



Happy Children'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 (Membership) desk



It is my pleasure to extend festive season's greetings to the SAENIS fraternity. It is extremely heartening to see *Sampark* evolve as an ideal medium of communicating ideas, information and knowledge among all the members.

By the time this edition of *Sampark* reaches you, we would have all witnessed the Formula One (F1) debut in our country. Apart from the glamour and entertainment the F1 provides for, it is also symbolic of the global automotive engineering talent, where the man and machine integration is truly demonstrated in a competitive environment. As a part of scientific society, I am sure that F1 debut in India not only made us proud as Indians but also sensitized and excited our engineering instinct.

One of the key objectives while preparing the vision for SAEINDIA is to create and enhance the knowledge base of member's mobility practitioners and keeping in the same spirit, SAENIS is going to host the program called "A World In Motion" (AWIM) - National Olympics in this current month. It is an ideal platform to harness the young minds of the student community to become tomorrow's engineers and scientists through an initiative which brings science, technology, engineering and math (STEM) education to life in the classroom for students in Kindergarten through Grade 12.

Talking about the future of the Auto industry, it is imperative that we sensitize ourselves to create a balance between economic and environmental impacts. I urge everyone to promote the awareness of the same as the future of mobility will depend on the technology and innovation to make more clean and efficient cars. As a corporate and scientific community, we must harness our energy and knowledge towards a safe and green future.

**Deepak Jain**  
Vice Chairman (Membership)  
SAENIS



### 16th Asia Pacific Automotive Engineering Conference

The 3 day Conference organized for dissemination of knowledge in the latest automotive trends and an insight into some eminent research work around the world. ...Page 2



### AWIM Jet Toy Regional Olympics

AWIM is an HR/CSR initiative by SAEINDIA designed to bring together teachers, students, practicing engineers and scientists in an exploration of physical science. ...Page 2

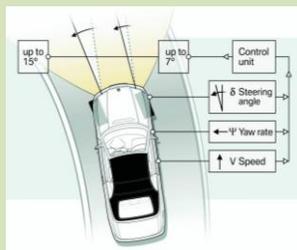


### Effi-Cycle SAEINDIA 2011

An endeavor which is a new Milestone in the realm of "Green Technology" - SAE Effi-Cycle entered into its second year and added an additional feature of Human-Electric Hybrid Power driving the vehicle ...Page 3

### TECH BUZZ

#### Adaptive Headlights



Headlights that can automatically move up, down, left or right, illuminating the direction of travel by just getting a reaction from the steering wheel angle and thus preventing the beam from going up during acceleration and down during deceleration.

... Page 3

#### Upcoming events...

- "AWIM Jet Toy National Olympics 2011", New Delhi : 13<sup>th</sup> November 2011
- Seminar on "Driving to Cleaner Air Around the World", Gurgaon : 17<sup>th</sup> November 2011

## 16<sup>th</sup> Asia Pacific Automotive Engineering Conference



SAEINDIA organized APAC 16 (Asia Pacific Automotive Engineering Conference), an International Mobility Engineering Conference to bring together mobility practitioners and stake holders to a vibrant platform to share, discuss and arrive at innovative & smart solutions for Sustainable Mobility.

The 3-day event from 6<sup>th</sup>-8<sup>th</sup> October 2011 played host to delegates from U.S., Europe, Korea and all around India, and nearly 140 technical papers and 15 keynote papers were presented by experts. These papers were presented in six parallel

## AWIM Jet Toy Regional Olympics



AWIM is an HR/CSR initiative by SAEINDIA designed to bring together teachers, students, practicing engineers and scientists in an exploration of physical science.

Delhi Regional was held in Delhi on 7th-8th October'11 at New Era School. This was followed by Regionals which were held for the first time at Chandigarh and Gurgaon on 17th and 18th October'11 respectively.

The students were provided with raw materials to build the jet toy and were taught how to design, build and experiment with it. The first step was the Master Teacher's Training Programme (MTTP) conducted for school teachers as well as students and industry volunteers where they learned, implemented and went through different phases of Jet Toy making. The teams had to compete with each other in various challenges such as maximum speed, distance and time, accuracy and weight carrying capacity to demonstrate and prove their Jet Toy design under various categories.



sessions over 2 days. There were papers on 2 and 3 wheeler technologies, Advance materials, Clean Fuels and Sustainable Propulsions, Engineering Process and tools, Simulation among other topics. In all there were 65 papers from Indian authors and 75 from abroad.

There was also an Exposition and various stakeholders, such as the vehicle manufacturers, component and aggregate suppliers from all over the world and particularly from Asia Pacific region were present.

The inaugural function was followed by fabrication of Jet Toy by the students. All the students worked effectively in a team and designed four toys, out of which three toys were designed to perform in a specific way, such as travel far, carry weight or have maximum speed. The fourth demo toy was only for presentation purpose. Students made very attractive posters depicting their teams' name, logo, slogan as well as the name of the toy they fabricated.



