



ICC's 7th Annual Engineering Design Competition

Sponsored by Society of Automotive Engineers

Thursday, November 16, 2006

treb•u•chet
noun. gravity-powered catapults used in the Middle Ages to lay siege to castle walls.



Program Dates

Saturday, September 23
Precision Driving School

Thursday, October 12
Fueling Our Future Transportation Needs

Thursday, November 16
ICC Design Competition

December
SAE Social Event

January
X-Prize – The \$10 Million Prize

February
CAT OEM Transmissions

March
State Farm Crash Investigation

March
Auto Show – Student Projects

April
SWE Career Development

May
Joint Strike Fighter

Location:

Illinois Central College
East Peoria Campus
Lorene Ramsey Gymnasium
One College Drive
East Peoria, IL 61635

Schedule:

6:00 – 6:30	Students Setup/Design Check
6:30 – 7:00	Engineering Speaker – Tom McClure
6:30 – 8:00	Design Competition
8:00 – 9:00	Competition Completion and Awards

Details:

Design teams will compete to see whose trebuchet can throw a tennis ball the farthest. In addition, a team of independent judges will evaluate each trebuchet for quality of engineering. These two factors will be combined to determine winning entries. Cash prizes will be awarded, courtesy of SAE:

1st: \$125 2nd: \$75 3rd: \$50 Best Design: \$50

The following **design criteria** must be met:

1. The design must be original
2. Total weight must not exceed 10 pounds
3. Total cost must not exceed \$50
4. Must be powered only by gravity (any elastic components used must not contribute energy to the throw).

All students are invited to form teams and enter the competition. Each team must have between two and five members. Entry forms must be submitted no later than November 16, 4 pm. To enter, or for more information, contact:

Prof. Ray Spilsbury
Office 318C
694-8449
rspilsbury@icc.edu

In addition to the first hand engineering experience that the students will get, Tom McClure, a Caterpillar Six Sigma Black Belt, will speak to students about engineering opportunities in industry. Tom has worked for 10 years in New Product Introduction on various components and systems. His varied work experiences include design, analysis, and testing roles. SAE Members and Guests are invited compliments of CIS SAE to observe this event and listen to the Speaker!



Central Illinois Section

Centroid News • November 2006



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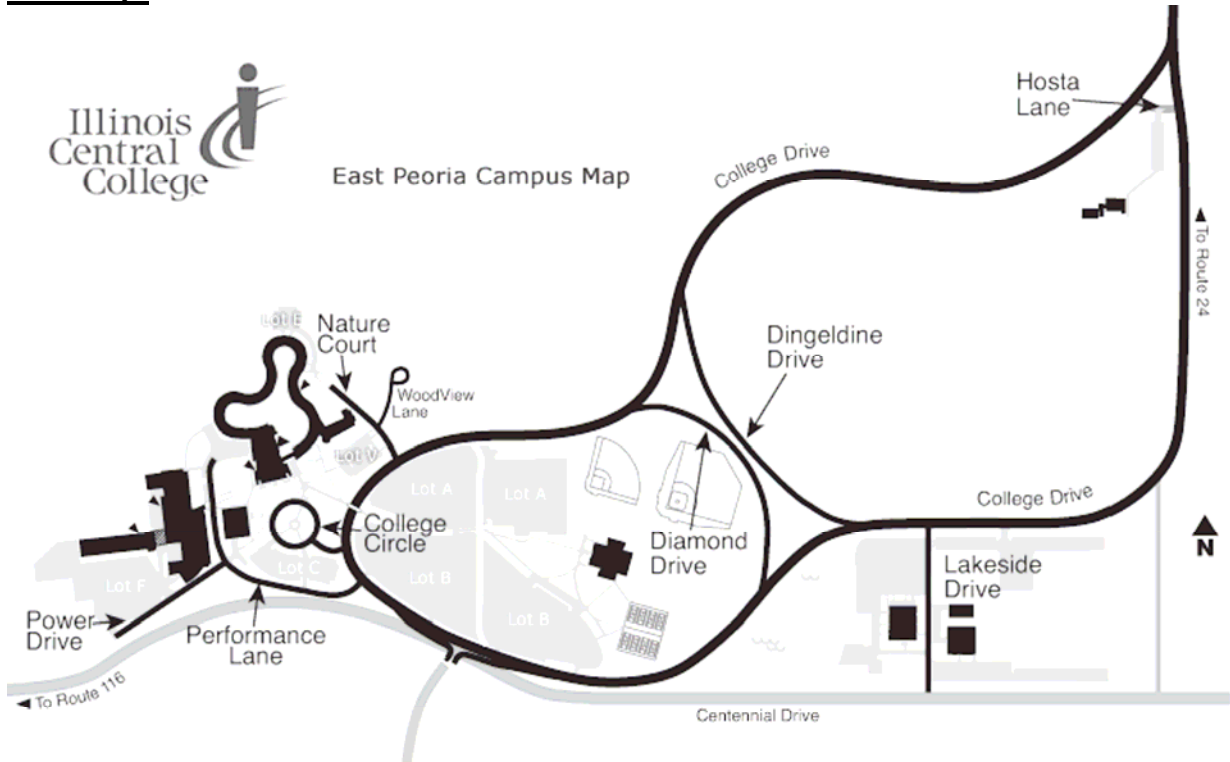
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Directions:

