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the newsletter of the International Federation of Automotive Engineering Societies

Women engineers:

SAEINDIA promotes opportunities



JSAE case study:

How to increase membership



Rafael Boronat

STA recognises his achievements



Experts discuss autonomous vehicles and safety at FISITA Summit



Above Prof. Dr.-Ing. Klaus Bogenberger, University of the Federal Armed Forces, Munich, speaking on 'Creating highways for autonomous vehicles'.

FISITA's fourth World Automotive Summit returned to Mainz towards the end of 2013 and brought together leaders and key stakeholders from the automotive industry, governments, the legal profession and NGOs to ask: *Can autonomous vehicles make traffic accidents a thing of the past?*

The 2013 FISITA World Automotive Summit took a closer look at the challenges and opportunities presented by the self-driving car.

In addition to questions around the engineering requirements of smart vehicles and smart infrastructure, speakers and delegates discussed at length the wide variety of challenges in terms of legal, regulatory, insurance and human factors.

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FISITA brings experts together to discuss autonomous vehicles and safety

Continued from page 1

“The 1968 Vienna Convention – do we need to re-write it for autonomous driving? We have to put these legal instruments into the context of innovation ... in transport and the impact on society.”

Eva Molnar
Director
United Nations Economic Commission
for Europe



An exceptional panel of world experts led the discussions, helping to form an objective view of the true safety and market potential of these exciting new technologies – especially how (and when) they will gain mainstream acceptance.

Ricky Hudi, Head of Development Electrics/Electronics, AUDI AG spoke about innovation in autonomous driving and AUDI AG's piloted driving concepts. Mr. Hudi told attendees, 'What we are aiming for is increased comfort and convenience, but the most important thing is the increased safety: 84% of accidents are caused by drivers. If the driver is supported by the car and the sensors...it can be a perfect combination of automated, or as we call it piloted, driving'.

Bryant Walker Smith, Resident Fellow Center for Internet and Society, Stanford Law School addressed the issues around who exactly is responsible for an automated vehicle, 'Law, just like technology,

evolves ... We can't simply extrapolate technology for motor vehicles and expect that the rest of the world will stay the same. In fact, everything is changing and tomorrow's vehicles will both confront and shape tomorrow's law.'

Other expert speakers came from the United Nations Economic Commission for Europe (UNECE), Continental Automotive GmbH; Fraunhofer FKIE; University of the Federal Armed Forces, Munich; and Trafikverket Swedish Road Administration with all the speakers participating in a lively question and answer session moderated by Prof. Ulrich Seiffert.

More information:

See videos of the presentations and download speaker slides at:

www.fisita-summit.com/2013/presentations

FISITA President, Dr. Li Jun attends IAESL Silver Jubilee Celebration in Sri Lanka



“I hope that IAESL will continue its cooperation with FISITA and I recognise the commitments made by IAESL to help the world automotive industry together with FISITA, creating efficient, affordable, safe and sustainable automotive transportation.”

Dr. Li Jun
President 2012–2014



The Institute of Automotive Engineers of Sri Lanka (IAESL) recently celebrated their Silver Jubilee and Mr. Neville Kulasekara, President of IAESL invited Dr. Li Jun, FISITA President, Vice Chief Engineer, China FAW and President of R&D Center, China FAW, to join the celebrations in Colombo.

Founded in 1988, IAESL joined FISITA in 1998 and has been closely involved with FISITA activities. During the celebrations at the Galadari Hotel Dr. Li extended his congratulations for the Silver Jubilee Anniversary to IAESL and their members on behalf of FISITA and SAE China, wishing them all continued success for the future.

Dr. Li then introduced Mr. Murli Iyer, Executive Advisor Global Affairs of SAE International, Vice President – Internal & External Relations Committee

for FISITA and Mr. Takao Kubozuka, Executive Director of JSAE and Vice President – Asia for FISITA, saying, ‘The FISITA Internal and External Relations Committee is a window and bridge for small societies to express their requests, their voices, and their say within the FISITA family’.

He once again wished the audience a very happy anniversary and he was confident that IAESL would continue to grow and prosper while making a contribution to strengthen FISITA.

More information:
<http://www.iaesl.lk>

“It is imperative to have the right blend of men and women to help the industry grow. We are glad that companies are realising the value of having diversity in the organisation.”

