FISITA made a little history recently when the association was accepted as an NGO Observer to the COP 15 climate talks in Copenhagen.

Now FISITA has issued a communiqué, on behalf of the world-wide community of automotive engineers, calling for a partnership approach involving industry, academia, governments and consumers to identify and pursue the most effective ways to further reduce CO₂ from road transportation.

FISITA President, Christoph Huss, said ‘the global attention generated by COP-15 is an opportunity for FISITA to speak out on behalf of engineers and perhaps to educate policy-makers on what needs to happen if engineers are to be successful in delivering the low-carbon mobility which the world is now calling for’.

‘Even if the results of the Copenhagen conference have been inconclusive so far regarding the final political settlement between nations, one thing is certain. Tougher targets will be set regarding man-made CO₂ emissions over the coming years and this will result in increasingly severe regulatory and consumer pressure which will surely drive the auto industry to further reduce CO₂ from our products. Our FISITA communiqué is intended to help frame the discussions which will now have to take place in the coming months around energy efficiency, electrification and traffic management’.
FISITA’s Asia Pacific member societies came together for the 15th APAC conference which took place in Hanoi, Vietnam from 25–28 October, organised for the first time by Vietnamese FISITA society, VSAE. More than 300 engineers attended the 2.5 day meeting with more than two thirds of attendees coming from overseas. Almost 200 technical papers were presented.

Speaking during the opening session on Monday, 26 October, FISITA’s Vice President for Asia, Hasiholan Sidabutar, stressed the continuing importance of the biennial APAC gathering:

‘Some of the challenges, in areas like alternative energy and CO₂ reduction, are pushing at the very limits of current scientific and engineering knowledge. We are almost facing a re-invention of the automobile. This is a task which could overwhelm even the brightest individual minds and the strongest companies. But when we come together at a congress like this, we see how much can be achieved when ideas are shared, discussed, debated, tested and improved’.

‘Congresses like APAC play a vital part in bringing us together with colleagues to discuss new ideas, renew friendships and develop fresh perspectives on the projects we are working on back at our companies and universities. They also provide an excellent showcase for the advanced research and development work which is increasingly taking place throughout the Asia Pacific countries.’

He went on to congratulate the President of VSAE and APAC 15 Chairman, Prof. Dr. Banh Tien Long, for organising such a successful first APAC meeting in Vietnam, supported by co-Chairman and Honorary VSAE President, Prof. Long, Dr. Do Huu Hao and VP and General Secretary, Prof. Dr. Du Quoc Thinh.

Other speakers in the opening session included SAE International President and APAC ’14 Chair, Prof. Jim Smith, along with the Presidents and official representatives of JSAE, KSAE, SAE China, SAE India and SAE Australasia.

The conference was well supported by the industry with sponsors including Toyota, Mercedes Benz, Lubrizol Corporation, THACO and SAMCO. Host society VSAE also benefited from support at the highest level of the Vietnamese government, including that of Dr. Tran Doan Tho, Vice Minister of Transport, who said ‘I do really believe that the 15th Asia Pacific Automotive Engineering Conference in Vietnam is an opportunity for home and overseas engineers, scientists and companies in the transportation industry to present their latest technologies, to seek and exchange the latest information as well as to consolidate and open new co-operations.’

A small Student Programme was also held in conjunction with the conference, with 9 students attending from 4 countries across Asia (Thailand 4, Korea 2, Japan 2, China 1).

SAE India have been confirmed as the host society for APAC 16 which will be held in Chennai from 9–16 October 2011.
When did you decide you wanted to be an automotive engineer and what first attracted you the industry?

Actually I wanted to study math at the very beginning when I entered into Jilin University in the late 1970s. At that time China was just entering into a new era of reform, and a large number of engineers were needed urgently, so I transferred to the engineering department of Jilin University. During my internship at FAW, the first automobile works China ever established, I was highly impressed by its corporate culture, which advocates keeping ahead and being innovative.

