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Chairman's Welcome

Welcome to the inaugural re-launch of CIS-SAE's Centroid. I hope that you find this quarterly newsletter informative about section news and events. The Section Governing Board's goal is to use the Centroid to:

- 1) Review of section meetings, events, and news that have recently occurred
- 2) Communicate the most up to date plans on section activities scheduled for the near future
- 3) Thank and promote our section sponsors,
- 4) Reduce section communication costs,
- 5) Communicate more activities done by the Section Governing Board.

As you can see the Centroid will be used to revamp our communication strategy and increase the Governing Board's accountability and transparency to the broader section.

Of course this change does impact the communication channels you may be used to! CIS-SAE will maintain using monthly emails, Caterpillar Communicators, and the Section webpage (<http://www.saesections.org/cis>) to communicate program details on a monthly basis. However we will eliminate the postcard program reminders to reduce work done by the volunteers on the section board and reduce the single largest section line item cost by at least 60%! Did you know that our section has about 500 dues paying or lifetime SAE members? That is a lot of paper, postage, and ink saved!

So please take 5 minutes to look through this newsletter and get ready for final program of this calendar year and start preparing for next year's program season.

Regards,
Matthew E. Leustek

Sponsorship Highlight: eServ

This year's Autocross in September and June was sponsored by eServ. eServ is a multifaceted product engineering company specializing in manufacturing, mechanical, electrical, aerospace, chemical, industrial and analysis. The September Autocross was huge success - with over 200 guests and we expect similar things from the June event. We would like to thank Jeff Robinson and the rest of eServ for their continued support of our Central Illinois Section of SAE. For more information about the company, go to: <http://www.eserv.biz>.

CIS-SAE is currently looking for sponsors for future programs. If your organization is interested in sponsoring a future program, please contact Jennifer Leustek at Leustek_Jennifer@cat.com.



Autocross with the Sports Car Club of America

“The event was very successful with 60 drivers registered in less than four days”



Nothing is more exciting than fast cars and stiff competition. Nothing drives more ingenuity and creativity than that competition. And nothing encompasses the spirit of SAE better than motorsports. If there is any doubt, then just look at the popularity of the SAE Collegiate Design Series, or the technology that has been created through motorsports, or the millions of people who regularly follow and participate in competitive motoring events.



It was this spirit that drove CIS SAE to pair up with the Sports Car Club of America to host the September 20th autocross presented by eServ.

The event was very successful with 60 drivers registered in less than four days, 220 attendees throughout the day, and 100% of the attendees were safe. An astounding number is that almost half of the drivers were novice and had never competed in an autocross before. We were ecstatic that that we had this many novices and were able to introduce them to SAE and competitive driving. We would not have been able to do it without those groups already listed and we would like to especially thank Caterpillar for allowing us to use their facilities. We would especially like to thank everyone who came and showed their support for SAE and motorsports in Central Illinois. This support and continued success make it possible for CIS SAE to keep offering these types of programs.

More pictures and the results can be found on the CIS SAE website. (http://www.saesections.org/cis/Autocross_2008_Results.htm)

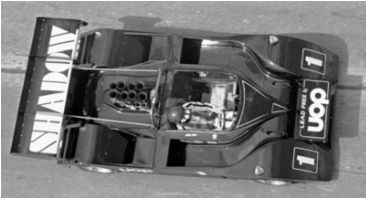
By Andrew Berberich

Check out our revamped website!!!



www.saesections.org/cis

Peter Bryant: The Can-Am Challenger



“Some of his aerodynamic design features were later implemented on formula racecars.”

October's SAE event was one that any auto racing enthusiast would appreciate. The evening began with dinner at Weaver Ridge Country Club followed by an entertaining and educational summary of the Canadian American Challenge Cup series as told by Peter Bryant, one of the most successful Can-Am series racecar designers. The Can-Am series was unique in the fact that the cars were virtually unregulated, which led to revolutionary car designs that utilized cutting edge racing technology.

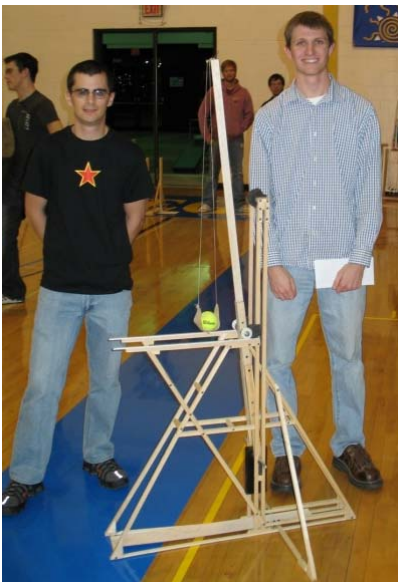
Peter started his presentation with an overview of his early days of automotive design, which included working on Carroll Shelby's racing team and developing the Ford GT40. He then went on to design the Autocoast Ti22 and later worked for team Shadow. Peter spent a good portion of the night discussing the technical details of his designs that gave his cars an advantage over the competitors. He discussed his ultra light titanium chassis design, suspension design, along with his use of wings and airfoils on the body to increase down force. Some of his aerodynamic design features were later implemented on formula racecars. Sadly, the Can Am series eventually folded when design costs became too large.



