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Upcoming Major Events

Apr 2015
Symposium on Fuel, Lubricants, Emission & After treatment Devices, New Delhi

Jun 2015
Virtual BAJA SAEINDIA 2015

Jul 2015
SAE International President visit

Jul 2015
SUPRA SAEINDIA 2015 Chennai

Aug 2015
ITEC INDIA 2015 Chennai

SAEINDIA BAJA 2015

Baja SAE is an intercollegiate design competition run by the Society of Automotive Engineers (SAE) Teams of university students from all over the world to design and build small off road cars, which have identical engines and other specifications.

BAJA-SAEINDIA is run by SAEINDIA. The history of the BAJA can be tracked down to the participation of the Delhi College of Engineering students who participated in the Mini Baja in 2002. A tiny red buggy flanked by chequered flags – the logo for Baja SAEINDIA, which has persisted since its inception in 2007, effectively conveys what the event is all about – an all-terrain, single-seater four-wheeled vehicle, designed, fabricated and raced by teams from different engineering colleges. And yet there is so much more that this little pictorial representation fails to convey.

The theme for this year 2015 was “Beyond Boundaries”, the very title suggests an encouragement to budding engineers to aspire higher to achieve their goals. All-Terrain Vehicles (ATVs) or a buggy, if you would like to call them that, have been known for their extreme off-roading capabilities taking on mudslinging, water wading, off-road tracks that a conventional vehicle would otherwise only dream to conquer. The premise to test the capabilities

of a vehicle on this track leaves little room for error and a whole lot of scope for improvement. It even gets interesting when you are asked to build your own ATV and then compete on a national level against like-minded opponents on one of the most gruelling tracks developed by some of the best minds in the business. That folks is the 2015 BAJA SAE India for you, in a nutshell.

The much awaited 8th edition of the Baja SAEINDIA 2015 finally came to an end on 22nd Feb 2015 at Pithampur Indore, leaving behind many exhilarating moments. A total of 74 teams had competed in the endurance round. The first edition of eBAJA saw 8 teams competing for the title on February 21, 2015.

The events took place at the NATRIP facility at Pithampur near Indore. While College of Engineering, Pune was announced winners of the 8th edition of the BAJA series in India, their vehicle was also the lightest, weighing only about 160kgs. D.Y Patil College of Engineering, Pune and Vellore Institute of Technology, Vellore were declared First runner-up and Second runner-up respectively.

The highlight of BAJA 2015 was the new track and with natural hurdles spread over 4.5kms. The track was designed in a manner to pose more challenges and test not only the

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SIAT 2015

The 14th Symposium on International Automotive Technology 2015 (SIAT 2015) organised by ARAI in Association with SAEINDIA, NATRIP and SAE International in January 2015 was a grand success. From 14 countries, we had received around 700 abstracts, out of which around 500 were accepted and finally 213 papers published.

The papers were in tune with the theme “Towards Safer, Cleaner & Quieter World” and focused on innovative approaches to reach the goals of environmentally sustainable, comfortable and affordable mobility. The technical sessions were very well complimented by SIAT EXPO with 205 stalls showcasing the latest developments in the automotive products, equipment, services and technology solutions across the globe. Student Poster Presentation Competition showcasing 22 posters in the area of Automotive Safety, Emission and NVH gave students an opportunity to showcase their work to practising professionals.



During SIAT, we also had Panel Discussion on “International Mobility Beyond Boundaries” wherein distinguished speakers representing top 6 vehicle manufacturing countries (China, USA, Japan, Germany, South Korea and India) deliberated. Additionally, 24th January 2015 was earmarked as a “Technology Theatre” day, wherein auto and allied industry presented their technological strengths and capabilities. Presentations & Panel discussion on “Industry Academia Enclave on Automotive Engineering” was an interesting session.



A DVD containing the symposium proceedings covering the Technical Papers & Keynote Papers was released at the hands of Chief Guest Shri Anant Geete, Honorable Union Minister of Heavy Industries & Public Enterprises, Govt of India, during the inaugural function. SIAT has come out with a Technical Reference Bulletin (TRB), which comprises technical articles & case studies relevant to automotive technology, is also available in the form of printed booklet.



The valedictory function concluded with Chief Guest Shri Nitin Gadkari, Hon'ble Minister for Road Transport & Highways and Shipping, Government of India, giving away the awards for the best papers and best Expo Stalls.

From the conference the following recommendations emerged to address the theme:

1. Development to promote use of alternate energy sources, viz. bio-fuel and green technologies, to support India's self-sufficiency in fuel

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2. Development of alternate materials and technologies to improve fuel efficiency and reduce emissions.
3. Contribution towards road safety by supporting indigenous development of vehicle designs, especially smaller passenger cars, 2-wheelers and 3-wheelers, which are India's focused sectors.
4. Close cooperation with Ministry regarding establishment of comprehensive facilities for measurement and control of various road parameters and standardization thereof.
5. Standardizing the structures for safer and better engineered truck bodies and bus bodies so that unorganized sector is better supported to ensure road safety.
6. Development and use of adaptive front lighting system to address the night vision, adaptive speed limiting devices based on GPS, Emergency Call System (E-call System).
7. Exploring the possibility of extending our services for transportation by alternate means suggested viz. waterways, sea ports, development of bus ports, etc.
8. Develop comprehensive solutions based on ITS applications to minimize human interventions and control of in-use vehicles.
9. Design and development of effective Noise Barriers for flyovers, metros to reduce the traffic noise.
10. Exploring the probability of Battery research in India.
11. City bus transportation on electric mode.
12. Developing Training programs for enhancing skills and fitness of the drivers.