Shrikant Marathe
Director, ARAI
President, SAEINDIA

More information:
www.saeindia.org

SAEINDIA encourages opportunities for Women Engineers



In June 2013 SAEINDIA held a programme designed to increase opportunities for women in engineering, offering educational industrial training for female student engineers as part of the Student Industry Education (SINE) programme and to reinforce SAEINDIA's strategy: 'Growth through diversity'.

A total of 22 students were selected to take part in an intensive two week programme from 2–14 June 2013, with the involvement of seven leading companies based in Pune, India. The programme also included a one-day training session at ARAI, Pune.

The session at ARAI opened with a welcome address from Dr. Vora, Deputy Director & Head ARAI Academy, Member SAEINDIA Off-Highway Board & Co-ordinator SAEINDIA Western Section. This was followed by lectures introducing best practices, testing and certification, emissions, structural testing and team building.

Shrikant Marathe, Director of ARAI and President, SAEINDIA, said, ‘Working with a diverse group demands changes in mindsets, behaviours and attitudes. We are glad that our theme of “Growth through Diversity” is catching up and companies are realising the value of having diversity in the organisation.’ The SINE programme was supported by ARAI, Cummins, Eaton, Escorts, JCB, John Deere and PTC.



STA recognises the achievements of Rafael Boronat

Rafael Boronat joined STA in 1972 and became a member of the board in 1980. In 1983 he began his first mandate as President of the society, inheriting a difficult financial situation caused by the rapid changes in the Spanish automotive industry at that time.

The 1980s were a hard time for the Spanish automotive industry due to the economy and as a consequence industry support for STA was significantly reduced, posing significant risks to the future of the society. Rafael decided to view the situation as a personal challenge and completely restructured the society, establishing new goals and reinforcing links with its members through personal networking.

During the 1990s STA's activity grew and it began to increase its visibility to industry and Spanish society. This resulted in an increase in members and the organisation grew further. Regular conferences, congresses and other activities were launched during this period and relationships with FISITA and

EAEC were reinforced at the same time. Taking advantage of this new momentum, Rafael promoted the organisation globally by hosting international congresses such as EAEC and FISITA in Spain.

In 2005, after the FISITA Congress, Rafael Boronat assumed the chairmanship for a second time, extended for two terms. This second period as President led STA to organise the EAEC Congress again in 2011, and to be one of the organising societies of the Formula Student Competition. The Formula Student Spain Competition was born in 2010 and has grown from strength to strength.

Due to his dedication and his 25 years of hard work, serving STA with enthusiasm and spirit, Rafael deserves special recognition from all the STA members and those in the FISITA family:

¡Muchas gracias Rafael!

Sociedad de Técnicos de Automoción (STA) was founded in 1947 and is among the oldest members of FISITA. Its history has been shaped by two presidents: Wifredo Ricart, the original founder of STA and Rafael Boronat, who has led STA for 25 years over two different periods, from 1983–2000 and from 2005–2013.

More information:
www.stauto.org



Russian Student Engineers get on the grid



In December 2013, the Association of Automotive Engineers (AAE) in Moscow, together with the Department of Science, Industrial Policy and Entrepreneurship of the Moscow-City Government hosted an international conference: 'Formula Student in Russia: development prospects'.

The event brought together more than 400 participants, including seven Formula Student teams from Russia and international teams from Germany and Estonia. Students received presentations and guidance on a range of technical aspects to do with car development.

Students also benefited from a number of 'how-to' guides on competition preparation from Pat Clarke, a Formula Student Chief Design Judge with competition experience from Austria, Australia,

Germany, UK and the USA; as well as insights and advice from Dr. Ludwig Vollrath and Ulf Steinfurth, the organisers of Formula Student Germany.

The next exciting step will be the organisation of Russia's first Formula Student pre-event, which will take place at Moscow Raceway in August 2014. Organisers expect up to 25 Russian and international teams will compete and the event will help show the development and growth of the Formula Student movement.

More information:
www.fs-russia.com

The end of an era and new challenges ahead



Towards the end of 2013 we received the news that Ian Dickie, FISITA Chief Executive, was leaving FISITA. Since taking on the role in 1996, Mr. Dickie has made significant contributions in all areas of FISITA's activities. Ian, with whom a large number of you will be familiar, became an integral part of FISITA, working tirelessly to ensure the organisation's relevance in the rapidly shifting world of global automotive technology.

