



Collegiate Design Series News

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Cornell University's Repeat Performance

Once again Cornell University reclaimed the FSAE Championship title and SAE Foundation Cup honoring Neil A. Schilke with an outstanding performance by scoring 905.793 out of a possible 1000 points. With a continuous team consisting of strong and talented students, the university has set a new record by winning the Formula SAE competition a total of nine times.

Points were awarded in seven categories: cost, presentation, design, acceleration, skid pad, autocross, and endurance-fuel economy.

The top 10 finishers were:

Cornell University.....	905.793 pts
University of Western Australia	868.147 pts
University of Wisconsin – Madison	853.928 pts
University of Waterloo.....	812.010 pts
University of Washington	811.588 pts
Pennsylvania State University	789.528 pts
North Carolina State University – Raleigh	764.794 pts
Saginaw Valley State University.....	754.202 pts
University of Missouri – Rolla.....	738.573 pts
Ryerson University	729.164 pts



The event was held on May 18 – 22, 2005 at the Pontiac Silverdome in Michigan. This year all 140 slots were filled in a record breaking 73 minutes. Onsite a total of 114 cars competed with teams spanning from Australia, Brazil, Canada, Finland, Germany, Japan, Mexico, Singapore, South Korea, the United Kingdom, Venezuela and the United States.

With a year of records, also came a year of sorrow as tragedy took the lives of three Minnesota State – Mankato students traveling to Michigan in hopes of competing their best year. Though the atmosphere of the event was sadden, the event still went on and in memory of those students. University of Michigan Dearborn created #28 stickers (the number of Minnesota State – Mankato's car) and passed them onto teams who wished to display them in memory of the missing team. PR representatives also sent to the event MSU logos in which almost every team was able to display on their car. Such efforts as moment of silence, signing of a memory banner, and displays of the car number were made in honor of Jamie Schlachter, Wesley Loutsch, and Chad Wilson. These fallen teammates will not be forgotten.

Last but not least, SAE would like to extend a special thanks to all the volunteers and supporters of the event and participating teams!

For more information on the final scores, please visit <http://www.sae.org/students/fsae2005results.xl>

Ecole de Technologie Superieure Takes 1st Again!

ETS retained its #1 car number for the third consecutive year by winning the 2005 Mini Baja East competition with a score of 931.24 points held in Rochester, New York. The winning school from Montreal also earned 1st place in the four-hour endurance race, water maneuverability challenge and design category.

The collegiate design and off-road driving competition was hosted by Rochester Institute of Technology who last hosted the event in 1982. Activities took place on campus in the Gordon Field House and at the Hogback Hill Motocross track in nearby Palmyra, Wayne County on May 5- 7, 2005. The event coincided with SAE's centennial anniversary and RIT's yearlong 145th anniversary commemoration. With a record breaking year for SAE's Collegiate Design Series Competitions, the Mini Baja East competition had 70 teams registered online and 64 onsite competing making it the largest east competition.



ETS winning car in 2004

The top ten finishers were:

1	Ecole De Technologie Superieure, Car #1	931.24
2	Auburn University, Car #6.....	894.74
3	University of Michigan-Ann Arbor, Car #72	854.83
4	Queen's University Ontario Canada, Car #10.....	850.75
5	Universite De Sherbrooke, Car #26.....	848.33
6	Clarkson University, Car #4.....	809.60
7	Rochester Institute of Technology, Car #5.....	781.41
8	Northeastern University, Car #35.....	773.98
9	University of Rhode Island, Car #34	761.10
10	North Carolina A & T State University, Car #58	755.76



2005 ETS winning car

SAE would like to extend a special thanks to all the volunteers and supporters of the event and participating teams!

For more information on the final scores, please visit <http://www.sae.org/students/mbe2005results.xls>

The U.S. Army TARDEC Participates in SAE's Mini Baja Design Competitions

By Mike Letherwood

The U.S. Army's Tank Automotive Research, Development, and Engineering Center (TARDEC) has teamed up with SAE International's Mini Baja Series to investigate and demonstrate the off road mobility of small lightweight vehicle platforms. TARDEC maintains a state-of-the-art simulation capability in the areas of vehicle dynamics, both analytical and physical. Engineers within TARDEC's Simulation Technologies Area are developing and applying engineering-fidelity simulations and simulators to meet Army customer demands for simulation-based evaluation of vehicle designs and technologies. TARDEC engineers provide modeling, analysis, and testing services to a variety of Department of Defense organizations and contractors involved in vehicle system development, production, and support. TARDEC is using modeling and simulation to demonstrate the feasibility and operational potential of advanced commercial and military technologies with application to new and existing tactical vehicles and to describe future vehicle capabilities.

