



Happy Teacher's Day!!!

SAEINDIA

NORTHERN SECTION

The Engineering Society
For Advancing Mobility
Land Sea Air and Space

Celebrating a decade of Knowledge Enhancement

From Vice Chairman's desk



Efficycle, remains close to my heart and in hearts of many youngsters who are working day in and out for promoting green technology. Efficycle event is about design and fabrication of an efficient cycle which runs on human power. Efficycle this year has grown by manifold compared to its last edition. This year saw a steep rise in the number of registered teams and there were innumerable ideas generated this year by the engineering students who have designed energy efficient Hybrid human powered three-wheeled electric vehicle keeping in mind the growing challenge.

This event aims to provide an opportunity for engineering students by setting up a trend of using eco-friendly vehicles in India and come up with some innovative designs. Students have to tackle real world engineering problems, work in multidisciplinary teams, and fabricate a cycle that can be manufactured.

The challenge of building green vehicles is not only creating new drive trains but the challenge is just as greater for engineers working on vehicle body and structure. Virtually every new green powertrain technology that is being developed will cost more. The body engineering challenge is to create solutions to improve economy and performance at a lower equivalent cost than the incremental cost that new powertrain technologies provide. To me the answer for engineers is to focus on architecture, weight, and aerodynamics to build a true green vehicle.

People say the first race occurred when the second car was built, and the current emphasis on green vehicles doesn't mean that the competitive nature of human beings will fade away. As new green vehicles will start appearing in greater numbers on the automotive inhabitants, I am sure that students, engineers & enthusiasts, will start to figure out how to make them perform even better.

Pamela Tikku
Vice Chairman
Formula/BAJA/Design Competition



Virtual BAJA SAEINDIA 2011

Coming together is a beginning. Keeping together is progress. Working together is success

A home-grown initiative of SAEINDIA, this year Virtual BAJA SAEINDIA saw registration from 252 engineering institutes across the country.

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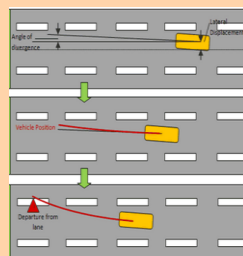


A World in Motion

SAENIS is now all set to organize the AWIM Regional Olympics on 7th and 8th October 2011 at New Era Public School, New Delhi. Around 168 students from 21 schools will be participating at this event. SAENIS wishes all the luck to AWIM participants and organizing teams!

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TECH BUZZ



Lane Departure Warning System (LDWS)

Also known as a Lane Keeping Assistance System, the Lane departure warning system issues lane departure warning signal only when the driver does not use the vehicle's turn signal in the direction of the lane change.

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Upcoming events...

- "Automotive Day", 21st September'11, Delhi Technological University, Delhi

Virtual BAJA SAEINDIA, 19th-20th August 2011, Bengaluru

SAEINDIA Virtual BAJA SAEINDIA is a home-grown initiative of SAEINDIA. The Virtual BAJA tasks the students to manage and plan a well structured team, prepare a detailed project plan and design the vehicle up to the extent of freezing the design for advancement to actual vehicle build stage. Essentially, it's a complete Virtual model of the four – wheeled all terrain buggy that the participating teams intend to bring to Pithampur, MP, the site of BAJA SAEINDIA 2012.

The BAJA SAEINDIA received registration from 252 engineering institutes across the country for participation in the upcoming BAJA SAEINDIA 2012 scheduled for 16th – 19th February 2012. A limit of 100 teams has been prescribed for participation in the event.

For this year, the baton for organizing Virtual BAJA was passed on to SAEINDIA Bangalore Section. Dayananda Sagar Institutions was singled out as the host of the event.

AWIM

SAEINDIA has been conducting a HR/CSR initiative known as “**AWorldInMotion® (AWIM)**”, annually for the last 4 years. Designed by **the Society of Automotive Engineers (SAE)**, AWIM curriculum brings together teachers, students, practicing engineers and scientists in an exploration of physical science.

The first step for this activity is the **Master Teachers' Training Programme**. This event was conducted successfully at Sanskriti School, New Delhi on 23rd July 2011.

Virtual BAJA was held on Aug 19th – 20th. In total, 232 student teams participated over a period of two days. Based on the performance in the Virtual BAJA, 100 teams were selected for participation in the main event. The judges included Sanjay Nibandhe from M&M, Jugal Miital from Cummins India Ltd, Amit Gautam from Maruti Suzuki, Santosh Kumar from ANSYS, Dr KC Vora from ARAI, Dr Christian Schoenherr from GM.

“Participating teams were evaluated on Knowledge of rulebook, Project plan, Design, Safety, Innovation, DFMEA, Design Validation plan with a maximum of 400 points”



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TECH BUZZ**Lane Departure Warning System (LDWS)**

Lane departure warning systems monitor the position of the vehicle and warn the driver when the vehicle starts to drift out of its lane, unless the directional signal is in use or the vehicle speed is below a certain threshold. Unintentional lane departure can be caused by driver distraction, inattention, drowsiness, or even adverse weather conditions and can result in serious head-on collisions.

These systems generally employ a video sensor that detects lane markings. The camera takes an image of the road ahead of the car during the day or within the headlight beams at night. This visual image is sent to an electronic control unit, where it is analyzed. The lane markings are identified and subsequent changes are recorded. If the vehicle is threatening to stray outside the limits of the lane, the system alerts the driver with an audible alarm and by vibrating the steering wheel or seat cushion. The system takes

the vehicle's speed into account, providing a warning earlier when the vehicle is travelling at higher speeds, so the driver has adequate time to correct the steering before the lane markings are crossed.

Lane departure warning systems monitor the turn signal's status and issue lane departure warnings only when the driver does not use the vehicle's turn signal in the direction of the lane change. In the most advanced systems, if no action is taken by the driver after the warning is given, a counter steering torque is applied to the steering wheel either by way of the electronic steering system or by applying braking force to a steerable road wheel of the vehicle causing the car to return to a safe position. These systems are sometimes referred to as Lane Keeping Assistance systems

*Reference: <http://www.cvel.clemson.edu/auto/systems/lane-departure-warning.html>

http://ec.europa.eu/information_society/activities/intelligentcar/technologies/tech_13/index_en.htm

http://en.wikipedia.org/wiki/Lane_departure_warning_system

“Lane departure warning signals get activated only when the vehicle's turn signals are not in use in the direction of lane change”

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