At the end of the event, Peter had an autograph session to sign copies of his Can-Am Challenger book. Hearing one of the most successful design engineers from such an entertaining racing series speak made for a very memorable evening.

By Matt Hensch

ICC Design Competition



The ICC design competition was held again this year in the Lorene Ramsey Gymnasium on the ICC campus in East Peoria. It took place on the evening of November 13th, 2008. The theme was trebuchets or gravity powered catapults. There were 19 teams which competed for a total of 59 student competitors. There was a small group of families and friends who came to cheer on their favorite team. The Central Illinois Section of SAE was represented by Jennifer Leustek (MC) and Andy Henderson (Judge). SAE guests included John Amdall (Guest Speaker and Judge) and Jon Jackson (Judge). A group of professors, which included Ray Spilsbury, from the college served as the officials for the competition.

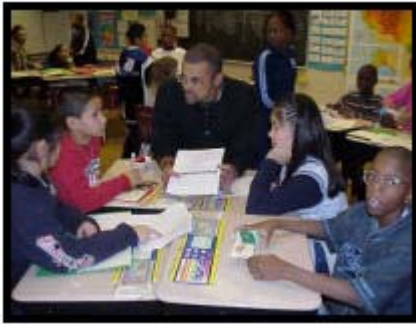
There were many good trebuchets but in the end the prizes went to the groups which were able to throw the farthest and most consistently while also having a well thought out design. The first, second, and third place teams received \$120, \$80, and \$50, respectively. The third place team also received the prize for Best Design which was another \$50. In addition to the cash prizes, each team member from the winning teams also won a student version of either MATLAB or Pro-E.

All in all, the competition was a great success and CIS SAE is looking forward to working with Professor Spilsbury, the students, and the rest of the ICC crew on these events in the future.

By Andrew Henderson



Be a Volunteer!



**Would you like to give back to your community?
Help encourage and inspire children?**

What is AWIM? Volunteering in a local classroom to help

- Promote science literacy
- Provide opportunities for concrete science experiences
- Support the roles of girls and minorities
- Expose students to engineering role models

You don't have to teach the material, just be there to support and encourage the students!

When: Anywhere between January and April teachers will schedule this SAE program to fit into their normal curriculum.

How: Contact Jess Crompton for more information. She will match you with a local teacher, and together you will decide how much time you can spend in the classroom.

We need volunteers!

Hope to hear from you soon,
Jess Crompton
Crompton_Jessica@Cat.com
309.578.5087

www.saesections.org/cis/ or www.AWIM.org



LeRoy G. Hagenbuch, inducted into AEM Equipment Manufacturing Hall of Fame

Central Illinois Section (CIS) – SAE is pleased to announce fellow section member LeRoy G. Hagenbuch’s induction into the AEM Hall of Fame.

The induction took place during the AEM Annual Conference November 11, 2008 in Scottsdale, Arizona. The AEM Hall of Fame recognizes, celebrates and preserves the history of outstanding leaders in the off-road equipment industry. The Hall of Fame seeks to create a wider public understanding and appreciation of the industry’s role - not only in the past but for the future - in global economic and social prosperity.

LeRoy G. Hagenbuch, P.E. is President and Co-Founder of the engineering and manufacturing firm Philippi-Hagenbuch, Inc. in Peoria, IL. His patent for the first commercially available tailgate designed for off-highway haul trucks was only the beginning. He is now credited with 89 patents, 51 in the United States and 38 in other countries. The most recent patent refines rear-ejection technology, allowing operators to push the load from the back of a haul truck instead of raising the bed. To advance the process of mine reclamation, he developed many products to efficiently haul overburden and other materials.

Mr. Hagenbuch has made outreach and industry progress a mainstay of his career. He has written white papers on vital industry topics, spoken at conferences and trade shows worldwide, and been active with many associations on behalf of the industry.

<http://aem.org/News/AEMNews/Details.asp?P=616>.
<http://www.philsystems.com/>



“He is now credited with 89 patents, 51 in the United States and 38 in other countries.”