SAEINDIA BAJA 2015 Cont...

success of vehicles but also of those driving that vehicle.

KL University, Guntur was declared the 'Best eBAJA Team'. This was the first edition of e-BAJA which aims to provide a platform to leverage the onset of Electric Mobility in India. The event saw participation from 12 colleges. However, only 8 colleges competed in the endurance round.

About 323 teams had registered in the 8th edition of BAJA SAEINDIA series, out of which 122 teams had qualified for the final event. However, only 74 teams qualified for the Endurance round. This year was remarkable with 8000 students from different parts of the country working towards BAJA SAEINDIA 2015 theme and making it a reality.

Speaking at the Valedictory function, Dr. Pawan Goenka, Executive Director, Mahindra & Mahindra Ltd. said, "It's heartening to see thousands of students coming together once again to celebrate the spirit of BAJA. Increase in participation from colleges and BAJA SAEINDIA's growth since inception indicates its growing popularity and national significance. This forum gives young engineering talent an opportunity to showcase their skills, innovate and acquire a real life experience posed with challenges which is critical to their success in the long term.

Mahindra & Mahindra is delighted to be associated with BAJA SAEINDIA 2015 as the title sponsor and with BAJA, we are taking forward the philosophy of Mahindra Rise to the next level".



It was indeed a technical feast where around 1200 delegates from 25 countries participated.



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Dr. Aravind Bharadwaj, President, SAEINDIA said, "Creation of industry ready skilled engineers is a prerequisite to achieve the targets that have been set forth in the Automotive Mission Plan 2016 for India. BAJA is one such initiative from SAEINDIA that provides an opportunity for students to get hands on learning experience in vehicle design. The rapid increase in the number of teams from SAEINDIA clubs in colleges across the country and the unparalleled enthusiasm of everyone involved with this event is clear evidence that BAJA SAEINDIA is making progress in the right direction".



Mr. Subodh Morye, Convener, BAJA SAEINDIA said, "BAJA SAEINDIA is a platform that offers students a chance to showcase their talent and skills in the presence of auto experts in addition to presenting them with an opportunity to gain hands-on experience in the industry of which they aspire to be a part. Amongst the thrill and adventure, we assess the abilities of participants by testing them on parameters such as leadership skills and theoretical and practical knowledge."

On a conclusive note he added, "Indore is a hub of industry and young talent. Its proximity to infrastructure such as the NATRIP facility makes it the ideal venue for hosting an event of this nature. The enthusiasm of the city is palpable simply from its response-- Indore has shown the highest participation closely following cities such as Pune and Chennai. I am confident that like every year, this year too will showcase the most promising talent in the country."

The dignitaries, Dr. Pawan Goenka, Executive Director & President, Automotive & Farm Equipment Sectors, Mahindra & Mahindra Ltd. and Chairman BAJA SAEINDIA Steering Committee, Chief guest Mr. Anthony Je DeSa, IAS Chief Secretary Government of Madhya Pradesh State, Mr. Kamal Bali, MD Volvo India, Mr. Girish Markale, Co-convener BAJA SAEINDIA, Dr. Aravind S Bharadwaj, President, SAEINDIA presented numerous other awards to the teams for static events.

Rustamji Institute of Technology, Gwalior bagged the Engineering Design award whereas SRM University, Chennai and Institute of Engineering and Technology-DAVV, Indore won the Go Green- Emissions Award. Special awards like Dronacharya award was given to the team of Sant Longowal Institute of Engineering & Technology, Sangrur- Punjab and Venus International college of Technology, Gandhi Nagar. The *Endurance award* which assessed vehicles ability to operate at a speed over rough terrain was however bagged by College of Engineering, Pune followed by VIT University, Vellore.



The students walked away not just with the excitement and a sense of accomplishment for having competed in such a testing event, but also a fair amount of prize money as well which was about Rs 27,00,000/-.

The other sponsors included ARAI, Altair, Briggs & Stratton, PTC, AVL, Chevrolet, Volvo, John Deere, Anand Group, Bharat Petroleum, Cummins, GTE, Emitec, Priya Events, Ansys, iCAT, NATRIP, Endurance landmark, IIST, Varroc, V productions, Wurth, Xitadel, ACMA, Fortune Landmark etc.

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The three day event started with basic Static Evaluation round which comprised of Design Evaluation, Cost Evaluation and Marketing Presentation. In the final round, the teams showcased their prototype of a rugged single seat, off-road recreational four-wheel vehicle and were evaluated on various parameters, including engineering design, cost and technology innovation. The objective of the competition was to simulate real world engineering design projects and their related challenges. Each team's goal was to create a safe, easily transported, easily maintained and fun to drive prototype without any direct involvement from professional fabricators. However, the teams were free to design their own transmissions with the only restriction being the speed limit to 60kmph.



The Winners of BAJA 2015 were,

- College of Engineering, Pune, wins the title.
- DY Patil College of Engineering, Pune bags 2nd position and
- Vellore Institute of Technology, VELLORE holds 3rd position respectively.
- KL University, Guntur bags the first 'Best eBAJA team award'

ITECINDIA 2015

Electrifying Mobility Through Holistic Ecosystem Solutions

ITEC INDIA 2015 will be held in Chennai, India between August 27 -29 2015. The conference is organised by SAEINDIA & IEEE Industry Application Society. ITEC INDIA 2015 will present an array of papers across different topic, Ride and drives and first ever pan India student Electric Vehicle competition.

