



Collegiate Design Series News

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Brazil Wins by 4 Points at Midwest Mini Baja

Only 6 points separated the top 3 teams at this year's Midwest Mini Baja. University Center of the FEI from Brazil car #7 took 1st place with a score of 872 points out of a possible 1000. The team also took home two other awards including; 2nd place for Cost Report and 4th place in Endurance. Finishing in 2nd was University of Akron car #33 and in 3rd place Auburn University car #12. Awards for the top three overall performances were sponsored by Briggs & Stratton.

Teams from 121 colleges and universities from across the United States, Canada, Argentina, South Africa, Brazil and South Korea competed in southern Wisconsin during the weekend of June 4th. This year the event was hosted by the SAE Milwaukee Section. Technical inspection, design judging and the first day of dynamic events were held at the Jefferson County Fairgrounds about 60 miles west of Milwaukee. The endurance race was run at the Aztalan Motorcross Track in Lake Mills. Because of the large number of entries, endurance was run with two one-hour elimination heats followed by a two-and-half hour final run with the top 58 qualifiers competing.

Judges and volunteers from major Mini Baja sponsors - Briggs & Stratton, Honda, Polaris and SAE Milwaukee Section members evaluated the teams as they passed through technical



Brazil #7
First place overall





Start of the endurance race

inspection, design, acceleration and braking, skid pull, hill climb, maneuverability, and the endurance events.

The Honda awards for best design were given to the teams with the top three mechanical design scores. In 1st place Ecole de Technologie Superieure car #8 with a total of 135.7 points. In 2nd place Oregon State University car #9 with a score of 133.2. And in 3rd place Instituto Tecnologico de Buenos Aires car #2 with a total of 129.8 points.

The top three finishers in endurance received the Honda Endurance Award. In 1st place crossing the finish line first was Auburn University car #12 with a total of 45 laps. In 2nd place University of South Florida car #10 also with 45 laps. And in 3rd place with 44 laps, car #33 the University of Akron.

The Dayton Cup is presented every year to the best team who registered and receive scores in Midwest Mini Baja and either Mini Baja East or Mini Baja West. Scoring is based on the team's Midwest finish and their best finish at East or West. Scoring is weighted based on the number of teams that compete in each competition. The award of \$600.00 and the Dayton Cup is sponsored and judged by the Dayton Section. This years recipient of the Dayton Cup was the Ecole de technologie superieure.

Polaris presented its award for the most innovative and unconventional suspension design to Purdue University car #51.



Also presenting an award for the best outstanding display of off-road mobility platforms in small vehicles was U.S. Army TARDEC (Tank and Automotive Research and Development Engineering Center). The TARDEC Off Road Mobility award has been presented to one team at each Mini Baja event held this year. Recipient of this award at the Midwest event was Ecole de Technologie Superieure car #8.

It is the goal of many teams to compete in all three Mini Baja events. To honor the hard work and dedication of teams that have participated in all 3 events, a special award – The Mike Schmidt Memorial Mini Baja Iron Team Award was presented to three teams with the highest combined point totals from this year. This award was developed by the Rochester Institute of Technology to honor Mike Schmidt, the student who was largely responsible for reviving RIT's Mini Baja Program and who was tragically killed while attending RIT. Receiving 1st place this year was University of South Florida, in 2nd place the Rochester Institute of Technology, and in 3rd place Queens University.

For more information on the final scores, please visit <http://www.sae.org/students/mbereslt.htm> under 2004 results.



Auburn University #12 during the endurance race.

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Ecole Polytechnique de Montreal and University of Akron fly into 1st place at Aero Design West

June 18-20, 2004 Ft. Worth, Texas



*Ecole. Poly de Montreal
First place - Regular Class*

The Aero Design West competition flew into the Ft. Worth Thunderbirds R/C Club on June 17th. The event drew in 41 teams from the US, Mexico, Venezuela, Canada, and Australia. Michael Bawden, of Lockheed Martin, organized the event for the first time in Ft. Worth, Texas. The flying field is bordered by Benbrook Lake presenting new challenges with the lake at flood stage, the hot and humid weather, and the afternoon gusty winds challenged the engineering skills of the teams. Several planes during qualification flights demonstrated how quickly the cargo loaded planes can sink.

Regular Class Results

Ecole Polytechnique de Montreal, Lord of the Wing, came in first place overall with a score of 251.0431 points and lifting 34.03 lbs. As the first place finisher, they were awarded the Elliot & Dorothy Green Award of Excellence. In 2003, Ecole Polytechnique de Montreal finished second overall.

The Flying Tigers of Auburn University had an impressive second place finish with a score of 239.5704 points and lifting 33.14 lbs. In April, Auburn University won first place at Aero Design East as a first time competitor.

Rounding out the top three is Ecole de technologie superieure (ETS), ACE, with a score of 238.6635. ETS also lifted the most weight, 35.96 lbs. In April, ACE placed third overall at Aero Design East.

*Auburn University
Second place - Regular Class*



Open Class Results

With their plane Conquest, University of Akron placed first overall with a score of 165.7638. They also took home the 1st place Award for Engineering Excellence with a presentation score of 29.33 out of 30 points.

Trailing by only a few points was the University of Missouri-Rolla. They scored 162.0339 points and also lifted the most weight for Open Class with 56.56 lbs. Third place overall was the team from the University of British Columbia with a total score of 110.2805.