The Regionals will be followed by National Olympics on 13th November at New Delhi.



### AWIM Jet Toy Olympics Regional Olympics, Delhi

**Winner :** St.Columbus School, GoleMarket  
**Runner up :** Tagore International School, Vasant Vihar

### AWIM Jet Toy Regional Olympics, Chandigarh

**Winner :** Ryan International School  
**Runner up :** Saupins School, Sec 32A, Chandigarh

### AWIM Jet Toy Regional Olympics, Gurgaon

**Winner :** CCA Public School, Sec 4, Gurgaon  
**Runner up :** Tagore International School, DLF Phase III

## SAEINDIA EFFI-CYCLE 2011, Chandigarh



Deriving its name from “Efficient Cycle”, the concept of EFFI-CYCLE originated in 2009 and its 1st edition was launched in 2010. A homegrown initiative of SAE NIS, under the aegis of SAEINDIA, the event promotes environment friendly technology for day-today mobility needs.

The EFFI-CYCLE tasks the students to design, fabricate and validate a 2-seater three wheeled vehicle powered by human-electric hybrid power, to take part in a series of events spread over a course of 3 days that test the vehicle for the sound engineering practices that have gone into it the agility of the vehicle in terms of gradability, speed, acceleration and maneuverability characteristics and finally its ability to endure that treacherous durability test. Nearly 90 teams registered for participation in the second edition of this event, up from 25 for its maiden event, indicating immense popularity the EFFI-CYCLE has garnered with the students. Based on an exhaustive scrutiny process, 37 teams were selected for participation in the event that was scheduled for 14th – 16th October 2011 at University Institute of Engineering & Technology, Chandigarh.

The event kicked off with the inaugural ceremony, presided over by Sh Vikram Gulati, Director – Operations / NATRIP, MoHI&E). Sh Gulati, amazed with the technology at display and the efforts of students, encouraged them to work on environment friendly solutions that would soon be driving the automotive industry in the future. The dignitaries present include Ms Pamela Tikki (iCAT), Prof R.C Sobti (Panjab University), Prof Renu Vig (UIET), Mr. Alok Jaitley (MSIL) and Dr.Tapan Sahoo (MSIL / SAENIS). The various events conducted during EFFI-CYCLE were:

14th October 2011	Inauguration, Tech Inspection, Brake Test, Marketing and Cost Evaluation
15th October 2011	Design Evaluation, Gradability, Maneuverability and Acceleration Event
16th October 2011	Endurance Event and Valedictory Event

Sh Samir Mathur, Principal Secretary Home and Finance Commissioner, Government of Haryana graced the valedictory event as the Chief Guest. He appreciated the efforts of SAENIS EFFI-CYCLE Organizing Body in establishing a platform that

lays the foundation of a green and clean future. “The young engineers need to be nurtured and made conscious of the environmental concerns, as they are the ones who would lead the industry in future” were his remarks to the audience. He also stressed that promising designs and technologies implemented must be further developed in joint collaboration with the industry to promote scientific research.

The award winners for EFFI-CYCLE 2011 are:

Overall 1 <sup>st</sup>	PES Modern College of Engineering
Overall 2nd	Birla Institute of Technology & Science, Pilani
Overall 3rd	Walchand College of Engineering
Best Design	Bangalore Institute of Technology
Maneuverability	Jamia Milia Islamia, Delhi
Acceleration	Walchand College of Engineering

The EFFI-CYCLE concluded on a high note with the announcement of the next event by Dr Tapan Sahoo. He believes that events such as the EFFI-CYCLE or BAJA or Supra, organized by SAEINDIA, are an important step to bridge the gap between theoretical knowledge as imparted in the college and application based engineering as implemented in the industry. Besides these, the pragmatic experience of the event and the year long journey, leads to the overall development of the students. It inculcates confidence, enhances aspirations, brings out the leadership potential and makes them industry ready.

EFFI-CYCLE is a unique initiative of SAENIS, and we would continue to take it to new horizons. You never know, one day you might find these carts on the roads and the first thing that would strike your mind is the EFFI-CYCLE jingle “EFFI-CYCLE di hun vaari!”



