

## ABOUT SAE INTERNATIONAL:

SAE International has more than 121,000 members - engineers, business executives, educators, and students from more than 97 countries - who share information and exchange ideas for advancing the engineering of mobility systems. SAE is your one-stop resource for standards development, events, and technical information and expertise used in designing, building, maintaining and operating self-propelled vehicles for use on land or sea, in air or space.

## ABOUT SAEINDIA:

SAEINDIA is a Premier Professional society that serves the Mobility Engineering Community engaged in the design, manufacture and service of self propelled vehicles and systems that move in land, air and space. It is an affiliate society of SAE International which is head quartered in USA with a glorious record of more than 100 years of service to the mobility community.

## ABOUT ANNA UNIVERSITY:

Anna University a leading technological University established on 4th September 1978 as a unitary type of University offers higher education in Engineering, Technology and allied Sciences relevant to the current and projected needs of the society. In addition to promoting research and disseminating knowledge gained there from, it has a good link with leading Industries. Anna University has four leading institutions amalgamated to it namely College of Engineering Guindy, one of the oldest Engineering Institutions in the world established in the year 1794, A.C College of Technology, School of Architecture and Planning and Madras Institute of Technology.

The University offers Undergraduate and Post graduate programmes as well as research programmes leading to M.S and Ph.D degrees. The University has well qualified faculty members with expertise in modern technologies.



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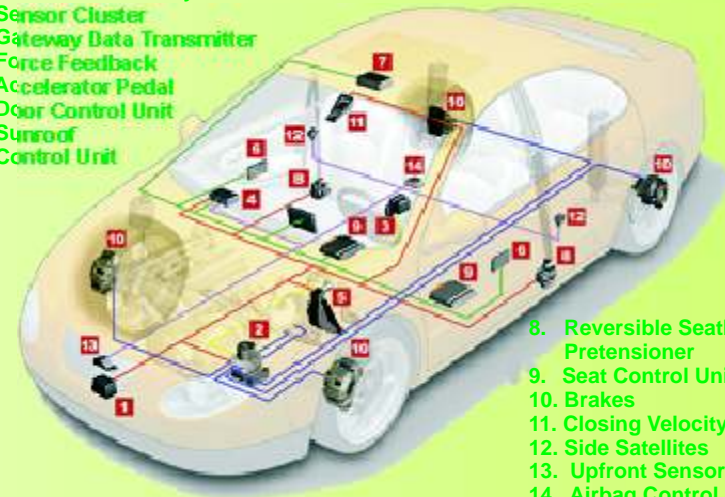
# AUTOMOTIVE INFOTRONICS

Towards Intelligent, Connected and Green vehicles

17-18 DECEMBER 2010

ANNA UNIVERSITY, CHENNAI

1. Adaptive Cruise Control
2. Electronic Brake System
3. Sensor Cluster
4. Gateway Data Transmitter
5. Force Feedback Accelerator Pedal
6. Door Control Unit
7. Sunroof Control Unit



8. Reversible Seatbelt Pretensioner
9. Seat Control Unit
10. Brakes
11. Closing Velocity Sensor
12. Side Satellites
13. Upfront Sensor
14. Airbag Control Unit

SAEINDIA Southern Section,  
No 25, Gandhi Mandapam Road, Kotturpuram, Chennai - 600 025  
E-Mail ID: [admin@saeiss.org](mailto:admin@saeiss.org) Website: [www.saeiss.org](http://www.saeiss.org),  
Phone - 044- 42188651 - 653

## Background:

The automotive industry in India has shown enormous growth potential and has been one of the key sectors providing impetus to the national economy. Among the various factors that have contributed for this significant development, it is believed that the important parameter is the ability of the industry to take up the challenge of international competition in providing quality products at competitive prices. Major international vehicle manufacturers such as Ford, Hyundai, Suzuki, Volvo, General Motors, Daimler, Volkswagen, Mitsubishi, Toyota, Honda, and Skoda have also set up operations in India over the last few years to utilize the local talent and realize local market potential.

Indian OEMs such as Tata Motors, Ashok Leyland, Mahindra & Mahindra and Maruti Udyog Limited have strengthened their presence over the last few decades and enjoy a significant share of business by manufacturing indigenously developed popular vehicle models. India has always been a major force in two wheeler segment also. Bajaj, TVS Motors, Hero Honda and Yamaha have been global players and are providing world class products. Significant advances have been made in the design and production of off-highway vehicles. TAFE, Mahindra, PTL, Escorts, John Deere, New Holland, Caterpillar India and BEML have all made significant progress in their areas of operation.

