not only won for Distance Traveled, but for their electric snowmobile in the Zero Emissions category. They also won the Bar-Pull contest and Range Event, which set the second highest record by traveling 18.2 miles. The South Dakota School of Mines and Technology took second place and Clarkson took third.

The zero emissions electric engine category brings an extra challenge. Here, the sled designs are more difficult with fewer industry standards to work with.

## **Next Year...**

The Keweenaw Peninsula is for hosting the Clean Snowmobile Challenge, with 235 inches of snow this year! Next year's weeklong competition will start March 7, 2016.

Jay Meldrum, the event organizer and Director of the Keweenaw Research Center, hopes to continue expanding the event. "The gauntlet is thrown," Meldrum says, challenging students to push into these newer and sometimes more challenging arenas. "We now have good competition and success in the internal combustion category, but just a few years ago, barely half the sleds ever made it out of the shop. I want to see this see this in electric and diesel."

To see more photos and updates, check out [@MichiganTech](#) and [#cleansnowmobile](#) as well as [Michigan's Tech flickr](#).

By Alison Mills (MTU) and Dale Wiza

# SAE Milwaukee Section Board Member Spotlight



## Randy Hoffman – Student Activities

Greetings, you may have seen me at meetings talking about the outstanding students and the programs they run at their schools. This paragraph is to introduce me to you so you will have a better understanding of both myself and SAE Milwaukee section. (I am the tall one in the photo)

I am a Wisconsin native, lived here all my life and schooled in South Eastern Wisconsin. I grew up in a car family, my dad worked on cars owned a filling station and a dealership, and my 2 brothers loved cars as did I. Growing up one of my brothers engineered and built a Henry J B-Gas drag car and when I was 11, I asked my dad if I could buy it (on the child loan plan) and work on it until I was old enough to drive. This garnered a resounding NO and the car was sold, I was crushed but retained my motivation. As a teen I was able to purchase a Corvette before I could afford the insurance, this is a whole other story ask me some time. To shorten a lot of time into a short description I was able to own a few cool cars, autocross some of them, crew for some SCCA and Vintage race teams, and someday maybe road race a car of my own. During this time I am happy to say I married the perfect wife (her idea of a great home is a large garage with a small attached house).

As times and the economy change I moved from a tool and die/machine builder career to unemployed. This was a setback but also an opportunity. It allowed me to obtain a higher education at the mid stage of life. I was able to complete course work for an Associate Degree in Mechanical Engineering Technology at Waukesha County Technical College then tackle 2 more years at MSOE to earn a Bachelor's of Science Degree in Mechanical Engineering. This career path change did nothing to deter me from automotive interests. While at MSOE I was part of a 22 member team that completed a SAE Formula Senior Design Series car and went to competition in 2004.

After school gave me the opportunity for a career change, I was able to find a job building test equipment for the large diesel engine and heavy equipment manufacturers. Though the speed of these machines was not earthshattering the horsepower and torque was a great fix for my gearhead self. During this time I converted from a student SAE member to a Professional member and was asked to join the board in about 2009-2010 and the Chair of Student Activities.

Student activities is a big part of SAE and I am glad to be a part of the student's growth into a professional engineer. It is a passion of mine to encourage the student to be a lifelong learner with a can do attitude through the SAE Collegiate Design Series.

Remember this is a SAE Section with a rich history and you can participate just like I am doing – **become a shadow**. That is to say start your participating (giving back), by volunteering to help someone on the board on the way to becoming a board member. This process allows you to find just the right fit without being overwhelmed. Call me today for more information!!

# ROAD *Road Racing at its Best*<sup>™</sup> AMERICA

Elkhart Lake, Wisconsin



SAE at the “June Sprints<sup>®</sup>”

*The First Leg of the SCCA Triple Crown*

Thursday, June 11 - Sunday, June 14

7:00 am – 6:00 pm

Special SAE Ticket Prices

\$5.00 for SAE Members

\$10.00 for Non-Members, Guests

More details in upcoming newsletters!



## Nine and Dine! – Save the Date - 2015 SAE Milwaukee Section Golf Outing / Dinner

Plan to be with us for our 2015 SAE Milwaukee Section Golfers/Duffers June 6 golf outing. Even if you haven't handled those clubs for a while, come join in on the fun. Invite your spouse and friends to make up your foursome or we'll match you up. We especially invite our student members – we'll have a set of clubs for you to use.

Particulars:

Date: Saturday afternoon, June 6, 2:30PM Tee Off  
Course: Edgewater Golf Club (Nine hole course) / The Bunkers Restaurant  
Address: 1762 Cedar Creek Road, Grafton, WI 53024  
Dinner: The Bunkers Restaurant, 5:30PM – Prime Rib is their Saturday night special!  
Cost: It won't break your bank! – Complete information in the May newsletter...