The Theme for this Conference will be Electrifying Mobility through Holistic Ecosystem Solutions.

ITEC INDIA 2015, International Transportation Electrification Conference India is aimed at helping the industry in the transition from conventional vehicles to advanced electrified vehicles. The conference is focused on components, systems, and standard grid interface technologies related to efficient power conversion for all type of electrified transportation.

We have received more than 200 papers for presentation in the Conference from all over the world.

Topic s covered for ITEC INDIA 2015 Conference

- Power Electronics, Electric Motor Drives, Electric Machines
- Sensors and Actuators
- Battery Management System
- Electric, Hybrid Electric, and Plug-in Hybrid Electric Vehicle System Architectures
- V2V Communication, Electrical Infrastructure, Autonomous Vehicles
- Electrification of Heavy-Duty and Off-Road Vehicles
- Renewable Energy - Fuel Cells and Applications in Transportation
- Electrification of Heavy-Duty and Off-Road Vehicles
- Modelling, Simulation, and Control, and Systems Integration

Steering Committee and Organising Committee are endeavouring to make the event unique and very special by involving all stakeholders connected with the Electric mobility.

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SAEINDIA Policy Planning & Deployment

Policy planning & deployment started with the welcome address of Mr. Parvez Alam, Champion Of the program. He thanked all the members for coming to attend the program in spite of their busy schedule. The first phase was the team introduction where all the team members gave their introduction & their involvement in SAE programs.



List of Members Participated:

1. Mr. S. Shanmugam
2. Mr. Arun Sivasubrahmaniyan
3. Mr. T. R. Sathyanarayanan
4. Dr. Kannan Rajendran
5. Dr. D. Muruganandam
6. Dr. M Uthayakumar
7. Mr. M. Parvez Alam
8. Mr. S. Karthikayan
9. Mr. Sanjay Nibandhe
10. Mr. T. Kasiraja
11. Mr. Yogesh
12. Mr. Aiyappan Ramamurthy
13. Mr. R. Alaguel Armstrong
14. Ms.Priyanka
15. Mr. Lingeswaramurthy
16. Mr.Muthu Solaiappan
17. Mr. Karthik Sethuraman
18. Mr. Satheesh
19. Mr. Parthasarathy Sriram
20. Mr.J.N Harisharan
21. Mr. J. Munirathnam
22. Prabhakaran

23. Mr.Selvamani
24. Mr.Selvamani
25. T. Ponraj
26. Dr. S. Senthil Kumar
27. Kumaran B
28. Vijayan G
29. Sundarvadivelu
30. Dr. N. Saravanan
31. Anand Gurupatham
32. S. Ilangovan
33. Hari Prasan Dash
34. S. Mukesh
35. S. Panneer Selvam

Mr. S. Selvamani, Mentor of the Policy deployment explained the purpose of the program, gave the background of the Policy deployment process. He explained each & every teams about the responsibility & the deliverables in the two days program.

Then Mr.Shanmugam, Secretary of the SAEISS presented the Chairman's policies.

Then each policy teams started the presentations.

Policy 1: Alignment with SAEINDIA Policy - CFT

Members:

1. M.Parvez Alam
2. Mr.A. Armstrong
3. Dr.Kannan Rajendran
4. Ms.Priyanka



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Policy 2: Improve KRT Activities - CFT Members:

1. Mr.Yogesh
2. Dr.Anand Gurupatham
3. Mr.Sanjay Nibandhe
4. Mr.Lingeshwaramurthy
5. Mr.Sriram

Policy 3: Competitions for Professional Members - CFT Members:

1. Mr. Meenakshi Sundaram
2. Mr.Muthu Solaiyappan
3. Dr.Saravanan
4. Mr.Senthilkumar



Policy 4: Certifications for Professional Members - CFT Members:

1. Mr.Karthik Sethuraman
2. Mr. Aiyappan Ramamurthy
3. Mr.Satheesh
4. Mr.Muruganandam
5. Mr.Ponraj
6. Dr.Uthyakumar
7. Mr.Karthikeyan

Policy 5: Career by Business - CFT Members:

1. Mr. Sriram
2. Mr.JN Harisharan
3. Mr.Javaji Munirathnam

4. Mr.Prabhakar
5. Mr.Arun Sivasubramaniaym



Policy 6: Last Mile Connectivity - CFT Members:

1. Mr. S. Shanmugam
2. Mr. T. R. Sathyanarayanan
3. Dr. G. Padmanabham
4. Dr. C.D.Naiju
5. Dr. S. Neelakrishnan



Finally 42 action items were identified in all these 6 policies with champion name and budget. For policy 1, champions name will be identified with the consultation from Governing council.

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SUPRA SAEINDIA 2015

Virtual SUPRA SAEINDIA 2015 took place at Vel-Tech University, Chennai, between 8th to 10th January 2015. Event was inaugurated by Mr. Srivats Ram MD, Wheels India on 8th Jan followed by panel Inspection of all the teams. 167 Teams participated in this event from different parts of the country consisting of more than 1000 students and was judged by 50 Judges from more than 20 Different Companies for 3 days. Results were declared by Mr. Kanniapan MD, WABCO who was the Chief Guest for the Valedictory Function on 10th Jan. Attraction of the event was Online Scoring system, through which teams were able to see their score just after Panel Inspection. Top 110 Teams were selected based upon their Design and Plan to Make a Formula Car and to bring their cars at the Main Event.