Over the 17 years he worked for FISITA Ian pioneered key restructures of the FISITA committees, enabling members to collaborate more easily and effectively. He helped to develop a range of essential resources for all members, such as the online bookstore, technical papers database and established a modern online presence for FISITA.

Ian built new strategic and powerful alliances for the future, such as the communiqué with COP15 and drew up a Memorandum of Understanding with PIARC – the World Roads Association. Under his leadership FISITA became a member of the UNRSC and he regularly spread the message of FISITA at international events all over the world.

The FISITA family of Member Societies and Honorary Committee Members grew steadily under Ian's stewardship, offering members and student members an ever-increasing variety of initiatives and programmes to learn, develop and share knowledge.

Over time and under his guidance the aim Progressions en commun has evolved to embrace world-class international initiatives to share knowledge for the advancement of automotive technology and include programmes which develop the skills and capabilities of the young engineers who are the future of our industry. This is in no small part due to Ian's efforts in developing education projects and offering strategic leadership and guidance to the biennial FISITA Congress organisers.

We at FISITA wish Ian well for the future and know that he will be incredibly missed by his colleagues past and present here in London and around the world.

Czech Republic holds its first Formula Student competition



A total of 24 teams from 22 universities arrived at the first Formula Student event in the Czech Republic in August 2013, representing 10 different countries. More than 550 students unveiled their racing cars in front of industry professionals and set out to prove their performance on the circuit.

More information:
www.fsczech.cz

The first two days belonged to the static disciplines with presentations on engineering, cost and business plans. These were evaluated by representatives from Škoda Motorsport, Škoda Auto, Porsche Engineering Services, Continental, TÜV – SÜD Czech and Telefonica, as well as Mr. Ivan Hodač, President of the European Automobile Association (ACEA).

The weekend came alive on the track, with the dynamic disciplines of acceleration, skid-pan, autocross and finally a 22 km long endurance race. The event was opened by European Parliament Vice President Mr. Oldřich Vlasák, who stressed the importance of skills, employability and close collaboration between university students and Czech companies. Mr. Vlasák highlighted how the competition met these requirements and the professionals in attendance recognised the high commitment of the students, teamwork skills and innovative approaches to the project.

First place was shared between students from Amberg-Weiden University of Applied Sciences and the University of Erlangen-Nuremberg. The best performing Czech university was the CTU CarTech Combustion team from Czech Technical University in Prague, who won the acceleration category and finished in second place in the category of cars with a combustion engine.

A special prize was also awarded at the event: the Innovation In Safety Award from TÜV SÜD Czech. This was presented to the Running Snail Racing Team from University of Amberg-Weiden.

Formula Student Czech Republic was held under the patronage of the Czech Automotive Society.



Get Your Free Copy of the JSAE Year Book 2013

The JSAE Yearbook 2013 contains information covering all aspects of automotive engineering in Japan, including a 2012–2013 overview from an international perspective.

This valuable tool is now available for first time in English.

Download the JSAE 2013 yearbook:
http://www.jsae.or.jp/e07pub/yearbook_e



JSAE Case Study on Increasing Membership

The Society of Automotive Engineers of Japan, Inc. (JSAE) was founded in 1947. JSAE has been developing positive initiatives in Japan as well as overseas through active membership in FISITA (since 1960) and participation in the APAC (Asia Pacific Automotive Engineering Conference).

JSAE organise an Automotive Engineering Exposition, the JSAE Annual Congress, Student Formula Japan, Kid Engineer and publications such as the Japanese-English-Chinese Dictionary and International Journal of Automotive Engineering, amongst many other activities.

However, in 2011–2012 JSAE noticed two things: firstly, a decline in growth ratio of their individual membership and secondly, their corporate membership had hit a ceiling of approximately 500 members. Further investigation suggested that JSAE's membership accounted for only 15% of the automotive engineers in Japan.

Following this discovery, JSAE decided to set a target to double their membership. They founded six new initiatives in their pursuit (listed on the left).

We spoke with Mr. Kubozuka, Executive Director, JSAE who offered an update:

Can you describe some of JSAE's new initiatives and whether they have been successful?

