

SAE MILWAUKEE

An SAE International Section

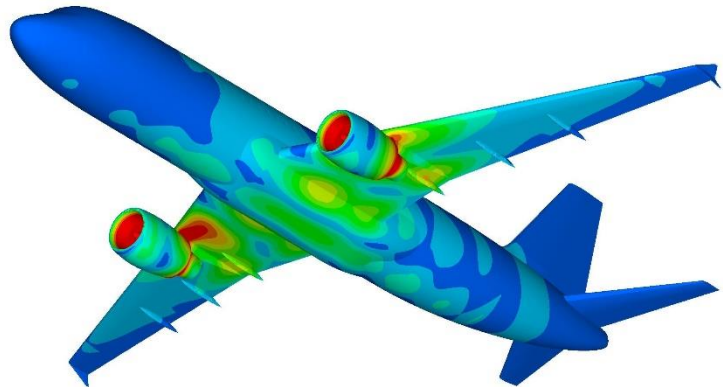
Upcoming Events

- November 1st - Student Night at UWM

October 2018 SAE Newsletter

Defects in Aircraft Design &
Materials:

Engineering Lessons Learned



Thursday, October 11th
4:30pm

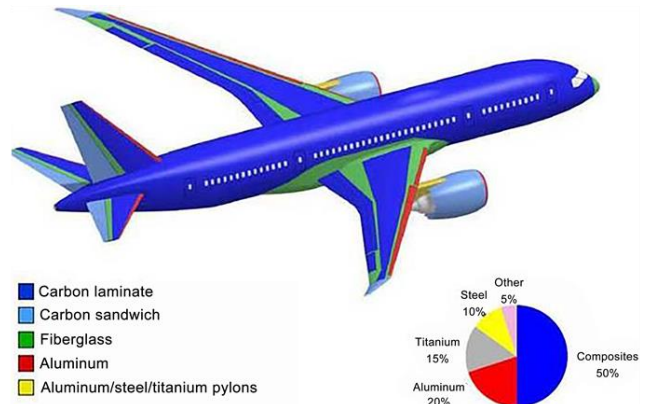
MATC - Oak Creek
Lecture Hall A (Main Hall)
6665 S. Howell Ave,
Oak Creek, WI

About the Event:

Larry Rinek will be guiding us through a thoughtful discussion and presentation on the design considerations and potential failures in the aviation industry.

Abstract

Why have preventable mishaps in aircraft occurred (which are not the fault of pilots), resulting in loss of life and property? Many of these incidents are directly attributed to human error and negligence in aircraft design as well as processing of materials (manufacturing issues). How can engineers prevent or at least minimize such unpleasant events, thus improving aircraft safety? What lessons can we learn from historical mishaps, so that they might be avoided in the future? Answers to these questions will be addressed, while exploring 12 case studies, involving some well-known civil and military aircraft programs. We will see how engineers recovered from hidden defects, and developed workable solutions.



About the Presenter:

Larry Rinek
Principal Consultant
Rinek Consulting Services
Santa Clara California



Larry Rinek is the Principal Consultant at Rinek Consulting Services. He was formerly a Senior Technology Consultant in the Technical Insights Division of Frost & Sullivan, where he had more than 17 years of service. His focus there was evaluation of emerging technologies and their commercial potential in aerospace & defense, automotive & transportation, industrial machinery, as well as advanced engineered materials. He is a trained engineer, a published historian (author of more than 25 items, including 6 SAE publications) focusing heavily on U.S. aviation technology history, a former USAF officer, a former student pilot, and veteran of the U.S. aerospace industry. Mr. Rinek is an active member of the AIAA and SAE technical societies, as well as the American Aviation Historical Society (AAHS), the Aircraft Engine Historical Society (AEHS), the Society for Aviation History (SAH), and the Wings of History (WOH). He earned a BS (with honors) in Industrial Engineering and an MBA in Marketing, both from UCLA. He has also been a guest lecturer in aero engineering for 9 colleges and universities across the US and Canada, with most of these visits sponsored by the SAE. Mr. Rinek has over 40 years of business and technology consulting experience. Many of his consulting projects have been sponsored by leading aerospace and motor vehicle builders/system suppliers around the world.

Event Agenda

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

Registration Fees

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

Dinner

Dinner Menu: Southern Fried Chicken, Carrots & Green Beans, and Garlic Mashed Potatoes

Registration

Registration Deadline: Oct 4th

Maximum Attendance: 85

Ways to Register:

- Online via the [SAE Milwaukee website](#) -
- By phone: Garrett Herning – 856-313-0581
- By email: Garrett Herning – sae@c2cintegration.com

Registration required – no walk-ins accepted

Location:

MATC - Oak Creek Lecture Hall A

6665 South Howell Ave, Oak Creek





David Pollock, Principal Engineer and James McFarland Ph.D., Sr. Electrical Engineer, will be discussing how alternators are designed from initial concept to production ready material. I hope you'll be able to join us and bring a colleague or two with you!