SUPRA SAEINDIA 2015 will take place in the month of July from 15th to 19th at Madras Motor Race Track, Chennai. Maruti Suzuki India LTD is once again the Title Sponsor of the Event.



Technical Committee of SUPRA is planning to have a Faculty Advisor and Team Captain's meet in the Month of April 2015, at three different locations i.e. Pune, Chennai and Delhi.

ICAM 3D

A new advanced technology called Additive Manufacturing / 3D printing (AM/3DP) is transforming engineers. 3D Printing is an innovative manufacturing technology that can transform digital designs into tangible parts in one step without using conventional tools.



The International Conference on Additive Manufacturing, 3D Printing, and 3D Scanning (ICAM-3D) was conducted at Hilton on Feb 5th to 7th, 2015 along with ICAM-3D Car Design Challenge for young engineers.

40 Teams registered from all over the country for this event and 6 of them were selected to present their model at the event. Top 3 teams were selected on the basis of their design and their knowledge in the domain



Dr. Chidambaram, The Principal Scientific Advisor to Govt. of India was the Chief Guest and inaugurated ICAM – 3D Conference. Dr. Tim Morris, NAFEMS Global gave away the awards for the winners and the shortlisted teams of ICAM – 3D Card Design Challenge.

SAEINDIA SECTION NEWS

BANGALORE SECTION

INAUGURATION OF SAEINDIA COLLEGIATE CLUB CHRIST UNIVERSITY, Bengaluru

Inauguration of SAEINDIA collegiate club of CHRIST UNIVERSITY, Bengaluru was held on 05th of February, 2015.



Mr. Vinay C . Harne - Advisor to Chairman SAEINDIA BS, Mr. K.C .Vora, Chairman, SAEINDIA Western section, Mr.K.P.Murthy, Vice Chair, student activities, SAEINDIA, BS were present during the inauguration of the club and addressed the students.



CONFERENCE ON GLOBAL EXPANSION – OPPORTUNITIES IN US FOR INDIAN COMPANIES

Conference on GLOBAL EXPANSION jointly organised by SAEINDIA Aerospace board and SAEINDIA BS, on 17th February 2015 at TAJ WEST END HOTEL, Bengaluru along with its strategy partner Brick work India

& IACC (Indo American chamber of commerce) for Fair fax county on the topic “OPPORTUNITIES IN THE US FOR INDIAN COMPANIES” followed by sub topic “ ENGINEERING SERVICES OPPORTUNITIES IN AEROSPACE & DEFENCE SECTOR AND WAY FORWARD”.



Mr. Munirathnam Javaji of SAEINDIA Aerospace Board, Mr. KP Murthy were present during the event.

SAEINDIA JSS collegiate club (BAJA-Techtalk)

SAEINDIA BS and JSS collegiate club arranged a technical session on the topic BAJA –SAEINDIA on 06th March 2015 at JSS College Auditorium, Mysore. Mr. Anoop B.Srinivasan along with Mr. Purushotham S Joshi briefed the student community on the following,

- What is BAJA?
- Team formation & Time management.
- Technical parameters & Vehicle cost involved.
- Judging methods & Rule book and finally
- Competition video-2015.

NORTHERN SECTION

SAENIS Governing Board meeting & SAEINDIA Foundation function

SAENIS held its Governing Board Meeting at Gurgaon. At the outset, Chairman- SAENIS, Mr. CV Raman requested all Governing Board members to implement “DRIVE” with enthusiasm and vigor to ensure that SAENIS membership increases continuously and its members derive value from SAE activities. Governing Board discussed several matters related to the functioning of the society, Efficycle 2015, AWIM National Olympics 2015, Technical Seminars and Forthcoming conferences.



Governing Board agreed in principle to host the 9th SAEINDIA International Mobility Conference 2016, at New Delhi.

The meeting was also attended by Mr. Murli Iyer, Executive Advisor (Global Affairs) – SAE International. Mr. Iyer complemented SAENIS Leadership team for spreading SAE activities in Northern Section.

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At the SAEINDIA Foundation function, Mr. Murli Iyer contributed an amount of Rs.50,000 to SAEINDIA Foundation. The cheque was presented personally by Ms. Rachna Palm Iyer, daughter of Mr. Murli Iyer, in memory of her mother, to Mr. R Dayal, President SAEINDIA Foundation. We thank Mr. Murli for his generous support to SAEINDIA Foundation!

TOPTECH Program on Fatigue Analysis Simulation & Testing

SAEINDIA Northern Section in association with Maruti Suzuki India Limited and Engineering Center Steyr & Finite To Infinite organized Top tech program on Fatigue Analysis Simulation and Testing on 5th February'15 at Japanese Hostel, Gurgaon.



The program aimed at giving an overview of FEA based Fatigue Analysis Simulation & Testing for automotive industry applications to help R&D, Design, CAE, Test and Data Acquisition engineers to gain confidence in their Design, Simulation and Testing.

The program commenced with a brief overview of fatigue analysis and influencing factors, wherein the importance of fatigue analysis in industry was explained.