All segments of the mobility industry, especially the automotive component sectors, are making rapid progress and we are sure to witness a robust growth in the coming years. The Indian consumer now has a wide variety of vehicles to choose from as never before and the competition is becoming very severe. The industry is now faced with developing and absorbing technologies that will assure a safe place for all the stakeholders. It is becoming increasingly important to look at aspects of fuel efficiency, safety, comfort, robust and smartness in vehicle design and manufacture.

In the fight for supremacy it is realized among others that effective utilization of software and information technology tools and electronics in automotive industry will become crucial in the coming years. It is estimated that much of the R&D efforts in these areas will be carried out in Design Centers located in countries like India for obvious reasons.

SAEINDIA an affiliate of SAE International, has been in the forefront for identifying and transmitting relevant technologies to the society in general and to the stake holders in particular. It is in this background that SAEINDIA Southern Section, a regional office of SAEINDIA is organizing the Sixth National conference on Automotive Infotronics on 17th and 18th December 2010 at Anna University, Chennai. The Conference will focus on key technology issues relevant to mobility engineering such as Embedded Systems in Automotive fields, In-vehicle Networks, Advanced Driver Assistance Systems, Safety, Design and Electronics.

## Who can attend?

It is expected that there will be a strong national level participation comprising engineers and scientists from all vehicle manufacturing and component industries, R&D organizations, apart from significant student body involvement. A number of experts from abroad have also agreed to attend the conference and will share their experiences with their Indian counterparts.

## Conference Chairman:

Dr. Arunkumar M. Sampath

Vice Chairman SAEINDIA Southern Section

Phone: 91-44-42188651-653

Email : admin@saeiss.org

## ABOUT SAEINDIA Southern Section:

SAEINDIA Southern Section (SAEISS), a section of SAEINDIA, is a premier professional society that serves the Mobility Engineering Community engaged in the design, manufacture and service of self propelled vehicles and systems that move in land, air and space. SAEINDIA Southern Section covers Tamil Nadu, Kerala and Andhra Pradesh and has more than 14,000 professional and student members. SAEINDIA Southern Section office is located in Chennai at the following address.

SAEINDIA Southern Section Room No: 1 & 2, ISTE Professional Centre,

No:25, Gandhi Mandapam Road, Kotturpuram, Chennai - 600 025

## Organizing Committee:

Chairman : Dr. Arunkumar M. Sampath

Co-Chair : Mr. N. Balasubramanian & Prof. Kannan Rajendran

Technical Committee : Dr. G. Nagarajan & Mr. S. Sivakumar

Finance Committee : Mr. S. Srinivasa Rao & Dr. Thirumalini Subramaniam

PR / Organization : Mr. Srinivasan Sankaran

## Advisory Committee:

Chairman : Dr. Aravind S. Bharadwaj

Co-Chair : Mr. Asit K. Barma & Prof. P. Appalaraju

## Registration Fee Details:

	Non -Members	Members	Faculty Member	Student Member
Toptech	₹ 12,000.00	₹ 9,000.00	₹ 7,000.00	₹ 5,000.00
Conference	₹ 5,000.00	₹ 2,000.00	₹ 1,500.00	₹ 750.00

Toptech registration fee includes conference also.

For delegate registration form download from our website [www.saeiss.org](http://www.saeiss.org)

## Pre-Conference Tutorial 1:

**Topic** : Diesel Engine and After-treatment Controls – Today's Technology and Future Trends  
**Date** : 15th & 16th December 2010  
**Resource persons** : Dr. Anupam Gangopadhyay from AIPL  
Dr. Uwe Lingener and Mr. S. T. Venkatesan from Continental  
**Venue** : Hall of Guinness, Anna University, Guindy

### Day 1: Diesel engine and After-treatment Control – Big Picture

Engine torque management and fuel system controls  
Diesel after-treatment concepts and controls  
Practical training on Vehicle – EMS Techniques

### Day 2: FIE / EMS Technologies and trends for future Emission Norms

On Board Diagnostics – A Primer  
OBD1 Demo on Vehicle by fault creation

## Pre-Conference Tutorial 2:

**Topic** : Towards Sustainable and Connected Mobility  
**Date** : 15th & 16th December 2010  
**Resource persons** : Mr. Gururaj Bengeri, Mr. Avik Gupta and Mr. Nitin Nair from Siemens India  
**Venue** : Henry Maudslay Hall, Anna University, Guindy