*University of Akron
First place - Open Class*

Other Awards

The Best Design Report went to Michigan Tech University with a score of 29.80 for the Regular Class and Ecole Polytechnique de Montreal with a score of 26.75 for the Open Class.

The Award for Engineering Design Excellence is given to the teams with the best oral presentation. The Award for Engineering Design Excellence went to the Open Class team from the University of Akron with a total of 29.33 points out of 30.

The Most Innovative Design was awarded to Colorado State University with their plane Feathered Anvil.

What goes up must come down no matter if it is a successful flight or a crash. The award for Most Interesting Flight Path went to the University of Akron for their Regular Class plane C-04 Predator. Despite the dreadful crash, they finished eighth overall.

Special thanks to Lockheed Martin, the Ft. Worth Thunderbirds R/C Club, Byrons Original Fuel, Elliot & Dorothy Green, and all of the volunteers for contributing to the successful event.

Please visit <http://www.sae.org/students/aerowest.htm> for results and photos of the 2004 Aero Design West event.

**Don't forget to complete
the 2004 Aero Design West survey
at <http://www.surveymonkey.com/s.asp?u=22140501833>**



Kansas State University

University of British Columbia Takes First at the 25th Anniversary of Supermileage



UBC - First place Overall

The 2004 Supermileage competition was held at the Eaton Proving Grounds in Marshall, Michigan to celebrate its 25th year on June 11 & 12th. Two corporations have been major contributors to Supermileage; Eaton Corporation and Briggs & Stratton. This year is no exception. In addition, Supermileage has been supported by the SAE Western Michigan Section which has played an integral part in supporting the competition from the beginning into the present.

Supermileage began as one event and then in 1984, a second Supermileage event on the West Coast was initiated. There were dual events until 1996, when the two events were combined into the Midwest event. Today, the Midwest

competition is SAE's primary event and continues to challenge students to design a fuel efficient vehicle. This year, 31 college and university teams along with 7 high school teams competed for the top fuel efficient vehicle.

With their sleek, black design and 1747.47 miles per gallon, the University of British Columbia, UBC, took home the first place trophy for the best fuel economy. Each run for the UBC team was consistently 1500 mpg. Their overall points, which include their mileage and design report score, was 1819.47.

With consecutive runs above 1300 mpg, California State University of Los Angeles came in second with 1615.55 mpg. Their overall total was 1684.55. The third place team, competing for the first time in Supermileage, was Rose-Hulman Institute of Technology with 1194.10 mpg and a total score of 1234.10.

Supermileage is the only SAE competition that includes high school teams. The 2004 first place trophy for the high school division went to Evansville Mater Dei with 1352.58 mpg and a total score of 1410.58.

Winamac high School



Overall Results

(Mileage + Design = Overall Score
College and Universities)

1st Place University of British Columbia
1819.47

2nd Place California State University,
Los Angeles, **1684.55**

3rd Place Rose-Hulman University
1234.10

High Schools

1st Place Evansville Mater Dei
1410.58

2nd Place Winamac **1305.33**

3rd Place Homestead **933.55**



This was the first year that Mater Dei competed in Supermileage. Winamac High School came in second with a total score of 1305.33 and last years first place finisher, Homestead High School, came in third with a total score of 933.55.

The Best Design Report went to Ecole de technologie superieure with a score of 73 out of 80 and Winamac High School with a score of 70 out of 80.

This was the first year Supermileage used transponders to track lap times. This allowed more vehicles on the course and teams to attempt more runs. This year, 98 runs were completed while in 2003 only 58 runs were completed.

The 25th anniversary of Supermileage attracted 33 universities and high schools from 3 countries.

For more information on the final scores and photos of the event, please visit <http://www.sae.org/students/supermw.htm>.



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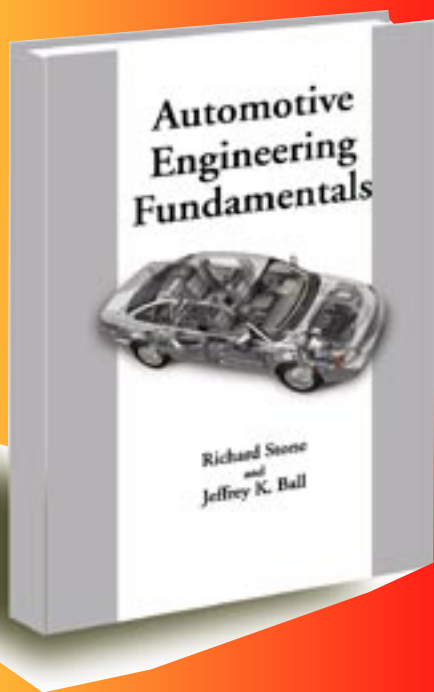
Student Newsletter Survey

Share your thoughts regarding the Collegiate Design Series! The Student Newsletter Survey is now available at: <http://www.surveymonkey.com/s.asp?u=93481347338>

FREE REGISTRATION

Do you have information, stories, or pictures that you want to share regarding your team?

Email them to CollegiateCompetitions@sae.org and qualify for a drawing for Free Registration to a 2005 event of your choice!



Automotive Engineering Fundamentals now available from SAE

The automobile has significantly evolved since the late 1800s, when these "ostentatious displays of wealth" - so dubbed by U.S. President Woodrow Wilson - were met with cries of "Get a horse!" as they obtrusively hissed their way down the street.

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