From then on, I believed I belonged to the automotive industry, where engineers play a very important role. Shortly after I got my Master of Engineering, I continued my study through a PhD under the supervision of FAW chief engineer, Mr. Xiaokuan Lu, who studied Aerodynamics at the University of Michigan 1947–1950.

Consequently I joined the FAW R&D CENTER without any hesitation upon my graduation; I don’t think I would have had the opportunity to get to know so many elites from the automotive industry had I chosen a different job.

What was the subject of your PhD and what is your main technical interest today?

My PhD subject was The Impact Study of Inlet Air Flow on Combustion Process of DI Diesel Engine at Jilin University. In fact, it was the first PhD to use CFD to simulate airflow in the cylinder, and use hotwire anemometer to make measurements in China.

In order to maintain the sustainable development of FAW, my technical interest today mainly focuses on design and development of automotive engines, and automotive technologies regarding energy saving and environmental protection, electronics as well as hybrid. I have been involved in research of engine performance and emission and electronics, design and development of powertrain and electronics for 10 years.

In 2000, I was appointed chief engineer of FAW R&D CENTER, responsible for FAW hybrid project, and in 2005, I became the president of FAW R&D CENTER, in charge of FAW product development and innovation.

Can you describe an average day in your job at FAW?

As the head of FAW R&D CENTER, I’m constantly occupied with activities. Normally after listening to the short reports and questions from various departments, I start my work by chairing management meetings, such as management system, standard system or R&D planning and capacity management, etc. Sometimes I also attend the design review meetings, according to the week’s agenda coordinated with my secretary and project managers. I check major projects regarding vehicle energy savings and environmental protection, automotive electronics and hybrid vehicles, to make sure that all the important development work is being accomplished on schedule, and all the decisions regarding technical issues raised by engineers are made. I always keep an eye on the future automotive technologies by reading the SAE and FISITA papers in the evening. Usually, I don’t drive home until I get 2 or 3 calls from my wife at 7–8 p.m. I also work on Saturday.

In addition, I participate in FAW top management meetings and make suggestion for decisions of technical and product development issues. Every two months I have to travel abroad, taking part in meetings for project review with contractors or suppliers.

China’s automotive industry has grown spectacularly over the past decade. What in your opinion have been major factors in that growth?

Yes, China’s automotive industry has grown very fast over the past decade. I think the major factors are, first of all, the fact that the Chinese government created a favourable environment for automotive industry, making it a pillar industry of the national economy, and encouraging establishment of joint ventures.
Meet FISITA’s future President – Dr Li Jun, continued

Secondly, vehicle population in China was only 38 units per thousand people in 2008, and there is a considerable gap compared with the average world level, so the huge auto consumption potential provides unparalleled market advantage for China’s automotive industry growth.

Thirdly, local Chinese brands have grown up fast in recent 5 years, and Chinese brands mainly meet the demands for low end market, including commercial vehicle and economic cars.

The potential for future growth in China is enormous. What will China’s engineers and politicians do to minimise the carbon impact of this huge growth in vehicle ownership?

1. The Chinese government has just announced that China will reduce CO₂ emission per unit of GDP in 2020 by 40–45 percent compared with the level of 2005 – just before the Climate Change Summit in Copenhagen. The phase III fuel consumption legislation for passenger car is now under discussion – which will lead to 20% fuel consumption reduction from current level by 2012.
2. China is the second largest auto market in the world. On one hand, this benefits many foreign auto makers who establish joint ventures in China. On the other hand, they have to bring in new technologies to reduce CO₂ emission in China.
3. More than 60% percent of Chinese families buy small cars. The Chinese government encourages consumers to purchase small cars with 1.6L or smaller engines by issuing policies of charging only 5% purchase tax for this segment.
4. Most buses in metropolitan China are equipped with diesel or CNG engines.
5. Today, Chinese engineers have started working on the design and development of new generation engines and transmissions for passenger cars with state of the art technologies, such as engine downsizing, VVT, GDI, TCI, 7speed DCT gearbox, lightweight material, etc, to reduce CO₂ emission. China’s automotive companies also take much account of hybrids, EV technologies and their applications.

In 2012 SAE China will host the FISITA World Automotive Congress in Beijing. What is your vision for the Congress?