Reserve your Tee Time / Dinner Reservation with:

Wayne Richter 262.770.0252 Talk/Text  
Tony Grant 414.935.8761 Talk/Text  
Matt Anderson ([anderson.matthew@basco.com](mailto:anderson.matthew@basco.com))

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## Remembering – Don Berchem

We pause to remember Don Berchem, who passed away this month. Don was proud of his 56 year membership in our Milwaukee section and served as a board member for several years. Don's mechanical engineering career included: West Bend Outboard Engines, FWD Corporation, Chrysler Corporation, Harley-Davidson and Ariens Company. Don was a car/truck restorer and collector. His favorites were Porsche automobiles, especially the 356 models (1950-1965). Don showed off his pristine 356 Coupe at our section's car show last July. We offer our condolences to Don's family. Don was 81.



## Milwaukee Section 2014-2015 Governing Board

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### VICE CHAIRMAN: OPEN

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### AWIM/EDUCATION:

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### WEBMASTER:

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### MEMBERSHIP VICE CHAIR:

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[dale@engineeringplacements.com](mailto:dale@engineeringplacements.com)

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### COLLEGIATE RELATIONS:

Mike Krauski—UW-Milwaukee  
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### STUDENT ACTIVITIES:

Randy Hoffman—WCTC  
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### CAREER DEVELOPMENT:

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### STUDENT PROFESSIONAL TRANSITION MANAGER:

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[nerissa.hanson@harley-davidson.com](mailto:nerissa.hanson@harley-davidson.com)

### MINI BAJA CHAIRMAN:

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[anderson.matthew@basco.com](mailto:anderson.matthew@basco.com)

### STUDENT REPRESENTATIVES:

Marquette: Jace Birschbach—[jace.birschbach@marquette.edu](mailto:jace.birschbach@marquette.edu)  
MSOE: Karl Hundt—[hundtk@msoe.edu](mailto:hundtk@msoe.edu)  
UW-Milwaukee: Nate Sievers—[nsievers@uwm.edu](mailto:nsievers@uwm.edu)  
Michigan Tech: TBD  
UW-Madison: TBD  
Northern Michigan University: TBD

## A Letter from the Chairman

Greetings Milwaukee SAE Section members and friends,

Spring is here and we are closing in on the end of the SAE year, but don't worry we still have some top notch events on our schedule.

This month we will be at Uptown Ford to get an up close and personal look at Ford's new F-150 with the aluminum body. There is a lot of buzz in the industry about this vehicle and this will be your chance to see what the buzz is about and what this means from a design perspective.

As you think of summer, keep in mind our annual Golf Outing and the June Sprints at Road America. These are great social activities where you can bring your friends and co-workers along to see what SAE is all about.

With the year coming to a close that means that we are in the stages of planning for next year. The SAE Milwaukee Section is looking for your help! We have two great opportunities for you to help grow your leadership skills and help keep our section active and continuing to be the premier engineering society in the area.

The first is our Shadow Program. Are you interested in what being a board member entails? Volunteer to be a shadow and we will pair you up with a board member. You can see what this board member does and help them with some of their task through the year. This is a great way to get involved and see what helping out with the Milwaukee SAE Section is all about. Please contact Randy Hoffman for more information.

The second opportunity is our AWIM/STEM initiative. Please consider volunteering to help bring engineering into the classroom for middle and high school students. Did someone spark your interest as a child that led you to a path in engineering? Maybe you can do the same for a young person. This is a great way to have an impact and promote the engineering discipline. Please contact Sid Jain for more information.

I look forward to seeing you soon at one of these upcoming events!

Garrett Herning  
SAE Milwaukee Section – Chairman

**NEW!!**



## **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 Chapter!

Do you like the service and support that your SAE Milwaukee Chapter 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 or find the position that suits your talents and/or interests.

***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

Your Milwaukee Chapter needs your help with expanding the AWIM program within the local schools. AWIM (A World In Motion) is a teacher-administered, volunteer-assisted program that brings Science, Technology, Engineering and Math (STEM) education to life for K-12 grade students. Program focuses on various age-appropriate challenges that are taught through the use of “kits” – students build different models using these kits while learning about basic principles of physics, motion and flight.

We have paired up with Messmer Prep and St. Rose/St. Leo schools in Milwaukee and will be introducing the AWIM program there



- Both schools are part of the Messmer Catholic Schools and serve the inner city students through a Voucher/Choice program
- This is **first time** a program of this kind is being introduced at Messmer – the program was **specifically requested by teachers** there to inspire girl students and encourage them to pursue STEM subjects later in their educational career
- AWIM program to be introduced for 4<sup>th</sup> and 5<sup>th</sup> grade students at both schools, with a focus on all 3 elementary and one middle school challenge
- **We want YOUR help** in assisting students in Fall and Spring sessions in after-school program setting (~ 3:30 – 5:00 pm)
- **For more information on volunteering, please contact Sid Jain, [S.Jain@na.modine.com](mailto:S.Jain@na.modine.com)**



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