ICC is near the intersection of Route 116 and Route 24 in East Peoria. From the 150/McCluggage Bridge headed East, cross over the Illinois River. Take Route 24 East. The first stop-light past the river is College Drive. Take a Right and follow around to **parking lot B**, where you should park. See map below.

ICC Map:



Event Sponsor



SAE Central Illinois Section
Visit our website at www.saesections.org/cis/ to learn about upcoming events

www.saesections.org/cis/

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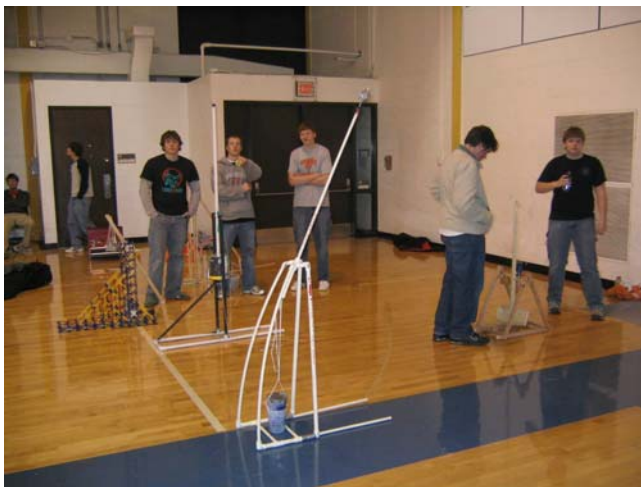
Event Lead Note:

It is estimated that approximately 70,000 engineers graduate annually from US colleges and universities. This may seem like a large amount, but compared to India's 350,000 and China's 600,000 graduates, the US is falling behind. In today's world, knowledge and technical expertise are more important than they ever have been. In order to remain competitive in today's world, we need more engineers and scientists. Part of the reason why we don't have as many people going in to engineering is that our young people don't really know what engineering is all about. Many students don't know what an exciting, challenging, and rewarding career engineering is. Part of our professional responsibility is educating others about what we do.



This is exactly why the Central Illinois Section of SAE is co-sponsoring the Student Design Competition at ICC. The design competition is an excellent opportunity for students to get a taste of engineering. In addition to the first hand engineering experience that the students will get, Tom McClure, a Caterpillar Six Sigma Black Belt, will speak to students about engineering opportunities in industry. Tom has worked for 10 years in New Product Introduction on various components and systems. His varied work experiences include design, analysis, and testing roles. Please support our initiative by joining us at 6:30 PM on November 17th for the ICC Student Design Competition.

Mustafa Al-Shawaf
Student Activities Chair



2005 ICC Student Design Competition



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Communication Note:

Greetings fellow SAE members,

I hope everyone had a safe and joyful summer. The fall is underway and we had two exciting program events: The Precision Driving School and Autocross with the Porsche Club of America and “Fueling our Future Transportation Needs” with William Chamberlain

Originally from Panama, I first became an SAE member in 2001 as a way to better integrate into the engineering world, as my background is in Physics. One of the reasons that drew me in particular to SAE, is the vast range of engineering fields it covers, not only in Automotive, but also in aerospace and off-road technology. As a professional, regardless of field, it is imperative for all of us to keep up to date with the latest technologies & trends, but most important, connected to the world community. SAE provides a way for us to connect with each other and contribute to something bigger than ourselves as individuals, to contribute to the advancement of society and improve everyone’s standard of living. Since I joined, I was able to attend very exciting SAE events like the Noise & Vibration Congress (Traverse City, Michigan) and the Commercial Vehicle Engineering Congress and Exhibition (Rosemont, Illinois).