I believe the 2012 FISITA Congress will be the biggest event in FISITA’s history, and will attract more than 2000 delegates and 100 companies for the exhibition from around the globe. Many hot topics, such as new CO₂ emission standards in EU, USA and China, renewable energy and vehicle electrification, will be on the agenda of the Congress. This Congress will also be the opportunity for engineers, professors and young students around the world to exchange ideas of advanced technologies and innovations, including technologies regarding product, material and processing. This Congress will be the summit between the top 10 leaders of the R&D centre, from Chinese auto makers and their counterparts across the globe.

What do you believe is the greatest challenge facing the global automotive industry today?

After more than 100 years of development of the automotive industry around the world, today we are facing the greatest challenges we have ever had. Regarding on how the automotive industry can go forward in a sustainable manner, there are 3 key factors or challenges on the way.

First of all, the direction we choose for the future development roadmap, is based on the traditional vehicle technology, we are on the way to the HEV now, while EV will be the next era for automotive industry and finally we will come to the era of FCV.

Secondly, there are the challenges to continuously optimize traditional vehicles by updating technology, with GDI, TC, DCT … CNG, LNG and other alternative fuels.

Thirdly, there are the challenges for sustainable development; we need technology diversification, technology innovation and counterpoise strategy for global automotive industry, and one single solution may not work in the long run.

Given the massive changes underway in today’s automotive business, what do you think FISITA’s future role should be?

As the automotive industry faces these great challenges, coupled with economy recession around globe, FISITA’s future role can be very important. FISITA may point out the future direction of automotive engineering world-wide, provide information within automotive organisations, and outline future roadmaps of automotive industry evolution, in terms of engineering, advanced development and future technology research in the long run. Being a bridge, FISITA may have its influences on both the automotive industry and governments, especially in developing nations, helping them cope with challenges, such as innovation and sustainable development.

What do you personally want to achieve during your Presidency?

All the FISITA presidents have the common responsibility to lead FISITA and its member societies to fulfill FISITA’s mission. For me, enhancing the exchange and cooperation between China and the world will be another part of my job, which will be beneficial for both China and the world automotive industry.

I will also improve FISITA financial situation by recruiting more FISITA members, including the Honorary Committee. As the automotive industry in China and other developing countries will still be on the rise for the next decade, more and more auto makers will be looking for a platform, like FISITA, where they can share knowledge and advanced automotive technologies for their long term survival.

What do you do to relax away from work?

I enjoy being with my family after work, chatting with my wife and son, and these are the precious moments that I have every week. Sometimes I also go shopping with my wife on Sunday, after an exhausted week.
IAESTE in Asia

SIA’s Philippe Marcangeli reports from the first Asian IAESTE conference, held in China in November 2009.

Nowadays, it is considered necessary for students to have initial technical experience in the automotive industry before going on the recruitment market. For 60 years now, IAESTE has established itself around the world to offer internships and industrial placements with the aim of exchanging technical work experience between students and companies of different nations.

In 2008 the global exchange consisted of 4579 trainees for the 84 full national members of IAESTE and cooperating institutions around the world. Though it began mainly in Europe, the IAESTE network now covers most of the world. Each national society brings its own capabilities, with IAESTE taking care to welcome everybody.

The particular aims of IAESTE are to offer employers well qualified trainees, in addition to being a source of cultural enrichment for students and their host communities.

Understanding since 2005. The aim is to advertise activities to students and young engineers through the IAESTE network. Like FISITA, IAESTE is an international network and there has been a conscious effort on the part of both associations to grow their activities in certain developing countries.

Asian exchanges are growing with new countries joining the institution, so it was a deliberate choice by IAESTE to hold a special meeting in order to welcome Asian members and share practices. During 2 days, 13–14 November, the first Asian IAESTE Forum was organised by IAESTE China with the aim of establishing new training, and to discuss how to increase cooperation between Asian countries. The forum had 35 participants from 17 countries covering most of the region.