Additional details are below along with a link to RSVP:

Topic: "[Challenges in Alternator Design: Theory to Reality](#)"

Date: Wednesday, October 17, 2018

There is no charge for the event. Food and refreshments will be provided.

Schedule:

5:30 pm – 6:15 pm: Arrival and Social

6:15 pm – 6:30 pm: Welcome and Introduction to Generac

6:30 pm - 7:30 pm: Presentation: Challenges in Alternator Design: Theory to Reality

7:30 pm: Question and Answer session, Prize Raffle and Conclusion

We hope you can join us! Please RSVP here by October 7: <http://www.cvent.com/d/1gqhxd>

If you have any questions, please contact Kelly Davis

Kelly Davis

Community Relations Program Manager

Generac Power Systems, Inc.

Kelly.Davis@generac.com

262.544.4811 X2446



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.

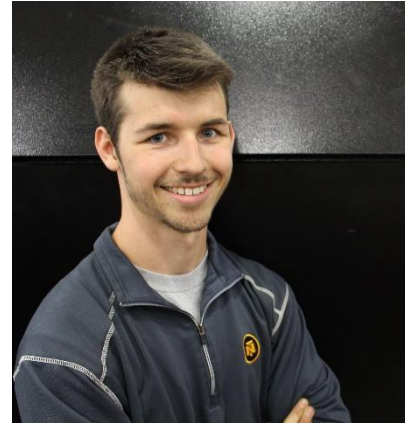
The program will be started in early February.

For more information on volunteering, please contact Negin Salami:

negin.salami@jci.com

Board Member Spotlight: Andrew Genal – UWM Chapter Sr Member

Hello All! For those of you who do not know me, I am a former President of the UW-Milwaukee chapter of SAE. Previously I have held the roles of Vice President, Vehicle leader and Shop Manager. I have been actively involved with the SAE Milwaukee Section since my freshman year in 2013 and have enjoyed meeting several of you at industry tours and events!



Leading up to graduation from Wauwatosa East High School, I wasn't 100% sure what major I wanted to take on. I was interested in becoming an architect, math teacher or mechanical engineer. When the time came, I enrolled at UWM as a Mathematics major and determined shortly after to pursue mechanical engineering by the presence of the SAE Baja team.

I am currently in my final semester at UWM and will be graduating this December. During my college career, I have always been an active member of SAE. I mainly sought out the leadership side of the organization and determining ways of how the chapter can improve function, efficiency and ensure members are getting the best experience possible. From 2015-2016, I created all the sweet, eye catching "Baja Yellow" body panels you've seen on our Baja cars. As SAE at UWM continued to grow, a few of my fellow members and I realized we need to expand and formed the first SAE Supermileage team at UWM. I am currently working with the Supermileage team to get their foot in the door, with the prospect to have a completed car for the 2019 competition in Marshall, MI. As my final task for SAE and UWM, before I graduate, I have taken on the challenge of organizing and planning the upcoming Student Night here at UWM. I look forward to becoming a professional member of SAE, and plan to stay active no matter where I end up.

Outside of school I have participated in 1.5 yearlong co-op with Kohler Co. as well as continually worked part time at Northern Tool + Equipment for over 6 years. After I graduate, I am eager to start a new adventure as a mechanical engineer, hoping for a position involving manufacturing process improvement or project management.

Chairman's Note:

Well summer is over although the mosquitos are still swarming. Meanwhile the board has been busy planning for the event year.

Our first event should be an exciting one and we expect a high demand for this great speaker. As humans and engineers, I think we all have a curiosity about failures and this program should give us some insight on designs that have gone wrong in aerospace.

November we will be enjoying presentations from our student chapters. BTW we really need our professional members to participate and judge this competition! So please clear your calendar November 1st for the Milwaukee SAE Student Night.

For those of you that were lucky enough to make the snowy trip to the Chicago Auto Show earlier this year you already know what a great event it was and what incredible access we had to the show... well we are already planning for the next one, so be prepared to take a Friday off in February!

Our longest-term plans revolve around bringing SAE Baja back to Wisconsin. If you'd like to see this happen make it a point to have a chat with one of our board members at our next event or better yet drop me an email

at VanPhifer@gmail.com. Thanks for reading and participating!

Milwaukee Section 2018-2019 Governing Board

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