### Day 1: Mechatronics solution for Automotive

Systems Driven product development (design, development & validation)  
Requirements capture, engineering & management  
Supplier/partner management  
A workshop on ECAD integration with MCAD  
From schematics to the actual harness design  
PCB Design & Exchanging from ECAD to MCAD  
Validating cooling characteristics of electronic systems

### Day 2: Hybrid Drive System for CV's Hybrid Concepts

Hybrid Drive System Topologies  
Current Technology & Future trends  
Special Applications  
Current Usage References

## Topics of Papers:

- 1) Embedded Systems in Automotive Fields (Speaker: Mr. C.S. Venkataraman, TATA Motors)
  - a) Latest Technologies
  - b) Clusters and Displays
  - c) Sensors and Actuator Controls
- 2) Advanced Driver Assistance Systems (Speaker: Mr. Jayendra Parikh, Ashok Leyland)
  - a) Infotainment Systems
  - b) On-board information systems
  - c) Telematics
  - d) Multi modal Transportation
  - e) Imaging/Video-based applications
  - f) Wireless Applications (Infrared, GSM/GPRS, Bluetooth, ZigBee, DSRC)
- 3) Electronics in Two & Three Wheelers (Speaker: Dr. S.J. Dhinagar, TVS Motors)
  - a) Recent Trends
  - b) Emissions Controls
  - c) Fuel Economy Improvement
  - d) Safety Technologies
- 4) Automotive Simulation and Modeling (Speaker: Mr. Prashant Rao, Mathworks)
  - a) Simulation of sub systems
  - b) HIL testing
  - c) AutoSAR
  - d) RTOS – OSEK
- 5) In-Vehicle Networks (Speaker: Mr. A. Srinivas, Mahindra & Mahindra)
  - a) LIN, CAN, FlexRay, MOST, KWP
- 6) Powertrain Controls (Speaker: Dr. Anupam Gangopadhyay, AIPL)
  - a) Powertrain Controls
  - b) Emissions and After Treatment Control
  - c) Active Safety
- 7) Electric/Hybrid Vehicle (Speaker: Dr. Rao Chalasani, General Motors India)
  - a) Recent Trends and Challenges
  - b) Advances in Power Modules
  - c) Thermal Management Advances
  - d) Energy Management Advances
- 8) PLM & CAD/CAE Applications (Speaker: Mr. Madhusudhan Varadaraj, Siemens India)
  - a) New Product Development using PLM Techniques
  - b) Utilizing CAE for Speedy Vehicle Development

## CONFERENCE AGENDA

### December 17th, 2010 (Friday)

<b>Registration</b>	<b>09:00 am - 09:30 am</b>
<b>Inauguration Ceremony</b>	<b>09:30 am - 11:00 am</b>
Chief Guest - Dr. Andrew Brown, SAE International President	
Prayer	09:30 am
AI Conference Theme by Dr. Arunkumar M. Sampath	09:35 am
Lighting of Kuthuvilakku	09:40 am
Welcome Address by SAEINDIA President (Mr. R. Dayal)	09:40 am - 09:50 am
Presidential Address by V.C. Anna Univ. (Dr. P. Mannar Jawahar)	09:50 am - 10:00 am
Address by Chief Guest (Dr. Andrew Brown)	10:00 am - 10:15 am
Address by CEO SAE International (Dr. David Schutt)	10:15 am - 10:30 am
Vote of Thanks by SAEISS Chairman	10:30 am - 10:35 am
Inauguration of Conference / Stalls	10:35 am - 10:50 am
<b>Tea Break</b>	<b>10:50 am - 11:00 am</b>
<b>Plenary Session</b>	<b>11:00 am - 12:30 pm</b>
Address #1 by SAE International President	11:00 am - 11:45 am
Address #2 by Dr. Michael Joerg Ruf, Continental	11:45 am - 12:30 pm
<b>Lunch</b>	<b>12:30 pm - 1:30 pm</b>
<b>Technical Session 1: (Embedded Systems in Automotive Fields)</b>	
Keynote Speaker: (Mr. C. S. Venkataraman, Tata Motors)	01:30 pm - 02:00 pm
Paper #1: Eaton Corporation	02:00 pm - 02:30 pm
Paper #2: Amrita University, Kerala	02:30 pm - 03:00 pm
Paper #3: Freescale Semiconductor	03:00 pm - 03:30 pm
<b>Technical Session 2: (Parallel Session) (Advanced Driver Assistance Systems)</b>	
Keynote Speaker: (Mr. Jayendra Parikh, Ashok Leyland)	01:30 pm - 02:00 pm
Paper #1: Visteon India	02:00 pm - 02:30 pm
Paper #2: KPIT Cummins Infosystems Limited	02:30 pm - 03:00 pm
Paper #3: John Deere, India	03:00 pm - 03:30 pm
<b>Tea Break</b>	<b>03:30 pm - 04:00pm</b>
<b>Technical Session 3: (Electronics in Two &amp; Three Wheelers)</b>	
Keynote Speaker: (Dr. S.J. Dhinagar, TVS Motors)	04:00 pm - 04:30 pm
Paper #1: UCAL	04:30 pm - 05:00 pm
Paper #2: Freescale Semiconductor	05:00 pm - 05:30 pm
Paper #3: TVS Motors	05:30 pm - 06:00 pm
<b>Technical Session 4: (Parallel Session)(Automotive Simulation &amp; Modeling)</b>	
Keynote Speaker: (Mr. Prashant Rao, Mathworks)	04:00 pm - 04:30 pm
Paper #1: Continental	04:30 pm - 05:00 pm
Paper #2: Visteon India	05:00 pm - 05:30 pm
Paper #3: ANSYS	05:30 pm - 06:00 pm