Uniaxial and Multi-axial fatigue testing was also briefly discussed. Following this, Mr. Wolfgang Huebsch, Vibration and Thermo Mechanical Fatigue Expert explained about the Non-Metal fatigue analysis and Vibrational fatigue in detail.



In the later part of the session, Mr. Axel Werkhausen, who is a Weld Fatigue Analysis Expert and has rich experience of more than fifteen years in the field of Fatigue analysis, discussed the different techniques of Weld Fatigue like Seam weld and Spot Weld and their fatigue analysis.

Future of Emissions Regulations

SAEINDIA Northern Section in association with Maruti Suzuki and Horiba jointly organized a technical seminar on "Future of Emission Regulations" on 23rd February 2015. The event was organized at Japanese Hostel, Gurgaon. More than 30 participants from various organizations like Maruti Suzuki, Denso, NATRIP, International Centre for Automotive Technology (iCAT), IOCL, Mitsui, Minda, Escorts and many more were benefitted from the above program. The seminar was targeted at R&D persons, Engineers, students and faculty interested in emission measurement and testing,

fuel economy improvement and related areas. Emission and Future Regulations along with related solutions from Horiba were discussed.



The seminar started with welcome note by Mr. P.Panda, VP Powertrain Development, Maruti Suzuki India and by Mr. Prakash Abhyankar from horiba. Following it, Mr. Les Hill, Global Product Manager, Horiba Ltd focused on new emission trends in US and European Nations. He stated the worldwide regulations namely WLTP cycle and Real world driving emissions that how they originated, test conditions and the new emission components which may come in future. Mr. Arun Aatkari, Senior Manager, Horiba explained the future emission measurement technologies of Horiba. The interaction during the lecture was intensive and feedback was quite positive. Participants learnt about the future emission trends and the solution to them.

Mr. Anoop Bhat, GM (Engine Calibration and Vehicle Testing), Maruti Suzuki India concluded the event with a vote of thanks and honored the dignitaries with mementos

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WESTREN SECTION

CO₂ REDUCTION REQUIREMENTS AND STRATEGIES

SAEINDIA Northern Section in association with M/s Delphi organized a seminar on "CO₂ Reduction Requirements and Strategies" on 23rd March 2015 at Crowne Plaza, Gurgaon. The seminar was targeted towards CO₂ reduction requirements and strategies and brushless pump and controller was solutions from Delphi. The seminar targeted towards the R&D persons, Engineers, students and faculty interested in these related areas.



Senior Vice Chairman-SAENIS, Mr. P Panda gave a welcome note to commence the event. The requirements of CO₂ Emission to meet Fuel Economy were discussed by Mr. Xu Xinagdong, Director, Asia Pacific, Delphi Powertrain and a Power train technologies expert. Followed by this Mr. Phil Anderson explained about the Brushless Technology. Thereafter, Controller strategies for Brushless Pumps was discussed. A Case study on CO₂ Emission reduction using Brushless Technology was then discussed which gave an insight into this technology.

TWO DAY WORKSHOP ON VEHICLE DESIGN & VEHICULAR DESIGN

A two day workshop on Vehicle Dynamic & Vehicular Design was organized by the SAEINDIA WS and G. H. Raisoni College of Engineering at Nagpur in association with Technical Education Quality Improvement Programme (TEQIP-II) of the Govt. of India on 3rd & 4th Jan 2015 at Auditorium, of G. H. Raisoni College of Engineering, Nagpur. The workshop was inaugurated by Mr. N. P. Wagh, Secretary of SAEINDIA WS.

Mr. R. S. Kolhe, Director, N. B. Technology, Pune, was the speaker of this workshop. Dr. P. V. Walke, Head of Department and Dr. A. Y. Deshmukh are coordinators of TEQIP. Delegates including faculty & students from various colleges in and around Nagpur participated in the workshop. Dr. P. B. Nagarnaik, Deputy Director, GHRCE, Prof. N. P. Awate and Prof. A. D. Pitale, were workshop co-ordinators.

In the workshop the following topics were covered as,

1. Fundamentals of Industrial behaviours and changes.
2. Basic qualifications for designers, Product/ Equipment verification and validation
3. Fundamentals of Vehicle Dynamics, detail calculations and Vehicle acceleration performance
4. Road Loads, Braking Performance and Suspensions.
5. Ride & Steady state cornering, Steering System, Rollover, Tires & Day to day Project planning and management.



The workshop concluded with practical explanation on all-terrain vehicle prepared by students of G. H. Raisoni College of Engineering, Nagpur.

7TH AWIM NATIONAL OLYMPICS

A World In Motion® (AWIM), indeed it abides by its unique name, it rightly amalgamates Fun, Challenge, Team Work & Leadership. The 7TH AWIM National Olympics was held from 10th to 12th January 2015 at Mahindra Vehicle Manufactures Ltd., in Chakan.

This was a great opportunity for Little Champion's Dream come true, of making their Dream machines at Automobile Manufacturing grounds itself. A total of 152 students, 76 teachers & many Industry volunteers from 17 Cities across the nation attended this event.

On the 10TH January the teams were registered for the event, and all teams were briefed on the rules and marking format for the event.



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On 11TH January 2015 the main event began, where student design teams from class 5TH & 6TH participated in the event by making “Skimmer” & “Jet-Toy” for track events, and they also designed dream cars which they perceive to be the future cars of the science age. About 8 teams for Skimmer & 30 teams for Jet-Toy participated in the grand finale.