SAE's Mini Baja Series provides a unique opportunity for TARDEC engineers to interact with students during the student collegiate design competitions from various Universities. TARDEC sends engineers and scientists to participate in the events as design judges and endurance volunteers. Many of the off-road dynamic events such as rough terrain maneuverability, acceleration, towing, hill climb, rock crawling, water navigation, and endurance are directly applicable to every day use by the Army's fleet of vehicles. TARDEC engineers evaluate the designs and performance of each vehicle to determine its viability for soldier applications as well as a validating technique for modeling and simulating procedures. TARDEC must routinely develop mobility requirements for various types of Soldier Mobility Platforms and is interested in analyzing and evaluating the student's designs and their performance throughout the arduous events. TARDEC also maintains a tent at each event to distribute information about the center and to advertise the many unique civilian employment opportunities that exist for talented engineers and scientists. For additional information please visit TARDEC's website at (www.tacom.army.mil/tardec/) and click "About Us – Employment".

MIT Graduate to Receive SAE 2004 Myers Award for Outstanding Student Paper

Warrendale, PA (April 20, 2005) - Jennifer A. Topinka, a recent graduate of the Massachusetts Institute of Technology (MIT) and a current member of the engineering staff at the General Electric (GE) Global Research, has been selected to receive the 2004 Society of Automotive Engineers (SAE) Myers Award for Outstanding Student Paper. Topinka wrote her award-winning piece with the help of co-authors Michael D. Gerty, Dr. John B. Heywood and Dr. James C. Keck. The award was presented to her on April 12 during the Honors Convocation at the annual SAE World Congress in Detroit, Michigan.



Jennifer Topinka

This award, established in 1998, is given annually for the best technical paper written by a student and presented at a major SAE meeting. The award honors Phil Myers, former SAE President and retired professor at the University of Wisconsin-Madison. Dr. Myers and his wife Jean have set a high standard for excellence, concern for students, and involvement with SAE. Topinka, along with her co-authors, is being honored for SAE paper #2004-01-0975, "Knock Behavior of a Lean-Burn, H₂ and CO Enhanced, SI Gasoline Engine Concept."



Phil Myers

At GE's Global Research Center in Niskayuna, N.Y., Topinka works on combustion optimization for the company's locomotive diesel engines. She is currently investigating technologies on a single-cylinder locomotive engine, with a goal of improving efficiency while meeting emission regulations.

The spark that ignited Topinka's interest in automotive and transportation technology was an undergraduate extra-curricular activity, the Future Car Challenge. This competition, which was sponsored by the Department of Energy and US CAR, organized engineering students from various universities to design and build the best-performing hybrid-electric vehicle. Topinka worked on the University of Wisconsin-Madison hybrid vehicle team throughout her undergraduate career. While an undergraduate, she also interned at Ford Motor Company. As a graduate student at MIT, she worked on a single-cylinder research engine to help characterize the performance potential of a novel engine concept involving a plasmatron fuel reformer.

Topinka is a member of SAE International and the American Society of Mechanical Engineers (ASME) and has several published papers to her credit. She holds a bachelor's degree in mechanical engineering from the University of Wisconsin-Madison and a master's from MIT.

2005 Collegiate Competitions Sponsors

Interested in being a sponsor? Email Doug Shymoniak at Shymoniak@sae.org for sponsorship opportunities.

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Award Descriptions

Briggs & Stratton Overall Performance Award - Mini Baja
Briel and Kjaer Quiet Car Cup - FSAE
Goodyear Best Performance Award - FSAE
Honda R&D Americas Endurance Award - Mini Baja
Honda R&D Americas Engineering Design Award - Mini Baja
Hoosier Tire Autocross Award - FSAE
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Award - FSAE
Society of Plastics Engineers' Composites Division Award -
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