

SAE MILWAUKEE

An SAE International Section

Upcoming Events

Midwest Composite
Technologies

- February 24th

Signicast

- March

Clean Snow Challenge

- March 7-12

February 2016 SAE Newsletter

February Event:

Midwest Composite Technologies

February 24th

1050 Walnut Ridge Dr., Hartland, WI

About the Event

Midwest Composite Technologies has been fabricating and manufacturing plastic and composite products for 40 years. As a family owned business, MCT prides themselves in being able to work closely with our customers to identify their needs while providing the flexibility to quickly respond to their diverse requirements. MCT offers CNC machining, tooling, molding, composite lamination, prototype metal stamping and fabrication, 4 additive manufacturing processes and industrial design services. Tours to include one of the largest collections of additive manufacturing machines in the Midwest.

Traditional prototyping and model making's development over the years and which new and old technology has been making the greatest impact.

Metal and plastic AM processes and applications including thermosets, elastomers, and advanced alloys.

Helmut Keidl

Helmut Keidl is the President and founder of Midwest Composite Technologies. Prior to MCT, he took an apprenticeship as a plastic pattern maker. He has always stayed close to plastics and the methodology he learned through this apprenticeship. Over the past 40 years, Helmut has dynamically changed his company to stay ahead of a rapidly evolving industry.

Tobias Keidl

Tobias Keidl manages the additive metal prototyping, IT securities, and directs development of internal software. Tobias holds a PhD in gravitation physics from University of Wisconsin – Milwaukee. Prior to joining MCT, Toby taught Physics at University of Wisconsin – Washington County.

Chris Keidl

Chris Keidl manages the additive plastic prototyping. Chris has been with MCT for 20 years, working with plastic tooling, molding, CAD, and additive manufacturing.

Event Agenda

Registration	4:30pm-5:15pm
Tours	5:00pm-6:00pm
Dinner	6:00pm-7:00pm
Presentation.....	7:00pm-8:00pm

Registration Fees

SAE Members	\$20
Retirees	\$15
Guests/Non-members.....	\$25
Students	\$10

Registration

Registration Deadline: February 19

Maximum Attendance: 75

Ways to Register:

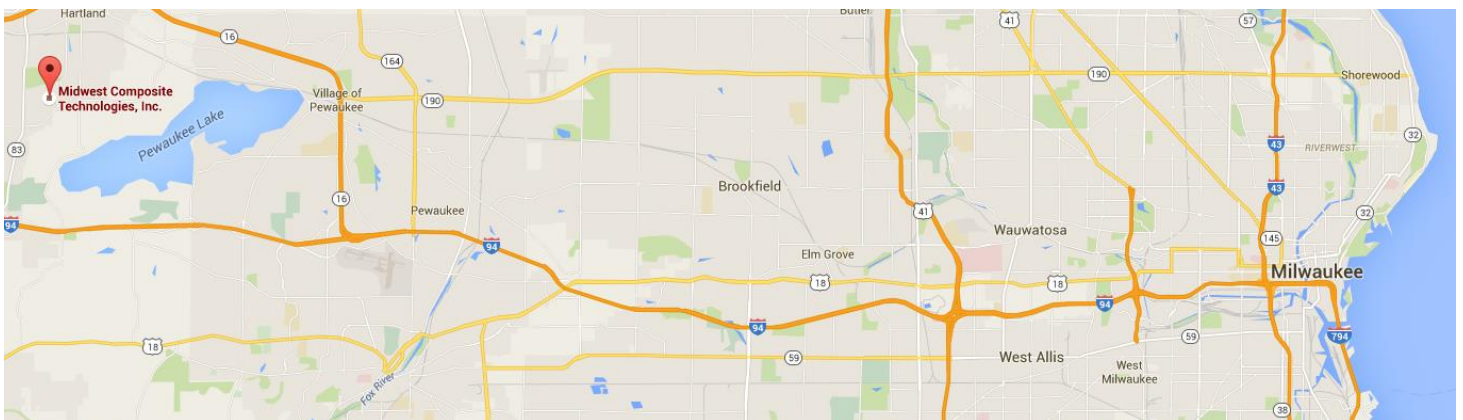
- Online with a charge card via www.milwaukeesae.com
- By phone: Van Phifer – (414) 465-8261
- By email: Van Phifer – VanPhifer@gmail.com

Registration required – no walk-ins allowed

Midwest Composite and SAE reserve the right to deny registration to individuals who work for competitors of Midwest Composite.

