



# Collegiate Design Series News

Volume 4, Issue 8 November 2007

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## 2008 Collegiate Design Series Registration Reminder

Registration for all 2008 SAE Collegiate Design Series events opened Monday, October 1, 2007 at 10:00 AM Eastern Daylight Time. As a reminder maximum team limits as well as event fees are listed below:

Event	Team Limit	2008 Fee
March 10 – 14, 2008 <b>Clean Snowmobile Challenge™</b> Location: Keweenaw Research Center - Houghton, Michigan	20	\$500.00 USD
April 4 – 6, 2008 <b>SAE Aero Design West</b> Location: Fort Worth, Texas	65	\$450.00 USD
April 18 – 20, 2008 <b>SAE Aero Design East</b> Location: Marietta, Georgia	65	\$450.00 USD
April 23 – 26, 2008 <b>Formula – VIR</b> Location: Virginia International Raceway - Danville, Virginia	50	\$1,000.00 USD
May 1 – 3, 2008 <b>Baja SAE Tennessee</b> Location: Tennessee Tech University - Cookeville, Tennessee	100	\$600.00 USD
May 5 – 7, 2008 <b>Formula Hybrid</b> Location: New Hampshire International Speedway - Loudon, New Hampshire	Unlimited	\$750.00 USD
May 13 – 18, 2008 <b>Formula SAE</b> Location: Michigan International Speedway - Brooklyn, Michigan	120	SOLD OUT
May 29 – 31, 2008 <b>Baja SAE Illinois</b> Location: Edwards Demonstration Center - Edwards, Illinois	115	SOLD OUT
June 5 – 6, 2008 <b>SAE Supermileage</b> Location: Eaton Proving Grounds - Marshall, Michigan	Unlimited	\$350.00 USD
June 11 – 14, 2008 <b>Baja SAE Montreal</b> Location: Ecole de Technologie Superieure - Montreal, Quebec, Canada	120	SOLD OUT
June 25 – 28, 2008 <b>Formula West</b> Location: California Speedway - Fontana, California	80	\$1,000.00 USD

### Editors:

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Please if you have submissions or  
ideas for news, contact us at:  
collegiatecompetitions@sae.org

## 2008 Formula SAE Fuels!!

It is confirmed!! Sunoco will be supplying the following fuels at all three (3) U.S. Formula SAE competitions:

93 Octane  
100 Octane  
E-85

### New Registration Requirements for 2008

In an effort to expedite onsite registration at all events, the SAE Collegiate Design Series Staff has implemented a new process for 2008 registration. All participating team members are now required to submit their credentials on the SAE website prior to the competitions.

Once a team has registered online for their desired event(s), all participating team members and faculty advisors must affiliate themselves to their respective school / college / university on the SAE website. You can confirm or correct your affiliation by going to [www.sae.org](http://www.sae.org) and logging into "My SAE" with your username and password. If you do not have a current username, you will need to create one by selecting the "Need a User ID and Password to Login?" link. If you are already an SAE member, select the "MyMember Info" button and then select the "Update School Information" link. You will then be prompted to update your education information.

If you are not an SAE member, go to [www.sae.org](http://www.sae.org) and select the "Join SAE / Membership Renewal" link under "Quicklinks", then select the "Join SAE" link under "Join SAE International". Students will need to select the "Student Membership" link and then follow the series of questions that are asked. Faculty members that wish to become an SAE member should choose the "Professional Membership" link and proceed to the series of questions. Please note all student participants must be an SAE member to participate in the event.