Mr. Vijay Dhongde-CEO MVML welcomed Dr. Pawan Goenka, Executive Director, Mahindra & Mahindra and briefed how his Vision helped to increase AWIM initiative from 2 Cities to 17 Cities across India.



Dr. Pawan Goenka’s presence changed the energy of the children and they were pumped with enthusiasm. His vision of benefiting children had a new leap. He visited Skimmer Track as well as all Jet-Toy Track and also witnessed presentations made by little champs. Later he shared his thoughts and interacted and guided the children to be better Engineers in Future, and expressed that these children would be the future of our country.

He also appreciated the efforts of the volunteers across the country who invested their time in teaching children beyond their textbook knowledge. He visualized how seeds of “Make In India” have been well sown at schools with activities such as AWIM. He revived his school days while spending time with these children. He also reiterated the fact that, how Automobile Industry has helped Indian Society to grow and develop over the years.



On 12TH January 2015 teams visited the Chakan plant with a lot of enthusiasm; these bright minds were excited to see the Plant. They were on a tour to Maxximo BIW, Maxximo TCF and Gyanodaya where they were explained Vehicle manufacturing details.

AWIM Curtain Raiser

A World in Motion (AWIM) curriculum joins together school teachers, students and industry volunteers in an exploration of physical science while addressing essential scientific concepts & skills of the secondary school students. Industry volunteers play an essential role in motivating the next generation to pursue careers in science & technology by bringing their everyday

experiences into an AWIM classroom. Each of the AWIM activities is designed around STEM (Science, Technology, Engineering & Maths) incorporating the laws of physics, motion, flight and electronics. SAEINDIA provides the AWIM curriculum, materials and training free of cost to schools.



Across the nation, many corporations have committed their resources to support AWIM. Automotive Research Association of India (ARAI), Ashok Leyland, Cummins India, Eaton Technologies, John Deere, Mahindra, Maruti Suzuki, Trim India & TVS Motors are some of the Companies who have supported the event in various cities and provided engineers who volunteered their time & talent to train students and teachers.



So far, across India 30000+ students and 600 teachers in 300 schools have been trained including some of the Zila Parishad and Municipal schools as well as Orphan are schools. With this background, the AWIM curtain raiser was arranged on 26th January 2015 (Republic Day) at N. K. Orchid College

SAEINDIA SECTION NEWS

of Engineering, Rolapur where student were trained for Jet-Toy, Along with them we had invited industry volunteer and leaders from Solapur city to witness the event.

Dr. K. C. Vora, Vice president, SAEINDIA and Sr. Deputy Director at ARAI, Mr. Saurabh Chitnavis, Development Board members of SAEINDIA and Director at ATS, Mr. Manoj Girhe, Convener, AWIM Pune Olympics 2014 and Manager at John Deere Embedded Systems were the trainers.

The event started with republic day function in the morning at 7.00 AM to 10.30 AM at Nagesh Karajagi Orchid College of Engineering & Technology (NKO CET), Solapur followed by training the students and volunteers from various school in and around Solapur. They made the Jet-toy which were tested for various aspects. Later an interactive and learning session was conducted for explaining scientific reasons behind the concept. The event concluded at 17.00 hrs with felicitation to students, industry volunteers and leaders and Trainers.

INAUGURATION OF SAEINDIA COLLEGIATE CLUB OF DR. D. Y. PATIL INSTITUTE OF ENGINEERING & TECHNOLOGY INAUGURATION

Inauguration of SAEINDIA collegiate club of . D. Y. PATIL INSTITUTE OF ENGINEERING & TECHNOLOGY, Talegaon was held on 12th of February, 2015. Mr. N.P. Wagh, Secretary of SAEINDIA WS, Prof. Dr. R. J. Patil, Principal, Dr. D. Y. Patil Institute of Engineering & Technology, Prof. S. K. Bhor, HOD, Mechanical Department, Dr. D. Y. Patil Institute of



Engineering & Technology, Prof. Amol C. Lande, Faculty Advisor, SAEINDIA Collegiate Club, Dr. D. Y. Patil Institute of Engineering & Technology, Prof. Dr. Mate, Faculty Advisor, SAEINDIA Collegiate Club, Dr. D. Y. Patil Institute of Engineering & Technology and Mr. Sagar Murugkar, Asst. Manager, SAEINDIA WS were present during the inauguration of the club and addressed the students regarding SAEINDIA's student activities.

TEXEPHYR'15 (FORMERLY KNOWN AS AXELERATE)

All Engineering departments of Maharashtra Institute of Technology (MIT), Pune with the support of SAEINDIA WS mutually organized a National Level event called "TEXEPHYR", on the 20th and 21st of February 2015 at MIT, PUNE.

TEXEPHYR is inaugurated Prof. P. B. Joshi, Board Member, MIT. In TEXEPHYR Events were categorized into various domains like Robotics, RC Car Racing, Reincarnation, Mechanics Quiz called as Mr. Mechanix, Designing Events Like Auto-cad & PROE, Paper Presentation and non-technical events like Mind Your Own Business, AXLOGRAPHY etc. Each event was reviewed and judged by a panel of prestigious judges who are the masters in their respective domains with prize distribution to winners in respective competitions.

INNOVATION 2K15 BY MKSS'S CUMMINS COLLEGE OF ENGINEERING FOR WOMEN COLLEGIATE CLUB

INNOVATION 2K15 was conducted by Cummins College of Engineering for Women, Pune, under which many events were conducted. "Lathe Star Wars" was jointly organized with SAEINDIA WS.