Location:

Midwest Composite Technologies – 1050 Walnut Ridge Dr., Hartland, WI



Clean Snowmobile Challenge

Please join us at our Milwaukee Section meeting on Thursday, March 10th, at Michigan Tech, as we look forward to a presentation from CSC's newest sponsor – Faurecia.

Faurecia is the 6th largest international automotive parts manufacturer in the world; in 2013 it was #1 for vehicle interiors and emission control technology. One in four automobiles is equipped by Faurecia. They design and manufacture: emission control technologies, seating and interior systems, exterior modules and decorative aspects vehicles.

We'd also like to thank MacLean-Fogg, with their continued sponsorship, and prestigious MacLean-Fogg Cup, that is awarded to the overall Gasoline Division winner. Last year, the UW - Madison won it.

MFCS management representatives were on hand in Madison on March 26th. to present the team with a \$1,000 award and their name on The MacLean-Fogg Cup.

If you are interested in attending the 2016 Clean Snowmobile Challenge, Contact Dale Wiza, dale@engineeringplacements.com, 414-807-9663 to learn more or rideshare. (The UP already has over 116" of snow!)

Schedule of Events

Monday, March 7			
Start Time	End Time	Activity	Meeting Place
8:00 AM	7:00 PM	Teams Arrive, Registration opens	
8:00 AM	7:00 PM	Turn in Snowmobile Description Form IC and ZE Final Technical Inspections	KRC/T3
5:30 PM	6:00 PM	Fire Safety Presentation	KRC/T3
6:00 PM	8:00 PM	"Early Volunteers" Reception	<i>Joey's Seafood, Houghton</i>
Shop open until Midnight		<i>Pizza for students in the shop</i>	
Tuesday, March 8			
Start Time	End Time	Activity	Meeting Place
7:30 AM		Judges Meeting Gage Products IC Fueling	KRC/T3
10:00 AM		*Grand Opening Event* NSF Electric Sled Range Test Endurance Run to Copper Harbor	KRC/T3
3:00 PM	5:00 PM	<i>Late Lunch and discussion about Future CSC competitions</i>	<i>Shelden Grill</i>
Return to KRC - Shop open 5pm until Midnight			
Wednesday, March 9			
Start Time	End Time	Activity	Meeting Place
7:30 AM		Presentation Judges Meeting	KRC Bldg 69
8:00 AM	5:00 PM	IC Design Presentations	KRC Bldg 69
8:00 AM	5:00 PM	AVL Lab Emissions Event Sensors Inc. In-Service Emissions	T5
10:00 AM	11:00 AM	Technical Presentation/Chalk Talk TBD	KRC/T3
8:00 AM	5:00 PM	Make-Up Endurance Miles	KRC/T3
Noon		<i>Lunch for the Presentation Judges Courtesy of Michigan Tech Career Services</i>	KRC Bldg 69
Noon		<i>Lunch in the shop Cincinnati Chili Courtesy of The PCB Group</i>	KRC/T3
Student Registration ends at Noon			
1:00 PM	3:00 PM	Electric Sled Draw Bar Pull	KRC/T3
4:00 PM	6:00 PM	Networking with Industry	Copper Country Mall

6:00 PM	8:00 PM	*Snowmobile Public Display* <i>Light refreshments will be served</i> <i>Courtesy of the Michigan Tech Graduate School</i>	Copper Country Mall
Shop open until Midnight			Outside KRC/T3
Thursday, March 10			
Start Time	End Time	Activity	Meeting Place
8:00 AM	Noon	PCB and HEAD acoustics Noise Event	KRC/T3
8:30 AM	5:00 PM	Polaris Subjective Handling Event	KRC/T3
8:30 AM	5:00 PM	Emissions Events (continued)	KRC/T3
10:00 AM	11:00 AM	Technical Presentation/Chalk Talk EMITTEC - "Catalyst Technology"	KRC/T3
Noon		<i>Pasty Lunch</i>	KRC/T3
1:00 PM	4:00 PM	ZE Design Presentations	KRC Bldg 69
5:00 PM	7:30 PM	SAE Milwaukee Section Meeting Presentation by Jack Phillion, Director or Corporate Quality of MacLean-Fogg	
Announcements for Special Awards Finalists Mandatory Attendance			DOW 641
<i>Dinner provided for registered students and Volunteers</i> <i>Provided by Michigan Tech MEEM Department</i>			
Shop open until Midnight			
Friday, March 11			
Start Time	End Time	Activity	Meeting Place
7:30 AM		Judges Meeting	KRC/T3
9:00 AM	5:00 PM	Emissions Events (continued)	KRC/T5
10:00 AM	11:00 AM	Technical Presentation Sound Quality HEAD acoustics, Inc.	KRC/T3
Noon		<i>Beef Bar-B-Que</i> <i>courtesy of the Iowa Snowmobile Association</i>	KRC/T3
1:00 PM	6:00 PM	Open time to enjoy the Keweenaw Mt. Ripley Ski Hill, Dollar Bay Motorsports Dan's Polaris, Houghton Powersports, M&M Powersports	
5:00 PM	6:00 PM	VIP Tours of MEEM Building MEEM	
7:00 PM	8:00 PM	VIP/Volunteer Reception	<i>Habeneros, Hancock</i>
Shop open until Midnight			<i>Students dinner on your own</i>
Saturday, March 12			
Start Time	End Time	Activity	Meeting Place
8:00 AM	8:30 AM	NGK/NTK Cold Start Event	Outside KRC/T3
8:30 AM	10:00 AM	Emission Testing (if necessary)	KRC/T5
10:00 AM		*Polaris Acceleration event*	KRC Test Course
11:00 AM		*Polaris Objective Handling event* *ZE Acceleration + Load Test*	KRC Test Course
Noon		Judges Meeting to Review Scoring and Penalties	KRC T1
6:30 PM		*Awards Banquet*	<i>MUB Ballroom</i>
<i>Banquet Meals for the students courtesy of the PCB Group</i>			
* Public Viewing Opportunities*			