Once an SAE member number has been obtained and participants have linked themselves to their respective school, all affiliated students and faculty must complete the following information on the SAE website:

- Medical insurance (provider, policy/ID number, telephone number)
- Driver's license (state/country, ID number)
- Emergency contact data (point of contact – parent/guardian or spouse – relationship, phone number)

To do this you will need to go to Student Central on the SAE homepage, then click on the "2008 Competition Date and Registration Information" link under "Student Competitions". Proceed by selecting the "Competition Schedule/Registration" link and then the event(s) you wish to register for. Choose the "Register" link (or "Update" link if after December 27, 2007) next to your desired competitions(s) and then select your team link to add yourself to the team profile. The "Add New Member" button will allow individuals to include themselves with the rest of the team. Please be sure to bring hard copies of your driver's license or passport as well as your medical insurance card to onsite registration for verification purposes.

All international student participants, or unaffiliated faculty advisors, who are not SAE members are required to complete the International Student Participation form per team found under "General Information" on the event specific webpage. Upon completion, email the form to [CollegiateCompetitions@sae.org](mailto:CollegiateCompetitions@sae.org).

**All students, both domestic and international, must affiliate themselves online or submit the International Student Registration form by February 28, 2008. For additional assistance, please contact [CollegiateCompetitions@sae.org](mailto:CollegiateCompetitions@sae.org).**

## 2008 Formula SAE Registration

**Registration for Formula SAE West will open to all teams on Thursday, November 1, 2007.** At this point, teams who registered for Michigan can register for California.

There was a misprint published in the 2008 rules with regards to the Formula SAE West team limit. The published limit was set at 90 teams; however SAE was not increasing the limit. The limit for 2008 will remain at 80 teams as published on the website.

Also misprinted was the date of when registration for Formula SAE West will open to all teams. The date published was Monday, November 5, 2007 however this date is actually Thursday, November 1, 2007. One month exactly since original registration opened on October 1, 2007.

**Dates and Registration Limits** – Next year's Formula SAE competition schedule is:

**2008 Formula SAE at VIR**, Virginia International Raceway, Alton, VA  
– Wednesday, April 23 through Saturday, April, 26, 2008 – Limited to 50 teams

**2008 Formula SAE**, Michigan International Speedway, Brooklyn, MI – Wednesday, May 14 through Saturday, May, 17, 2008 – Limited to 120 teams – SOLD OUT!

**2008 Formula SAE West**, California Speedway, Fontana, CA – Wednesday, June 25 through Saturday June 28, 2008 – Limited to 80 teams

**Multiple Event Registration** – During the first month of the registration period teams may register for either Formula SAE or Formula SAE West – but not both. Additionally teams may simultaneously register for FSAE at VIR. Specifically, registering your team for both FSAE at VIR and either FSAE or FSAE West will be permitted during the first month of registration. After the first month of registration teams may register for any competition at which space is available.

## Customs Entry Process for Baja SAE® Montreal Event

There have been several questions in regards to customs and shipping materials into Canada for the Baja SAE® Montreal event. Below are some points to consider for the time being, as we learn more information closer to the event SAE will keep everyone informed:

- If you are shipping anything to Canada (i.e. to a hotel or otherwise directed by the event organizer), please be sure to have your duties/taxes paid at the time of shipping, as the recipient may not accept your shipment if this has not been paid upfront by the sender. You can coordinate the duty/tax fee with your freight company. This duty/tax may also apply to international teams who are having their engine shipped directly to the organizer.
- Please visibly list all inventoried items inside the shipment on the OUTSIDE of any boxes, crates, etc. to help move the customs process along smoothly.
- Please have a valid passport if you are flying OR driving to the event. EVERYONE IS REQUIRED TO HAVE A VALID PASSPORT IF THEY ARE CROSSING THE CANADIAN BORDER.
- All teams traveling to Canada for the event must obtain a Visa Invitation Letter from SAE stating the name of the event, location, host, and the nature of the competition. Teams need this document so that government officials are aware that students are attending a collegiate engineering event and are simply not importing certain tools and equipment. This letter will be located on the Baja SAE Montreal homepage at <http://students.sae.org/competitions/bajasae/ets/> under "Competitions Resources." For further information on crossing the Canadian border, visit [www.travel.state.gov](http://www.travel.state.gov).