## CONFERENCE AGENDA

### December 18th, 2010 (Saturday)

<b>Plenary Session</b>	<b>09:00 am - 10:30 am</b>
Address by Cuneyt L. Oge, PRTM Corporation	09:00 am - 09:45 am
Address by Mr. Doug Neil, MSC Software	09:45 am - 10:30 am
<b>Tea Break</b>	<b>10:30 am - 10:45 am</b>
<b>Technical Session 5: (In-Vehicle Networks)</b>	
Keynote Speaker (Mr. A. Srinivas, Mahindra & Mahindra)	10:45 am - 11:15 am
Paper #1: KPIT Cummins Infosystems Limited	11:15 am - 11:45 am
Paper #2: Dearborn Group Technologies	11:45 am - 12:15 pm
Paper #3:	12:15 pm - 12:45 pm
<b>Technical Session 6: (Parallel Session) (Powertrain Controls)</b>	
Keynote Speaker (Dr. Anupam Gangopadhyay, AIPL)	10:45 am - 11:15 am
Paper #1: UCAL	11:15 am - 11:45 am
Paper #2: Continental	11:45 am - 12:15 pm
Paper #3: Anna University	12:15 pm - 12:45 pm
<b>Lunch</b>	<b>12:45 pm - 01:45 pm</b>
<b>Technical Session 7: (Electric/Hybrid Vehicles)</b>	
Keynote Speaker (Dr. Rao Chalasani, General Motors India)	01:45 pm - 02:15 pm
Paper #1: Mahindra & Mahindra	02:15 pm - 02:45 pm
Paper #2: Siemens India	02:45 pm - 03:15 pm
Paper #3: Mahindra & Mahindra	03:15 pm - 03:45 pm
<b>Technical Session 8: (Parallel Session) (PLM &amp; CAD/CAE Applications)</b>	
Keynote Speaker (Mr. Madhusudhan Varadaraj, Siemens India)	01:45 pm - 02:15 pm
Paper #1: TATA Technologies	02:15 pm - 02:45 pm
Paper #2: TVS Motor	02:45 pm - 03:15 pm
Paper #3: MSC Software	03:15 pm - 03:45 pm
<b>Tea Break</b>	<b>03:45 pm - 04:00 pm</b>
<b>Valedictory Session</b>	<b>04:00 pm - 05:30 pm</b>
Chief Guest - Dr. V. Sumantran, Executive Vice Chairman, Hinduja Automotive	
Guest of Honor - Mr. S.R. Marathe, Director ARAI	
Welcome the Guests SAEISS Chairman	04:00 pm - 04:05 pm
Address by Chief Guest	04:05 pm - 04:35 pm
Address by Guest of Honor	04:35 pm - 05:05 pm
Vote of Thanks by SAEISS Vice Chairman	05:05 pm - 05:15 pm

**Technical Sessions 1,3,5,7 - Henry Maudslay Hall**

**Technical Sessions 2,4,6,8 - Hall of Guinness**