Last year, I was given the opportunity and privilege to give back to the SAE Community by joining the Governing Board of the Central Illinois SAE Section as part of the Communications and Program Team. It gave me the chance to contribute, but also to grow, learn and among all, to find new friends. This year I am privileged again by being part of the Communications Team, along with Ben Fong, Matt Anderson and our Communication’s Chair, Steven Hofstetter.

Like others, I enjoyed the benefits of being an SAE member (publications, congresses, seminars, etc.), without giving back and getting involved with our local section. I personally invite you to volunteer for your local SAE section and find ways to contribute in your own and unique way. I am sure you will find the experiences as rewarding as I have.

Starting in November, we will discontinue sending postcards to all who are on the email listserv list - that is all that are receiving electronic notices of our events. This will streamline communications processes and reduce costs, which will allow us to provide better speakers and reduced meal costs to our members. Please double check your spam filters to make sure you will receive the future notices by email! Our sending e-mail address is changing to: [CIS SAE Communications@yahoo.com](mailto:CIS_SAE_Communications@yahoo.com).

Thank you for your continuing support of the SAE Central Illinois Section. Only with your support, comments and suggestions we will fulfill our goal to contribute to a better society, to something bigger and more important than ourselves as individuals.

Sincerely yours,

Guillermo A. Herrera
CIS SAE Communications Committee

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Student Chapter Donations and Matching Contributions

Student Chapter Donations and Matching Contributions

The two universities in our section, Bradley University and the University of Illinois at Urbana-Champaign, have active SAE Student Chapters that participate in SAE Collegiate Design Series competitions. Many of the chapter's activities, specifically the Formula SAE and SAE Mini Baja programs, give young engineers hands-on experience in the design, build, and development process. Current teams are in full swing, and now is the perfect time to support local education.

These participants will be future engineers in the off-road equipment industry, and donating is a great way to fuel student and corporate growth. Many companies have donation matching programs to make your contribution go farther. The Caterpillar Foundation has a program for Caterpillar employees to get their contributions matched, regardless of SAE membership:



1. Fill out the Caterpillar Foundation matching funds form. The form can be accessed via [www at https://largepower.cat.com/cda/components/securedFile/displaySecuredFileServletJSP?fileId=203491&languageId=7](http://www.largepower.cat.com/cda/components/securedFile/displaySecuredFileServletJSP?fileId=203491&languageId=7) Under "Purpose of Gift/Gift Designation," specify "SAE Mini Baja" or "Formula SAE." There is an account setup for each. Under organizational information, indicate which university will receive your donation:

University of Illinois Foundation
Attn: Matt Wilson
1305 West Green Street, MC-386
Urbana, IL 61801

or

Gift Records, Bradley University
1501 W. Bradley Avenue
Peoria

2. Make check payable to University of Illinois Foundation or Bradley Fund. Please designate "Formula SAE" or "SAE Mini Baja" in the memo.

3. Send check and form to the addresses above. For the February 15, 2006 match, the contribution needs to be made by the end of 2005.

Please note that it is possible to contribute your gift on-line at the following websites, but the Caterpillar Foundation matching funds form must still be sent by mail.

<http://www.giving.uiuc.edu>

<http://www.bradley.edu/development/onlinegifts/index.shtml>

Thank you in advance for your support!



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Up-coming Events:

**SAE December Social Event
Spirit of Peoria Dinner Cruise**

Saturday, December 9th, please come and enjoy an intimate and merry holiday revue with your fellow SAE members aboard the Midwest’s unique and historic paddlewheeler, the "Spirit of Peoria." This dinner cruise features a tour of the “Spirit of Peoria” engine room, homemade prime rib buffet, two-hour riverboat cruise, and live entertainment. The tour of the engine room is a special treat added on for our SAE event and features two Caterpillar 3412 diesel engines. So take a break from the busy holiday season, bring your family and friends, and come and spend some time getting to know other CIS SAE members!