Again we will keep you all informed of any other custom related issues that teams should be aware of. Should you have any questions please let us know via the forum or [CollegiateCompetitions@sae.org](mailto:CollegiateCompetitions@sae.org).

## FORMULA SAE ANTHROPOMETRIC REFERENCE DATA 5TH PERCENTILE FEMALE & 95TH PERCENTILE MALE

For 2008, we have introduced a requirement in the Vehicle Design Objectives, Rule 1.2, that among other things, "The car... should accommodate drivers whose stature varies from a 5th percentile female to a 95th percentile male." This has been done because, in spite of the long standing design objective that "the students are to assume that a manufacturing firm has engaged them to design, fabricate and demonstrate a prototype car for evaluation as a production item," and that "the intended sales market is the nonprofessional weekend autocross racer," many cars have been designed just to fit the members of that specific team, not the wider potential market.

To assist the teams, the following data has been assembled to give some significant dimensions for a 5th percentile female and a 95th percentile male. While this data is primarily based on North American subjects, the information we have from the UK indicates that the UK subjects are a just fraction of an inch shorter in height and even less in sitting height. Therefore, we believe that this data is representative for North America (the USA and Canada), Western Europe, Australia and New Zealand, which are the major potential markets for a vehicle of this type.

Attached is a chart giving some basic dimensions.

Dimension #	Dimension	Measurements			
		95th Percentile Male		5 th Percentile Female	
		Metric	Imperial	Metric	Imperial
	<b>Weight</b>	<b>102 kgs</b>	<b>225 #</b>	<b>49 kgs</b>	<b>108 #</b>
1	Standing Height	186.5 cms	73.4 ins	151.5 cms	59.6 ins
5	Hip Height	100.0 cms	39.4 ins	74.0 cms	29.1 ins
8	Erect Sitting Height	97.0 cms	38.2 ins	79.5 cms	31.3 ins
10	Sitting Shoulder Height	64.5 cms	25.4 ins	50.5 cms	19.9 ins
17	Sitting Shoulder Width	50.5 cms	19.9 ins	37.5 cms	14.8 ins
19	Hip Width	40.5 cms	15.9 ins	31.0 cms	12.2 ins
25	Shoulder Grip Length	71.5 cms	28.1 ins	55.5 cms	21.9 ins
30	Foot Length - bare	28.5 cms	11.2 ins	22.0 cms	8.7 ins
31	Foot Width - bare	11.0 cms	4.3 ins	8.5 cms	3.3 ins

The numbers in the diagram below refer to the "Dimension #" in the left hand column of the chart above.

## FORMULA SAE ITALY 2007

ATA, the organization behind Formula SAE Italy since the start, has been working for many years to improve collaborative links between Italian Universities and automotive industries.

This third edition, successfully organized in the legendary Ferrari Fiorano Racetrack, registered the participation of 20 teams in class 1 and 5 teams in class 3.

It was certainly a special emotion for students and organizers to live three days in such a particular Circuit.

More than 600 students attended the competition which was sponsored by 21 automotive companies.

As far as the Technical Committee is concerned, it was composed by some of the most representative experts of the racing world and F1 who judged designs and cars appreciating the technical level and originality of the ideas and solutions proposed by team members.

The Rennteam Uni Stuttgart was the winner of this edition followed by the Squadra Corse of the Politecnico di Torino and by the TU Graz Racing Team.

Following the introduction in Italy of the FSAE series, some Italian Universities are working to involve students to set up teams and many others are developing their projects to attend next Formula SAE competitions.

Through this event, both Italian Universities and automotive companies are strengthening their collaborative links gaining valuable experience and learning best practices along the way.

Therefore ATA is expecting an increasing success for next Formula SAE Italy editions.