This is a platform to showcase your skills on the lathe machine. Teams are well acquainted with different operations on lathe machine such as drilling, turning, facing, knurling, parting and tapering. Teams will be assigned a work piece, within the stipulated time they have to finish the required operations on the same. In this event the participants were judged on speed, accuracy and also on workmanship, operations on lathe machine. The event concluded with award ceremony, and giving the prizes to the winners.



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SOUTHERN SECTION

TWO DAY TOPTECH PROGRAM - APPLICATION DESIGN OF EXPERIMENT

SAEINDIA SS (SAEISS) successfully conducted the 2 days TOPTECH Program on 9th & 10th January 2015 on the topic "Application Design of Experiment" by Mr. S. Selvamani / WABCO INDIA LTD & S. Shanmugam / DDIPL at Valeo India Ltd.

Design of Experiments is a powerful tool in Research and Product Development. In recent times, many affordable tools have evolved to design experiments and analyse the results statistically. This development has made DOE easy to use.



However, choice of experiment design for different situations has not been well understood by the practicing engineers leading to either inadequate information from experiments or too expensive tests. In either case, engineers get frustrated. To give our mobility engineers an overview of real life situations and appropriate DOE schemes the program was organized.



STUDENT CONVENTION 2015

The 9TH SAEINDIA National Student Convention was held at Kalasalingam University (KLU), Krishnankoil, Virudhunagar Dist., on 30TH & 31ST January 2015. Every year, the SAE collegiate chapters get an opportunity to, discuss, display and celebrate their success in the last one year. This is also the occasion when the winners from the 6 zones meet and battle it out to find the best in the competitions held. This year's event saw active participation of over 1000 students from 86 colleges.



The Inaugural function began with the welcome address by Dr. S. Saravana Sankar Vice - Chancellor, Kalasalingam University. Student Convention brief was given by Dr. D. Muruganandam Student Convention-Champion. The Inaugural Address was given by Mr. N. Balasubramanian Chairman, SAEISS. The Presidential Address given by Thiru. K. Sridharan Chancellor - Kalasalingam University. The chief Guest for this prestigious event was Mr. Oba Noboru Vice-President - RNTBCI. Vote of Thanks given by Dr. M. Uthayakumar, Organising Head, KLU.

On Day 1 all the existing events where the winners of Tier 2 regional events will compete at national level, this is the battle among the Six Divisions of SAEINDIA SS, the events were - Business Plan Contest, Aero Design and Fabrication Contest, Auto Quiz, Technical Paper Contest, Modeling and Animation Contest, Computer Aided Manufacturing Contest, Analysis Contest & CAE. Along with the existing events SAEINDIA Southern Section made History by successfully conducting 12 new events. These events were focused on the Nations goal that is "MAKE IN INDIA".



These events created a platform for engineering students to learn & understand the Manufacturing Technology. Out of 12, the following events were conducted on day 1 - Mobile Robotics, Mechatronics, CNC Turning, Manufacturing Technology Challenge, Welding & Prototype Modelling

On Day 2 the manufacturing technology events continued and they were - Mechanical Engineering Design CAD, Sheet Metal, CNC Milling, Plastic Die Engineering, Electronics & Polymechanic & Automation.



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Technology Theatre :

SAEINDIA SS conducted the 4th Technology Theatre for the Student members who came to visit Student Convention. The Topics included “Challenges in Integrating High Voltage on Automobile” by Mr. R. Ramachandran from Mahindra & Mahindra, Chennai, “Digital Manufacturing for Automotive Industry” by Mr. Aiyappan Ramamoorthy from Siemens, Chennai, “Automotive crash” by Mr. Aditya Malladi from Mahindra & Mahindra, Chennai, “New Product Development of Passenger Car” by Mr. Shanmugavel from Renault Nissan Technical Business Centre India, Chennai.

Collegiate Club Presentation &

Display:

Club Presentation, showcasing the achievements, strengths and unique activities of various SAE collegiate chapters. The Club Display competition and Technology Theatre ran parallel at different venues. Various working mechanical models, presentations and charts were put on display. SAEISS Students Executive Council met and discussed the various aspects of running a collegiate club, ways to improve the SAE activities and also the new SEC members for the year 2015-2016 were announced.



KLU Bike Show:

The host College also conducted a Bike show where they displayed high power bikes of above 1000cc. They really attracted the Student members.



Valedictory & Prize Distribution

Ceremony:

The convention was brought to a close in the valedictory function later in the evening. Welcome Address was given by Dr. V. Vasudevan, Registrar, Kalasalingam University. Presidential Address given by Dr. S. Saravana Sankar Vice - Chancellor, Kalasalingam University. Review of Convention by Dr. R Kannan, EEC – Champion.

The Chairman of SAEINDIA Southern Section Mr. N. Balasubramanian addressed the gathering by giving a Glimpse to Future mega events by the section like BAJA South & Additional 10 events in Next Student Convention. The Chief Guest for the valedictory function was Dr. Aravind S. Bharadwaj, Sr. Vice President - M&M & President, SAEINDIA. This was followed by the distribution of prizes and mementos and the vote of Thanks by Mr. S. Shanmugam, Secretary – SAEISS.

TWO DAY FACULTY ADVISOR FORUM

SAEINDIA SS also conducted 2 days Faculty Advisor forum where 21 faculties from various Colleges participated.