*Students showing their Handling skills*

SAEINDIA EFFI-CYCLE 2011 Gallery



Chief Guest Sh. Vikram Gulati (Ministry of Heavy Industries & Enterprises) during the Inauguration Ceremony



Team IGIT showcasing their EFFI-CYCLE to the dignitaries



A team arrives at Chandigarh Just In Time for the event



Utility and Handling event in progress



Endurance Run



Awards Galore



Team IIT Roorkee posing with the Convener



The heart and soul of the event – volunteers



Valedictory Event

Adaptive Headlights

TECH BUZZ

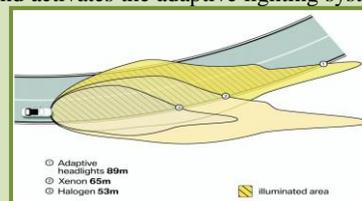
Adaptive headlights can direct the beams by moving each headlamp left, right, up or down in reaction to steering wheel angle, speed and movement of the vehicle. The adaptive headlights use a variable headlight control system geared to the driver's position on the road. This anticipative illumination of the road ahead is based on a system of sensors and computers. The adaptive headlights direct headlight modules geared to the steering to the ongoing course of the road. This keeps the road surface correctly illuminated when the vehicle's front is diving on hard deceleration, prevents the beam going up in the air when the vehicle accelerates, and also ensures that the beam lights the road in a curve instead of illuminating the side of the road.

Adaptive Headlights automatically adjust the light to match the direction of travel. That enables the driver to react more quickly because he/she will see the road ahead more clearly. Sensors monitor vehicle speed and steering angles to assure the proper distribution and control of the beam pattern. An electronic control unit processes the data and activates the adaptive lighting system, which switches the headlights to full-beam, dipped or cornering settings.

Reference:

<http://www.usautoparts.net/bmw/technology/lighting.htm>

[http://ec.europa.eu/information\\_society/activities/intelligentcar/technologies/tech\\_03/index\\_en.htm](http://ec.europa.eu/information_society/activities/intelligentcar/technologies/tech_03/index_en.htm)



“Vehicle speed and steering angles are monitored by Sensors which in turn is sent to an electronic control unit”

**The Managing Committee****Chairman**

**Mr. I.V. Rao**  
MEO (Engineering), MSIL

**Senior Vice Chairman**

**Mr. R.B. Madhekar**  
CGM, MACE.

**Mr. P. Agrawal**

GM, MSIL

**Secretary**

**Dr. Tapan Sahoo**  
GM -MSIL

**Treasurer**

**Mr. N.S. Rao**  
AGM - MSIL

**Vice Chair Student Activities**

**Mr. Deepak Sawkar**  
GM -MSIL

**Dr. SSV Ram Kumar**

Chief Mgr. IOC (R&D)

**Vice Chair Membership**

**Mr. Anoop Chaturvedi**  
GM - MSIL

**Mr. Deepak Jain**

Sr. Executive Dir. Lumax Industries

**Vice Chair Technical**

**Dr. K.P. Naithani**  
Exec. Dir. IOC(R&D)

**Mr. C.V. Raman**

Executive Officer (Engineering), MSIL

**Vice Chair Conference  
& Communications**

**Mr. Sanjay Thakar**  
GM -MSIL

**Dr. R. T. Mookken**

GM- IOC (R&D)

**Vice Chairman – Formula/ BAJA India/  
Design competition**

**Ms. Pamela Tikku**  
Deputy Dir., iCAT

**Vice Chairman - AWIM**

**Mr. Rakesh Sood**  
Managing Director, Trim India

**Executive Members****Dr. K. Kumar**

Director –MACE  
Mentor (SAENIS)

**Dr. R. K. Malhotra**

Director – IOC (R&D)  
Immediate Past Chairman, SAENIS

**G.K. Acharya**

DGM (IOC) R&D

**Mr. Hemant K Swain**

GM -MSIL

**Mr. Atanu Ganguli**

Director-SIAM

**Mr. A. D. Sindwani**

Exec.Dir - SAE-NIS

**Mr. Murli M Iyer**

Exec. Advisor Global Affairs  
SAE International

**Invitees****Mr R. Dayal**

Executive Officer (PE), MSIL  
President – SAEINDIA

**Mr S. Maitra**

Managing Executive Officer (SC), MSIL  
Ex-Chairman, SAENIS

**Editorial Board**

Sanjay Thakar

Deepak Panda

Anoop Bhat

Piyush Agrawal

Avnish Gosain

Siddharth Kotru

Gaurav Jain

Milind Wagh

Harveen Talwar

Harjinder Singh Brar

Ravi Kumar Goel

Ankur Anand

**SAENIS Office Address**

O – II – 87, Palam Vyapar Kendra,  
Palam Vihar, Gurgaon – 122017, (HR)  
Tel: 0124-4370163

e-mail : sae.nis@gmail.com

Mr. A.D. Sindwani :  
+91 9891189512

**KNOW MORE**

[www.saeindia.org](http://www.saeindia.org)

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

[www.saeindia.org](http://www.saeindia.org)

[www.fisita.org](http://www.fisita.org)

[www.siamindia.com](http://www.siamindia.com)

**JOIN US @ [www.saeindia.org/sae-india-membership](http://www.saeindia.org/sae-india-membership)  
VIEW OUR MEMBERS @ [www.saeindia.org/members](http://www.saeindia.org/members)**

*Let the editors know what you think of this  
Newsletter*