The meeting was a success and it is hoped that the Asian Forum will become an annual event, in which each Asian country can put forward its activities. AIF should be also the place to discuss how to increase communication and collaboration between countries in order to make IAESTE exchanges easier and more rewarding for students and companies throughout the region.

Further information
www.iaeste-china.org

SAE International forms new committee to create vehicle battery standards

To address this growing technology and to help standardise development, SAE International is creating a new Vehicle Battery Standards Committee which will serve as a centre for standardisation. ‘We, along with the Alliance of Automobile Manufacturers and the Association of International Automobile Manufacturers (AIAM), recognise the importance that batteries and battery technology play in the design and development of new vehicles. SAE International has long been at the forefront of standards development and we feel that this committee will fill a crucial need in the development of this technology,’ said David L. Schutt, PhD, Chief Executive Officer, SAE International.

The new SAE Vehicle Battery Standards Committee will initially focus on standardising battery performance and safety and will assure harmonisation with other standard development in the U.S. and around the world.

The new committee will report to the SAE Motor Vehicle Council, which is responsible for development of all passenger car, light duty truck and van standards within SAE International.

The continued development of new and advanced battery technologies will play a critical role as vehicle manufacturers increase the availability of hybrid-electric vehicles, move toward the implementation of plug-in hybrid-electric and battery-exclusive vehicles, and continue research into other variations of electric-related vehicle propulsion systems.
TSAE are offering an exciting two-week student programme, based in exotic Thailand. The new programme gives international students the chance to share and exchange technical knowledge while experiencing a culture different to their own. As well as meeting fellow engineering students from around the world, the lucky participants will also gain insights into one of the most up-and-coming automotive producing nations in Asia.

The programme begins with seminars addressing a topical technical issue, followed by discussion on individual project research. There will also be seminars designed to allow students to discuss their own systems of education and share methods of learning.

Also included is an exclusive programme of technical visits encompassing automotive manufacturers, universities and institutes of technology. Needless to say, these will be combined with many exciting cultural visits throughout the beautiful country of Thailand, including museums and trips to the fascinating Ancient Cities.

TSAE also plan an ‘Ideas Contest’, where students will be asked to submit an innovative ‘idea’ for future technology required in the automotive sector worldwide. At the end of the programme, students will be asked to submit a report to TSAE and FISITA, describing what they were able to gain from the experience.

This is an opportunity not to be missed. TSAE offers full accommodation (student hostel) with 3 meals a day, as well as all transportation for the technical and cultural visits.

The programme is available to all undergraduate and post-graduate student members of FISITA, under 30 years of age, and there will be the opportunity for 6 students to participate in 2010. The programme is set to run in one of the following two periods in 2010: end of May – beginning of June, or end of October – beginning of November.

Students are required to pay for their own return air fair to Thailand.

For more information please contact Prof. Saengbangpla: phulporn@yahoo.com

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### Proposed schedule

<table>
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<th>Day/s</th>
<th>Activity</th>
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| 1     | Morning: Introduction  
       Afternoon: Get to know each other |
| 2     | Presentation of subject study  
       Education System  
       Project and Research Discussion |
| 3     | Visit University (1) |
| 4     | Visit University (2) |
| 5     | Morning: Vocational College  
       Afternoon: Technical Institute |
| 6/7   | Temples Tour |
| 8     | Technical Visit I: Auto Industry |
| 9     | Technical Visit II: Motorcycle Industry |
| 10    | Technical Visit III: Parts Industry |
| 11    | MTEC / TAI / TG (Automotive Clusters) |
| 12    | Idea Contest (Conception) for Future Technology |
| 13/14 | Visit Museum/Ancient City |

Activities are all day unless shown otherwise.
My six months at FISITA – Amelie Gong

After spending six months working with FISITA HQ in London, Amelie Gong, Vice-Director of Events, SAE-China, talks about her experience in the run up to her organisation of the FISITA 2012 Congress in China.

My six month experience with FISITA has been very beneficial in many aspects. First, of course, is the Congress. Working with FISITA on the coming 2010 Congress was really helpful preparation for the 2012 Congress in China which I will help organise as I became familiar with all the initial processes they have to go through. Also working in the FISITA headquarters, it was much easier having access to all the documents and data from previous congresses, which was very useful for my own preparation.