Some other special prizes were awarded by the following sponsors:

### BEST ENDEAVOUR AWARD

by FISITA

Winner: MFSAE - University of Malta

### BEST POWER/WEIGHT RATIO

by LAMBORGHINI

Winner: TU Graz Racing Team - TU Graz

### BEST AND MOST INNOVATIVE COCKPIT SYSTEM

by MAGNETI MARELLI

Winner: TU Graz Racing Team - TU Graz

### SAE International Award

1st PLACE DYNAMIC EVENTS

Winner: Rennteam Uni Stuttgart  
Universitaet Stuttgart

### TIBERINA BEST CHASSIS AWARD

Winner: Hawks Racing Team

University of Applied Sciences Hamburg

## 2007 Baja SAE® Korea at Yeungnam University

The Baja SAE® Korea event was held June 28-30, 2007 at Yeungnam University. With 80 teams in attendance, the competition proved to be a challenging one with dynamic events such as the power pull, maneuverability, rock crawling and acceleration. Overall winners of the event were team #83 - Pittsburg State University in first place, team #46 - Yeungnam University in second place, and team #48 - University of Ulsan in third place.

The 2008 Baja SAE Korea event will be held once again at Yeungnam University from July 17-20, 2008. For more information on this event, please visit <http://yu.ac.kr/~race>.

## Formula Student Sets Record at F1's Home

Formula Student 2007 was a fantastic success when it celebrated its 10<sup>th</sup> year at the prestigious Silverstone Circuit. More than 2000 students competed, which is the largest number of entrants yet, and all corners of the globe were represented. As well as over 30 UK teams, countries from as far a field as Korea, the United States, Finland, India, Japan and Iran took part. The overall winners were RMIT University and a list of the Winners of FS2007 can be found here: <http://www.formulastudent.com/NR/rdonlyres/03E9368A-3169-4EF4-96FF-5A6D05EDC375/0/FS07Awards.pdf>.

Class 1(A) will feature as the exciting new category for FS2008, sponsored by Flybrid Systems and EEMS. It will favor the low CO<sub>2</sub> nature of the fuels and the smaller engine capacity. This will allow the development of alternatively fuelled vehicles within the Formula Student framework. A draft outline of the Class 1(A) category can be found here: <http://www.formulastudent.com/news.htm>

Please see [www.formulastudent.com](http://www.formulastudent.com) for more information on the Formula Student competition.

## The Formula Student Germany Event is over – Congratulations to Stuttgart University

By: Wenke Friske, Ulrike Fröhlich



The University of Stuttgart is the honoree of the Champion 2007 title!

Almost 1,200 participating students as well as around 5,000 visitors, guests and sponsors made this year's Formula Student Germany the most successful event so far. The success is also due to the help of all teams and the support of more than 150 volunteers, our "red shirts". Thanks to everybody, the second Formula Student Germany Event finished outstandingly at the Hockenheimring.

At 9:00 pm, after a long time of waiting, the award winning ceremony was held on top of the pit lane. During the ceremony the winners of Design-Finals were announced. The University of Munich won the Design-Finals just in front of University of Graz and UAS Graz.

Rookie team of the year is the University of Karlsruhe. They even made it in the top ten of the overall results. One of the most important awards of the whole event is the Formula Student Germany Sportsmanship Award. This year it was handed over to Delft University, which supported other teams in every possible way.

With the courtesy of different industry companies like Bosch Engineering or Audi Motorsport, the Formula Student Germany is able to honor teams for the lightest car or most powerful engine. The University of Graz was awarded two of the highly-demanded awards – Best Lightweight Design Award and Best Dynamometer Performance Award.

Right from the beginning, the team of Stuttgart was one of the favorites of the whole event. The Presentation Event was the first one where they could show their high quality performance. Also at other static events Stuttgart was always within the top ten. Strengthened through the very good results in the static events, Stuttgart continued their success story during the dynamic events. At the end of the event, the organizers were happy to announce Stuttgart as the Overall Winner of this year's Formula Student Germany.