SAE Milwaukee Board Member Spotlight

Drew Boyer – Social Media Manager/Program Manager



Hello! Although being on the board now for over four years, and making as many meetings as possible, I am typically not as much in the foreground as other board members are with their roles. Although that is the case, I still have had the opportunity to hopefully either share a tour or dinner with most of you over the years. In this spotlight I hope to give you a better introduction about myself, and why I am involved in the Milwaukee SAE section.

Like a lot of us, I am a Wisconsin native. I was born and spent my entire childhood up north in Rhinelander, WI (Yes, Hodge country!). Growing up in northern Wisconsin, I was always exposed to the great outdoors, power sports, and of course any activity that you can do in the snow. Surprisingly engineering, tinkering on things, etc. was the last thing on my mind when I was growing up. I grew up in more of a Hockey family and the ice rink is pretty much where I spent age 3 – 18, with 8 months out of the year being spent traveling the around to various games and tournaments. It is a sport that has brought me lessons that will last a lifetime, friends that I will have forever, and experiences I will always cherish. Oddly this sport accidentally directed me into the future passion that I would have which is engineering. Growing up my parents had high academic standards that they would use hockey to insure I met. Oddly I had a knack for math, and I always excelled at it, so I eventually put my later academic choices into more and more advanced math because it was the easiest balance between my athletic and academic life. Because of that, I found myself only being interested in engineering leaving high school.

Upon graduation in 2000, I attended MSOE starting out in computer engineering and eventually (actually very quickly) finding my true calling in mechanical engineering. In order to fund my college endeavors, I joined the Army National Guard as a combat engineer which I would eventually take a year and half of school off from 2003 – 2004 to deploy for Operation Iraqi Freedom (OIF1). During my deployment our unit was tasked with numerous non-combat and combat orientated missions that put us all over the theatre. I have heard that the 130th engineering brigade that we were commanded by called our unit the most versatile engineering unit in all of theatre during that time (which really speaks to the Wisconsin work ethic). I eventually graduated in 2006 from MSOE with one season of college hockey, a minor in Mathematics, and BS in Mechanical Engineering under my belt.

Leaving MSOE I had always enjoyed and had a passion for energy systems and how optimizing/innovating them is such a great way to positively impact our society as an engineer. So upon graduation I was fortunate to start my career as an application engineer at Modine Manufacturing Company in Racine, WI in the Engine Products Group. Within this group and this role I have had the opportunity to practice this to its fullest and from there is where I really got hooked into mobility engineering and made my transition to a “car guy”. My career began with opportunities to launch heavy duty EGRC (Exhaust Gas Recirculation Cooler) and liquid cooled intercooling / charge air cooling products that all support the reduction of NOx emissions in advanced diesel engines for US10 emissions. This opportunity allowed me to be in front of customers such as Cummins, Navistar, and John Deere and allowed me to be part of my first US patent. The later part of my career transitioned to focusing on compact liquid-liquid heat exchangers that support lube oil efficiency on automotive applications in both advanced IC engines and automatic transmissions that help the automakers to meet the new 2016 and 2025 CAFÉ fuel economy standards. This opportunity has put me in front of customers such as GM, Ford, and FCA in North America, and an exciting assignment in our location in Stuttgart, Germany that put me in front of Audi, Porsche, and Daimler. All of these opportunities I feel have allowed me to truly use my engineering background to meet my initial goals when I graduated. I am still in the role and in the group, only now I get to cascade this down to the next generation of engineers as an Application Engineering Supervisor.