The new initiatives introduced in 2013 were successful and the events will be continued in 2014. Under initiative 1 we organised the New Car Technology Seminar in October 2013. We had projected 200 participants but actually attracted almost 400 participants!

Under initiative 2 we organised a briefing session for the HR representatives of Student Formula and the JSAE Corporate members. In September 2013, we provided the sponsors of the Student Formula Japan competition with exhibition space.

Under initiative 3 we organised the first Female Members Gathering in May 2013 which was well attended and which will continue in 2014. In October, we established a Women's Engineer Committee. As a result, the number of female members rose by 10% (approx.50 members) from the beginning of 2014.

Under initiative 4, we organised the Car Design Contest for children aged 13–18. The event was successful and will take place again this year.

Under initiative 5, we have received good media coverage. The impact has quadrupled in comparison with the previous year.

What initiatives are planned for 2014?

New Initiatives planned for 2014 include the Automotive Engineering Exposition in Nagoya in December 2014, which is a new exposition. Its aim is to narrow the gap of membership service between the Tokyo metropolitan area and other regional areas.

When do you expect to see a significant change in membership?

The growth ratio of membership keeps improving. In 2011 we had over 400 members, in 2012 we had more than 550 members and in 2013 we had almost 750 members. This is a sure sign that our activities are working and, more importantly, are favourably received by our members.

JSAE's six new initiatives

1 A new event that elevates engineers capabilities through engineering exchanges

2 Supporting young engineers & future engineers

3 Promoting the growth of female memberships

4 Promoting new memberships from the area of car-designer, production engineering

5 Raising the profile of JSAE, the brand awareness

6 Questionnaire to JSAE branches & academia to find out needs from all points of view



FISITA's Two-Level Support for Automotive Conferences

'FISITA Patronage' is awarded to international events with a proven track record, high technical quality and global significance.

'Supported by FISITA' status is awarded to newer events which are deemed valuable to the engineering community and have strong future potential.

FISITA helps with the promotion and development of these events by providing assistance in identifying keynote speakers, after-sales of the proceedings through the FISITA Bookstore and giving general advice. These events are also highlighted in FISITA publications and website and details are distributed to FISITA's network of contacts.

Forthcoming events that have been awarded FISITA support

Date	Organiser	Event	Location	Status
8-9 May	ÖVK	35th International Vienna Motor Symposium	Vienna, Austria	Patronage of 
22-24 May	JSAE	EVTec 2014 & APE Japan 2014	Yokohama, Japan	Patronage of 
22-26 September	JSAE	AVEC 2014 The 12th International Symposium on Advanced Vehicle Control	Koganei Campus Tokyo University	Patronage of 
23-25 Oct	SIAR	3rd International Congress - SMAT 2014 Science & Management of Automotive & Transportation Engineering	Craiova, Romania	Supported by 

FISITA's support is restricted to events which are organised, co-organised or supported by a member society.

More information:
including application forms
www.fisita.com/events/patronage

Contact:
k.williams@fisita.com

5 minutes with Natalie Roberts



Name

Natalie Robert

Role

Executive Director, Society of
Automotive Engineers
– Australasia

Location

Australia

When did you first become interested in automotive engineering?

Since I can remember, I was interested in all things mechanical (most likely to the dismay of my parents, as I was very good at pulling things apart but not always so patient to finish putting them back together).

I followed my sister's footsteps and studied Aerospace Engineering, however I was determined to work in the automotive industry and lucky for me I got a job with GM Holden as an engine calibration engineer after graduating and it's been auto ever since.

What ambitions do you have for SAE Australasia?

To see the Society grow its member base and increase the benefits of membership. I want our members to become more connected with each other, have increased opportunities for learning and professional development in a collegiate environment and contribute back to the broader community through imparting their knowledge and passion for the industry.

What is the most important challenge faced by SAE Australasia?

Australia's automotive industry is presently facing extreme hardship, with the closure of major vehicle manufacturing and design centres to occur over the next couple of years.

We need to help our members to transition to industries and transport mobility sectors that are strong and growing, where companies can capitalise on the skills and experience that our talented automotive engineers will bring. Areas such as heavy commercial vehicles, the 4WD aftermarket sector and campers/trailers are great opportunities.

What do you like about working in Australia?

I enjoy Australia's quality of life – we have such a large country with relatively few people and an extensive road network that allows you to easily travel to remote locations. Australia's growing SUV and light commercial vehicle sales are testament to our love of packing up and exploring!