## 2007 Sasol Baja SAE® South Africa Challenge a Superb Success

Sunny and warm weather greeted the University students who entered the 2007 Sasol Baja SAE® Challenge today, 13th October, at the Gerotek Testing Facilities near Hartebeespoort Dam for the final day of fierce competition for their custom made buggies, in one of South Africa's premier engineering contests.

Following the first day (Friday the 12th October) of static evaluation and testing of the vehicles capabilities of towing, hill climbing and manoeuvrability, the scene was set for the 'big show down' of a four hour long endurance race run over a 2.5 km dirt track, which had its fair share of challenging undulations, water splashes and jumps, to ensure that both man and machine were tested to the limit, and in many cases beyond the limit, whilst rendering many drivers and their cars unrecognisable because of the amount of mud they were covered in.

The toughness of the circuit was borne out by the high attrition rate, which eclipsed fifty percent of the total of twenty seven entries. Many were through mechanical failures, whilst others were caused by driver error, which saw a few of the competitors roll their vehicles or catch an unfortunate tree, none with any injury though.

Nevertheless, all the entrants, successful or not enjoyed the challenge, their spirit and excitement rubbing off on all those who'd arrived to support the teams and the event, which notably saw the attendance of the Director General of the Department of Science and Technology, Dr. Phil Mjwara, was declared a huge success and one of the best in its twelve year history.

The 7.5kW Briggs and Stratton powered, space frame vehicles, which it has to be said were extremely well turned out and professionally prepared, blasted off at 12h00 and immediately saw the Number 2 car of the Cape Town University of Technology take the lead. For almost two and a half of the four hours, they led the race before being overtaken by the Number 28 car of the Tshwane University of Technology. Over the next hour and a half they eked out a one lap and unassailable lead to cross the finish line at four 'o clock having completed 64 laps of the circuit and the winners of the 2007 event. This left the Number 2 car of the Cape Town University of Technology to come home second ahead of third placed and highly consistent entry of car number 30 from the Nelson Mandela Metropolitan University.

Other notable achievements came from Car Number 95 from the University of Pretoria which won the Design Report as well as the Static Judging section of the competition. Car Number 2 from the Cape Town University of Technology which featured so well in the four hour endurance race also won the feasibility of Mass Production, an important category in the overall competition.

A television highlights package of this Sasol sponsored challenge will be broadcast on 'Rapid Motion Dirt Worx' on Supersport during mid-November.

*Excerpts issued on behalf of SASOL Group of Companies by Mark Woolley & Associates*



Car #28 – Tshwane University of Technology,  
1st Place Overall Winner

**Recognize Achievement. Reward Leadership.**

**SAE Leadership Development Program**

The 4th Annual SAE Leadership Development Program is designed to recognize and engage engineering student leaders who have exhibited outstanding leadership skills through SAE student activities. Those selected to participate in the program will attend an all-expenses-paid, two-and-a-half day event in Orlando, Florida -- January 2008. The event will be held in conjunction with the Section Officers Leadership Seminar -- giving the future leaders of SAE a chance to network with SAE members who influence both SAE and vehicle engineering industries.

**Eligibility**

All nominees must be SAE student members and either a team captain for one of the SAE Collegiate Design teams or an officer of their SAE Collegiate Chapter. Nominees must be in their junior or senior year of their undergraduate degree or currently enrolled in a graduate degree program. Nominees must plan to pursue a career in the mobility industries that SAE serves.

**Nomination Process**

Nominations must be submitted by either the faculty advisor of the SAE Collegiate Chapter or an officer of the local Section. A detailed explanation of the student's leadership activities and skills must be provided as well as an explanation of the student's involvement with SAE.

**Nominations are due by November 30, 2007**

**[www.sae.org/leadershipdevelopment](http://www.sae.org/leadershipdevelopment)**

The SAE Leadership Development Program is part of