Secondly, it’s very beneficial for both FISITA and SAE-China to know each other better. Establishing a personal relationship allows for better communication between the two societies, and this will reflect in the work we are able to do together.

Thirdly, it was very interesting to work with FISITA staff, who have become my friends and will continue to be in the future. All of them are lovely people, and we got along really well. Working with them as friends will be much better than just colleagues.

Fourthly, I’ve improved my English a lot, which is very important for me in organising the 2012 Congress, even if I couldn’t always understand their chatting in the FISITA office! By the way, London is a great city. I love the museums, the parks, the musicals, and the weather and food as well! And I really miss my landlords, Emer’s (FISITA’s Education Officer) parents, who made me feel at home in London. I hope I can go to London again one day.

FISITA 2010 World Automotive Congress Programme

Hungarian society, GTE and FISITA have published the Preliminary Programme for next year’s World Automotive Congress in Budapest.

The congress, which takes place from 30 May to 4 June, features 500 technical and plenary presentations by the world’s leading engineers, scientists and executives, plus a fantastic programme of technical visits and social events.

To see full details visit: www.fisita2010.com

For a printed copy contact: congress@fisita.com

KSAE announces 2010 President

Korean society, KSAE, have a new President for 2010, Dr. Ki-Joon Yu. Elected in the general meeting for 2009, held in Songdo Conventia on the 24 November, Dr. Yu is currently a Vice-President of the society and President of GM Daewoo Auto and Technology Institute.

Dr. Yu graduated from Seoul National University, where he also gained his masters, before moving to Massachusetts Institute of Technology to study for a doctoral degree in Material Engineering. Since he joined the research institute of Daewoo Motors in 1986, Dr. Yu has worked with the Automotive R&D, Production Technologies and Product Development departments.

The society’s Vice-Presidents for 2010 were also elected:

Sim-Soo Park
Professor of Korea University

Kuk- Yeal Lee
Executive Director of GM Daewoo Auto and Technology

Kwang Min Chun
Professor of Yonsei University

Un-Koo Lee
Vice President of Hyundai Motors

Moon-Sik Han
Professor of Keimyung University

Byoung-Soo Kim
Director of Korea Automotive Technology Institute

Myung-Hwan Bae
Professor of Gyeongsang National University

Dr. Ki-Joon Yu, KSAE’s new President for 2010.
When did you first become interested in automotive engineering?
I became particularly interested in automotive engineering in 1983 when I started my Ph.D. study at M.I.T. (Massachusetts Institute of Technology).

I was looking for the most challenging area and the internal combustion engine seemed a complicated and interesting field. My thesis advisor Prof. John B. Heywood helped me understand the fundamental phenomena in engines, and to pursue my career in engines and the emission reduction area.

What ambitions do you have for KSAE?
My ambition for KSAE as a current vice-president is to make its activity in international affairs more active. KSAE looks to make closer relations with other organisations like FISITA and SAE-International as well as other APAC societies, and to encourage Korean automotive engineers to take part in international conferences and ISO activities more actively.

What is the most important challenge faced by KSAE?
KSAE members are increasing and it needs to provide better services to reflect this growth. KSAE will co-work with other societies to develop better programs, including international conferences and special education.

What do you like about living in Korea?
Korea is dynamic. It changes so fast. Engineers are close and work hard until they are satisfied. We have many opportunities to discuss important topics, such as what will be the future of motor vehicles. Sharing information is very easy and common in Korea.

What do you do when you are not working at KSAE?
I read books in a wide area of subjects, such as history, philosophy, fiction as well as science and technology. Recently my son gave me a book The Pillars of the Earth to read because it was almost 1000 pages long and would take some time to finish.

I also exercise, practicing Korean traditional stretching in the morning which is similar to Yoga. I recommend stretching for everybody who is reading this article.

If you could drive any car in the world, what would it be?
I would drive a car which emits 50g/km CO₂ which is still safe and fun to drive.