During the discussion the following points are discussed between the Faculties & SAEISS Management Team as,

- Funding Opportunities from Government funding agencies.
- Research problems from Industries & Funding Opportunities from SAEISS .
- Using Industry/common Test facilities for carrying out R & D Projects.
- How to identify research problems. Scientific writing and presentation.

TWO DAY TOPTECH PROGRAM - ENGINEERING DESIGN PROCESS

Toptech program on “**Engineering Design Process** ” was organized by SAEINDIA SS on 6TH & 7TH February 2015 at SAEISS Office. Speaker Mr. S. Shanmugam, DDPII, Managing Director, Chennai



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The objective of this program was to enable the participants to understand the engineering design process and its elements, different levels of involvement and cooperation between OEMs, Tier – 1 suppliers, component suppliers and engineering service providers.

TWO DAY TOPTECH PROGRAM - VEHICLE THERMAL SYSTEMS

Toptech program on “**Vehicle Thermal Systems**” was organized by SAEINDIA SS on 20th & 21st March 2015 at Goutham Manor, Chennai. Speaker Mr. B. Balaji, Ashok Leyland, Chennai.

Objective of the program is to provide a good grounding in the fundamentals of Vehicle Thermal System including Cooling , Charge Air Cooling, HVAC Systems , in addition to enhancing awareness of the various concepts and technologies available as well as the future trends in these areas.



Further it will help to understand the various concepts of engine thermal system, brake thermal system, heat transfer from engine compartment to passenger compartment and measures to do heat balancing and material selection from thermodynamic point of view to reduce energy loss in the form of heat to the surrounding.

SKIP - FINITE ELEMENT ANALYSIS

SKIP program on “Application of Finite Element Analysis ” was organized by SAEINDIA Southern Section on 13th & 14th February 2015 at SSM Institute of Engineering & Technology, Dindigul.

Speaker: **Dr. V. Ramamurti, FNA, FASc, Consultant**



This program is designed to bring better understanding of formulation and interpretation. Automotive industry has understood the need for Finite Element Analysis and Finite Element Analyst for some time now. Wide range of software packages are available to carry out FEA with ease. However, there is considerable lack of understanding of formulating problems for FEA and interpreting the results. This program will facilitate the better understanding of Finite Element Analysis.

SKIP - AUTOMOTIVE CHASSIS COMPONENTS & SYSTEMS

SKIP program on “Automotive Chassis Components & Systems” was organized by SAEINDIA SS on 7th & 8th March 2015 at Henry Maudslay Hall, Anna University, Guindy. Speaker: Mr. M. Rajesh, HOD/ Auto, KV CET.

To understand the construction and working principle of various parts of an automobile chassis. To study the constructional details and theory of drive line, structural, steering, braking and suspension systems of automobiles.



SKIP - VEHICLE DESIGN DATA CHARACTERISTICS

SKIP program on “Vehicle Design Data Characteristics” was organized by SAEINDIA SS on 21st & 22nd March 2015 at Karpagam College of Engineering, Coimbatore. Speaker: **Dr. E. Rajasekar M.E., Ph.D.**

The objective of the program is to

- Understand vehicle manufacturing organization & vehicle development process.
- Understand vehicle systems and attributes & Learn to set performance specifications for a new vehicle.

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- Understand system/component contribution towards vehicle performance
- Learn to set specifications for system/component design.
- Learn to design components to meet specifications.

LECTURE MEETING - ISO - 3834 - QUALITY REQUIREMENTS OF FUSION WELDING OF WELDED PRODUCTS

Lecture meeting on ISO – 3834 – Quality requirements of fusion welding of welded products was organized by SAEINDIA Southern Section on 28th Feb 2015 at SAEISS office, Guindy. The session was inaugurated by Dr.Muruganandam MC member SAEISS and gave introduction about Speaker **Mr. V. Muralidharan**, Chairman, The Indian Institute of Welding, Chennai Branch.



LECTURE MEETING ON 6 SIGMA AND CATERPILLAR PRODUCTION SYSTEM



Lecture meeting on 6 Sigma and Caterpillar Production System was

organised by SAEISS on 21st March 2015 at Hotel Gowtham Menor, Chennai and the speaker was **Mr. G.Saravanan**, Group Manager, Caterpillar® India Pvt. Ltd, Thiruvallur.

SKIP - STEERING SYSTEM & VEHICLE HANDLING

SAEINDIA SS successfully conducted the 2 days SKIP Program on 23rd & 24th January 2015 on the topic “Steering System & Vehicle Handling” by Shri. S. Radhakrishnan M.Tech (Retired Vice – President (R&D) from Rane) at Sri Krishna College Of Engineering And Technology, Coimbatore. 67 Student Members participated in this program.

Considering the prevailing traffic/road conditions as well as the burgeoning vehicle population in India, driving safety is of paramount importance. This course aims at providing the necessary basic understandings and appreciation of the relevant concepts and technologies to those Managers & Engineers involved in designing and implementing the Chassis Systems, particularly the Steering System, to satisfy the handling requirements, unique to India. In addition, the course will also provide a preview of the future technologies in these areas, to be taken into account, for planning future vehicles & systems. Comfort & fun of driving as other elements for good Handling. To provide a good grounding in the fundamentals of Steering Systems & Vehicle Handling, in addition to enhancing awareness of the various concepts and technologies available as well as the future trends in these areas.

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