Caterpillar Aviation Services, Division History

The Caterpillar Inc. Aviation Services Division History event took place on November 17th, 2008. SAE packed over 90 people into the Caterpillar Hangar at the Peoria International Airport. The event provided great networking opportunities, as well as a rare chance for aviators and non-aviators alike to learn what it takes to transport personnel of a world class organization to many locations around the world. Caterpillar operates 3 Bombardier Challenger 600 series jets (pictured above) that must travel to far reaching locations at a moment’s notice.



Two of the Caterpillar jets were on hand for the event. Participants were allowed to tour the jets and hangar facilities and had the opportunity to ask the jets’ pilots questions. The attendees also heard about the history of Caterpillar Aviation Services Division from Gene Stage. Gene’s presentation began by describing the beginning of the Aviation Services Division and how the division has grown since its inception. He also discussed the logistics of scheduling flights and the cost benefit to Caterpillar of having an

aviation division. A lengthy question and answer time followed, which allowed attendees to ask all of their Caterpillar aviation questions. Overall, the event was an excellent time to learn about flying in Caterpillar style first-hand!



Jet Plane Interior

By Jennifer E. Grote

D7E Electric Drive Tractor



The D7E Electric Drive Tractor Presentation took place on January 27th 2009. SAE packed over 100 people into the Caterpillar SS Cafeteria in East Peoria, IL. Speaker Mike Betz, team leader for the D7E, introduced the new innovative Caterpillar electric drive track type tractor. According to Mike's presentation, the entirely new Caterpillar D7E contains more advances than just a new electric drive train. The D7E tractor also has a tilt cab with ergonomic controls, Cat SystemOne undercarriage, modular electric air conditioning, dedicated steering pump, beltless C9 ACERT engine, hydraulic demand fan, and grouped service points, just to name a few. The new tractor is expected to have lower operating costs, less noise, less downtime, less fuel consumption than current models, better performance, and better visibility. The benefits from the electric drive system specifically are reduced operating costs from lower fuel

consumption and better performance, easier operation, machine design flexibility, and more electrically driven accessories. Participants learned all about the features and benefits of the D7E design and then had a chance to view a fully assembled D7E machine, D7E powertrain display, and C9 Engine Display. Participants were also allowed to climb into the cab of the D7E display and check out the new ergonomic controls! The event provided great networking opportunities for employees from multiple different companies including, Caterpillar, Eserv, Komatsu, and Hydrogear. SAE would like to thank Caterpillar Inc. for hosting the event, and Mike Betz and his team for giving a great presentation and making this a hands-on event for attendees. Also, thanks to all of the volunteers who helped make this SAE event possible.



By Jennifer E. Grote

Chevy Volt February/March Program Canceled!

Although not widely communicated, CIS-SAE very nearly secured a program featuring a Program Manager from the GM Chevy Volt project and potentially an early version of a concept car. This program was part of Mike Redmann's continued vision for trying to bring in large scale and dynamic programs. Unfortunately, literally hours before the communication for this program was going to be published, the GM had to withdrawal their support for the CIS-SAE program due to Volt program needs. It is our goal to try to make this program happen in the 2009-2010 program year!

SAE & SWE Leadership Development Seminar – Leadership in Tough Economic Times

The annual leadership development series took place on April 30th with 30 participants at Caterpillar Technical Center Building E. The extremely relevant topic was discussed by two dynamic speakers: Vickie Clark the COO for the Economic Development Council for Illinois and Michelle Conger a Senior Vice President for Performance Improvement at OSF. Vickie shared with the group about how the Economic Development Council specifically in Peoria is working to create opportunities by bringing new sustainable businesses into the area. Michelle Conger described how OSF was weathering this economic down turn, trying to retain physicians, and improving the level of care within OSF. Both speakers discussed how each personally is approaching this downturn; both recommending maintaining focus on the issues at hand, staying positive, open and honest, and maintaining relationships. CIS-SAE wants to thank Michelle and Vickie for helping to make this program possible by sharing their views, visions and insights on leadership during challenging economic times.

Vickie Clark



- Chief Operating Officer of the Economic Development Council for Illinois
- Graduate of the Peoria Area Chamber of Commerce Community Leadership School
- Director of the Illinois River Road National Scenic Byway
- 1997 Class of Peoria's Forty Leaders under Forty
- 25 Women in Leadership
- Athena Award for business leadership



Michelle Conger



- Senior Vice President of OSF - Performance Improvement
- Leadership role at Saint Francis Medical Center as well as served as a Master Black Belt in 6 Sigma
- Masters Degree in Psychology/Social Work from the University of Illinois at Champaign Urbana



CIS-SAE
P.O. Box 355
Peoria, IL 61651