All geared up for beer!
VDI hold their International Conference on Gears in Munich, October 2010

VDI will host its fourth International Conference on Gears – ‘Europe invites the world’ – from 4–6 October 2010 in Garching, near Munich, Germany.

Supported by national and international associations, the conference will be a broad platform for equipment manufacturers, producers and researchers of gears and transmission systems to present problems and new solutions as well as their latest research results. The conference will comprise of keynote addresses and presentations in a series of plenary and parallel sessions.

The conference also provides an opportunity to visit Munich, one of Germany’s most popular travel destinations, and home to the famous Oktoberfest which takes place from 18 September to 3 October, so there’s no excuse not to enjoy a pre-exhibition Mass or two!

More information:
www.vdi-gears.eu
Tell us about your car
She is a red Messerschmitt KR 201. After World War II a broad range of microcars were designed in Germany to fulfil the need for transportation. Built at, and named after, the Messerschmitt airplane fighters works at Augsburg, Fritz Fend designed a very simple lightweight vehicle with a common 2 stroke engine for the market niche between motorcycle and cars. This particular car is the first ever in my possession.

Where did you find her?
In 1966 – I was 16 years old at that time, with 2 more years to go before my drivers licence – our next door neighbour was selling his Messerschmitt. Even if I have heard him cursing the car now and then if she won’t start in the morning – the price seems ok for a schoolboy: 100 DM, an equivalent of 15 Pounds in those days. The argument ‘It’s a three seater, so we all can go and I will do the maintenance’ convinced my elder sister and brother to support this project at the family table.

By the way, for the next 2 years I was still living in my parents house and the Messerschmitt occupied my father’s garage, needing quite a lot of attention.

Is she rare?
Yes indeed. Only 250 cars still registered in Germany and almost the same amount in the UK where 3 wheelers had a long tradition due to tax reasons.

What do you love most about it?
Driving a Messerschmitt is pure fun. As you may know, she has no wheel to steer with, but controls shaped like an aircraft handlebar. If you get used to the fact that just slight correction will produce great impact to your direction, cornering is a really fantastic experience.

What annoys you most about her?
Not annoying but you have to get used to it: There is no reverse gear since the Sachs 200cc 2stroke engine was designed for motorcycle. Clever engineers found a simple solution: engaging a dashboard switch, you operate a reverse cranking of the Dynastarter and change simultaneously the ignition timing – this will give you 4 speeds in reverse, very unique, I haven’t seen this on another car.

It seems that your Messerschmitt is an ideal city car
Yes indeed she is. The 10 Horsepower engine shows enough performance, the consumption of 3–4 liters save you some money. Nevertheless the Messerschmitt is also good for touring (if you avoid the Autobahn). I once did a long trip through France, Spain and Italy with no major breakdowns. During this trip I encountered a funny situation: while driving around La Grande Motte in southern France, I was overtaken by a Lancia Stratos in full flight and then by a second one. I followed the direction of those guys and then … 500 yards ahead was the finish line of the Tour de France de Automobile. I passed it 3rd and stirred up some confusion amongst the officials.
France

SIA’s international conference The Spark Ignition Engine of the Future: facing the CO2 and Electrification Challenges, organised in partnership with the University of Karlsruhe on 2 December was a big success for the French society.

The 180 attendees included representatives from OEMs and suppliers from France, Germany, the UK, Japan and Korea, as well as academics and leaders of research centres.

Australia

Monash University won the FISITA Award for Engineering Excellence at this year’s Formula SAE Australasia which was held from Thursday 10th December to Sunday 13th December at Victoria University Werribee Campus, near Melbourne.

The award was presented by Prof. Harry Watson, on behalf of FISITA.

Korea

KSAE held its 2009 Annual Conference and Exhibition on 24–26 November in Songdo (Incheon city) with 1,500 automotive engineers in attendance.

572 papers relating to the recent trends of automotive engineering were presented and 33 companies participated in the technology exhibition. 6 special lectures were given and 2 workshops were held: the Korea-Japan Engine Joint Workshop and the Standardisation Workshop.