What do you do when you are not working at SAE Australasia?

Planning or working on my next 'big project'. Pulling things apart. Flying or competing in club motorsport events. I also like to relax by working on my small cattle farm, fishing, making charcuterie or keeping up to date with politics.

If you could drive any car in the world, what would it be?

I enjoy driving older vehicles, as to drive them well you need to control smoothly every aspect of the vehicle's operation, which can take some skill (this can also be true of starting them!).

If I could choose any car to take for a spin, it would be the Ferrari 250 GTO – this car has to be one of the most beautiful vehicles ever built, but unfortunately with a price tag to match. Second to this would be my Datsun 260Z rally car, which has been a work in progress for the last five years, but is an achievable goal – come back and ask me in 12 months!



FISITA 2014 WORLD AUTOMOTIVE CONGRESS
2–6 JUNE 2014, MAASTRICHT, THE NETHERLANDS

Intelligent transport to solve
our future mobility, safety
and environmental challenges

Register online
www.fisita2014.com/register



A unified knowledge base laying the foundation for advanced study and research in automotive engineering

Encyclopedia of automotive engineering

The *Encyclopedia of Automotive Engineering* provides for the first time a large, unified knowledge base laying the foundation for advanced study and in-depth research. Through extensive cross-referencing and search functionality it provides a gateway to detailed but scattered information on best industry practice, engendering a better understanding of interrelated concepts and techniques that cut across specialized areas of engineering. Beyond traditional automotive subjects the Encyclopedia addresses green technologies, the shift from mechanics to electronics, and the means to produce safer, more efficient vehicles within varying economic restraints worldwide.

The work comprises nine main parts: (1) Engines: Fundamentals (2) Engines: Design (3) Hybrid and Electric Powertrains (4) Transmission and Driveline (5) Chassis Systems (6) Electrical and Electronic Systems (7) Body Design (8) Materials and Manufacturing (9) Telematics.

- Authoritative coverage of the wide-ranging specialist topics encompassed by automotive engineering
- An accessible point of reference for entry level engineers and students who require an understanding of the fundamentals of technologies outside of their own expertise or training
- Invaluable guidance to more detailed texts and research findings in the technical literature
- Developed in conjunction with FISITA, the umbrella organisation for the national automotive societies in 37 countries around the world and representing more than 185,000 automotive engineers
- Available both as a fully searchable, updating online resource, and in a print edition comprising six volumes and over 4,000 pages



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<http://www.automotive-reference.com/>

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Future Events

LAIA 18th Annual Conference

Latvia Association of Automobile Engineers (LAIA) will organise its 18th Annual Conference 'What can we expect from the car tomorrow?' taking place during the Riga International Motor Show, from 11–13 April 2014.

The conference will include a Student Research Paper Competition where the three best research papers will be presented at the close of the event.

www.laia.lv

JSAE International Conference

Society of Automotive Engineers of Japan, Inc. (JSAE) will hold their international conference on Electric Vehicle technology (EVTeC 2014) addressing "Future Sustainable Society beyond Cars", alongside the Automotive Power Electronics (APE) conference, with APE being jointly organised with SIA, the Société des Ingénieurs de L'Automobile.

EVTeC and APE will take place in Yokohama from 22–24 May, 2014, with the event expected to attract 100 papers and 300 international participants.

The JSAE Spring Congress and Automotive Engineering Exposition will also take place in 2014 from May 21–23 at the same venue.

www.evtec.jp

AVEC'14

The 12th International Symposium on Advanced Vehicle Control (AVEC) will be hosted by the Tokyo University of Agriculture and Technology, from 22–26 September, 2014. Topics range from vehicle dynamics to integrated chassis control systems, autonomous driving, collision avoidance, driver assistance systems, driver modeling, ITS and much more.

www.avec14.com



13–15 May 2014
Lille, France



Register now

www.eurobrake.net/register

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FISITA diary

07–08 April 2014

**Executive Board, Finance Committee,
I+ER Committee & APAC meetings**
Detroit, Michigan, USA

02–06 June

FISITA 2014 World Automotive Congress
Maastricht, the Netherlands

06–07 June 2014

**FISITA 2014
Council, Executive Board, Committees**
Maastricht, The Netherlands



www.fisita.com