Details

Meals Include: two entrees—one being chef carved prime rib, fresh green salad, vegetable, potato, rolls, coffee, tea and gourmet dessert. Cash bar is available.

Pricing:

\$17.00 – SAE Member
\$25.00 – Non-Member
\$14.50 – SAE Student Member* / Children Ages 4-12*
Free – Children 3 and under*

Registration

Please register and pay online at www.sae.org on the CIS-SAE events webpage. Only payment with credit card will be accepted for online registration.

* Students and children cannot register online. Please contact Jennifer Grote at Grote_Jennifer_E@cat.com to register as a student or to bring children. All children need to be registered whether or not there is a charge for the child. Only checks made payable to SAE-CIS that are received prior to the event will be accepted for registration not made online.

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SAE Commercial Vehicle Congress, Oct. 31-Nov. 2, 2006, Chicago Area

The SAE Commercial Vehicle Engineering Congress and Exhibition is a global assembly of commercial vehicle engineering customers in one location. It successfully brings together, in one place, a global assembly of both on- and off-road customers, providing three days of solid, profitable interaction with engineers, supply managers and executives. This high-energy event enables attendees to access cutting edge technological information, engage in high-profile networking and enhance understanding concerning the issues and challenges facing the entire commercial vehicle industry.

As an SAE member, you can attend one event per year for FREE.

event

at-a-glance

Monday October 30	Tuesday October 31	Wednesday November 1	Thursday November 2
SAE Technical Standards Committee Meetings (Monday – Thursday)	8:00 a.m. – 10:30 a.m. Technical Sessions	7:00 a.m. – 8:00 a.m. Bagels & Briefings: SAE Standards Update (Ballroom)	8:00 a.m. – 10:30 a.m. Technical Sessions
	10:30 a.m. – 10:45 a.m. Networking Break (Foyer)	8:00 a.m. – 10:00 a.m. Technical Sessions	10:30 a.m. – 11:00 a.m. Networking Break (Exhibit Hall)
	10:45 a.m. – 12:30 p.m. Panel (Ballroom): "Alternative Energy for the Future" and Technical Sessions	10:00 a.m. – 10:30 a.m. Networking Break (Exhibit Hall)	11:00 a.m. – 12:30 p.m. Panel (Theater): "Electronics Architecture" and Technical Sessions
	12:30 p.m. – 1:00 p.m. Lunch (Ballroom Foyer)	10:30 a.m. – 12:00 p.m. Panel (Theater): "Operator-Vehicle Interfaces" and Technical Sessions	12:30 p.m. – 1:30 p.m. Lunch (Exhibition Hall)
	1:00 p.m. – 3:00 p.m. Technical Sessions	12:00 p.m. – 12:30 p.m. Lunch (Exhibition Hall)	12:30 p.m. – 5:00 p.m. Committee Meetings
	3:00 p.m. – 3:30 p.m. Networking Break	12:30 p.m. – 1:30 p.m. Buckendale Lecture (Theater)	Exhibit Hours: Tuesday 3:00 p.m. – 8:00 p.m. Wednesday 10:00 a.m. – 5:00 p.m. Thursday 10:30 a.m. – 1:30 p.m.
	3:30 p.m. – 5:00 p.m. Panel (Theater): "Focus on India: Providing Engineering Solutions for the Commercial Vehicle Industry" and Technical Sessions	1:30 – 3:00 p.m. Technical Sessions	
	5:00 p.m. – 8:00 p.m. Welcome Reception (Exhibition Hall)	3:00 p.m. – 3:30 p.m. Networking Break (Exhibit Hall)	Registration Hours: Monday 10:00 a.m. – 5:00 p.m. Tuesday 7:00 a.m. – 5:30 p.m. Wednesday 7:00 a.m. – 5:30 p.m. Thursday 7:00 a.m. – 1:00 p.m.
		3:30 p.m. – 5:30 p.m. Panel (Ballroom): Global CEO Panel	
		5:30 p.m. – 9:00 p.m. Networking Reception and Banquet with Speaker: Carl B. Mack	

SAE 2006 Commercial Vehicle Engineering Congress and Exhibition