As I entered Modine, I was never exposed to SAE, and thought that would be the best way to get acquainted with industry peers (especially as I was never much of a car guy prior). SAE Milwaukee made that really easy for me as there is such a strong section in Milwaukee with such an impressive group of industry peers in the area and Modine has a rich heritage of engineers being active on the board. I started initially by attending the exciting events, then eventually decided to get active by starting out as a company rep, then ultimately moved to a spot on the board as the Social Media Manager / Program Manager (which was newly created when I joined). This role has been very rewarding to see our social media develop and keep up in these changing times, and planning events that keeps our members engaged. Outside of SAE I enjoy staying active through Crossfit, motorcycling, snowmobiling, bicycling, golfing, and playing recreational hockey.

Recent Event – Wisconsin Auto Museum



Milwaukee Section 2015-2016 Governing Board

CHAIRMAN:

Garrett Herning—Power Test Dynamometers
garretth@pwrst.com

VICE CHAIRMAN:

Van Phifer

SECRETARY AND BAJA CHAIRMAN:

Drew Caron—Rexnord
andrew.caron@rexnord.com

TREASURER:

Mitch Crawford—Modine Manufacturing Co.
m.s.crawford@na.modine.com

**HISTORIAN & COMPANY
AMBASSADOR:**

Wayne Richter
richterway@sbcglobal.net

AWIM/EDUCATION:

Sid Jain - Modine Manufacturing Co.
S.Jain@na.modine.com

WEBMASTER:

Cara Kazda—Cummins Filtration
cara.kazda@cummins.com

MEMBERSHIP VICE CHAIR:

Nerissa Hanson—Harley-Davidson
nerissa.hanson@harley-davidson.com

COLLEGIATE RELATIONS:

Mike Krauski—UW-Milwaukee
krauski@uwm.edu

STUDENT ACTIVITIES:

Randy Hoffman—WCTC
rhoffman2@wctc.edu

CAREER DEVELOPMENT:

Dale Wiza—Professional Engineering
Placements
dale@engineeringplacements.com

SENIOR ADVISOR:

Kurt Person—Hayes Performance Systems
kurt.person@hbpsi.com

SOCIAL MEDIA MANAGER:

Drew Boyer—Modine Manufacturing Co.
a.m.boyer@na.modine.com

NEWSLETTER EDITOR:

Mike Fricke—HUSCO Automotive
michael.fricke@huscoauto.com

A Letter from the Chairman

Greetings and Happy New Year to the Milwaukee SAE Section Members and Friends!

I hope our first newsletter of 2016 finds you well and keeping out of the cold. It was a busy holiday season for all and we are ready to start the New Year with a great line up of events.

We had a great turnout for our social event that the WI Auto Museum in Hartford on our first cold day in January. We had about 35 attendees and it was great to see such a great collection of automotive history right in our backyard. If you were unable to make it, I encourage you to take a trip there sometime and spend a few hours wandering around the impressive collection. You will not be disappointed.

Our February event will be held at Midwest Composites in Hartland. If you have ever wanted to see some of the latest technology in rapid prototyping machines, this will be your chance. Midwest Composites literally has an army of rapid prototyping machines and we are going to get to hear first-hand about the different types of printing and the capabilities that they have. Please be sure to join us as this will be an event you do not want to miss.

The Milwaukee SAE Section is continuing our Shadow and STEM/AWIM initiatives. If you are contemplating becoming more involved and think you might like a board position next year, now is a great time to shadow a board member and see what helping run our section is all about. Additionally, we are always looking for people to become involved and help bring engineering to grade school and high school kids. Please see any board member at an event or contact any of us directly to see how you can become involved.

I look forward to seeing everyone at our February Event!

Garrett Herning
SAE Milwaukee Section – Chairman

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 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 Section 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 4th and 5th 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**

Section Sponsors



FALK[®]



HAYES[™]



MacLean-Fogg
COMPONENT SOLUTIONS



MILWAUKEEMILE
AMERICA'S LEGENDARY OVAL



Newsletter communications brought to you by...

Ken Cook Co.

Innovation in Technical Communication

Ken Cook Co.'s mission is to support client customers by developing and distributing client product operating, service and parts information worldwide. Ken Cook is known worldwide for the production of quality technical support documentation in electronic and printed formats and in most languages. Web design, ISP hosting, e-learning, e-business and internet communications are available to our customers.