



# insidetrack

the newsletter of the International Federation of Automotive Engineering Societies



## The big questions

get tackled in Budapest



## NHTSA's Strickland

to address 2010 World Automotive Summit



## The FISITA Medal

We honour three automotive pioneers

# Ted Robertson is the new FISITA President



Robertson spent 35 years at General Motors, beginning in 1968 as an Experimental Engineer for GM of Canada.

**The closing Ceremony of the FISITA 2010 Congress in Budapest saw the handover of the FISITA Presidency to Mr J.E. (Ted) Robertson of Magna International.**

Mr Robertson will serve as the 27th President of FISITA until the close of the next congress in 2012.

Mr. Robertson is Chief Technical Officer, Executive Vice President of New Product Creation and President E-Car Systems North America for Magna International Inc. He is a former President as well as a Fellow of SAE International.

Prior to joining Magna Robertson spent 35 years at General Motors, beginning in 1968 as an Experimental Engineer for GM of Canada. Throughout his GM career he held various senior executive positions including Staff Engineer for Buick

Experimental Manufacturing and Buick Styling & Body Design, Director of Engineering and Forward Planning GM Canada, Chief Engineer for the Camaro and Firebird, Vehicle Line Executive for Mid-Size Trucks and Chief Engineer for Small and Mid-Size Trucks.

FISITA Chief Executive Ian Dickie said 'In Ted Robertson, FISITA is very fortunate to have a President who not only has the vision to take FISITA forward, but who also has a very heartfelt commitment to serving his fellow engineers, and to tackling the issues of sustainable mobility'.



## No more 'business as usual'

**FISITA 2010 World Congress  
tackles the big questions in Budapest**

**FISITA**  
**2010**  
**World Automotive Congress**  
30 May – 4 June, Budapest, Hungary

**The FISITA 2010 World Automotive Congress took place in Budapest, Hungary from 29 May–4 June under the banner 'Automobiles and Sustainability'. An international audience of more than 800 engineers and executives gathered to hear presentations from industry and public policy leaders including Wolfgang Hatz of Volkswagen Group; Eva Molnar, Director of the United Nations Economic Commission for Europe (UNCE) and Josef Palinkas, President of the Hungarian Academy of Sciences.**

Opening FISITA's 33rd biennial congress, FISITA President Christoph Huss set out the challenges facing the automotive industry, and inspired the world's engineers to come together to solve them. He told a packed audience during the opening session, 'Many people are talking about a return to "business as usual" in the automotive industry. I don't believe this will happen'.

'Yes, credit is beginning to flow again in most markets, and yes the customers are starting to come back into the showrooms. But our industry will emerge from the crisis changed forever'.

Huss went on to explain that with the world's population predicted to exceed 9 billion by the year 2050, as well as hundreds of millions expected to move to megacities and an estimated 500 million new households joining the \$5,000 income band, demographic change will be the key driver of technology in future automobiles.

'With this growth and improvement in living standards comes increasing demand for Mobility. Mobility is fundamental to life. It underpins every modern, prosperous and growing society'.

'According to IEA projections, we will need about 40% more energy in 2030 than we consume today.

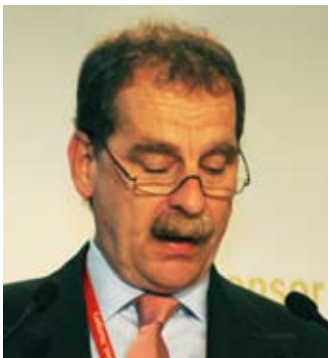
And, if current trends continue, we will double today's demand by the middle of the century. At the same time, all the major powers have governments in office with a strong commitment to tackle climate change. This is to say nothing of the 1.2 million people who lose their lives in traffic accidents every year, a number which could rise further along with increasing motorisation in the developing markets'.

'So however we look at it, business as usual is no longer an option'.

The Congress was hosted by Hungarian FISITA Member Society, GTE and sponsored by Audi, BMW Group, General Motors, Siemens, Suzuki and ITD Hungary. The programme featured more than 400 technical presentations and debates on the technologies which are crucial to making the automobile safer and more environmentally sustainable. These include electric vehicles, alternative fuels, advanced driver assistance systems and 'Connected Car' technologies, which offer the potential to save fuel, cut CO<sub>2</sub> and prevent accidents by utilising vehicle-to-vehicle and vehicle-to-infrastructure communications. In addition, there was a technology exhibition, Gala Dinner and student programme.

**Continued on page 3**

No more 'business as usual' continued from page 2



Christoph Huss, FISITA President



Wolfgang Hatz, Volkswagen Group



Eva Molnar, UNECE



### FISITA 2010 Outstanding Paper Awards

**Mr. Gary Waite**

Ricardo UK Ltd, United Kingdom

*Investigation into Application of Low or Non-integrated Regenerative Braking Systems for Small Passenger Cars*

**Dr. Nobuaki Takubo**

National Research Institute of Police Science/  
Third Traffic Science Section, Japan

*Research into Event Data Recorder Characteristics In Standardized Crash Tests and Real World Accident Reconstruction Tests*

**Dipl.-Ing. Johann Willberger, Dr. Mario Hirz**

Graz University of Technology, Austria

*Energy Efficient Operation of In-Wheel Motors for 4 Wheel Driven Passenger Cars*

**Dr. Norbert Grün, Andreas Schönberger**

BMW Group, Germany

**Dr. Martin Schulz**

Science+Computing AG, Germany

*From Soiling to Stone Chipping - Simulation of Particle Trajectories and Impact in Time Averaged and Transient Flow Fields around Vehicles*

**Mr. Marco Gubitosa, Mr. Takatoshi Tsukano,**

**Mr. Stijn Donders**

LMS International, Belgium

*Development of a Parameters Estimation Scheme for Concept and Real-Time Simulations of Vehicle System Dynamics*

**Mr. Gergely Bóka**

Budapest University of Technology and Economics, Department of Vehicle Parts and Drives, Hungary

**Mr. Balázs Trencsényi, Dr. Huba Németh**

Budapest University of Technology and Economics, Department of Automobiles, Hungary

*Look-up Based Synchronizer Logic for the Effective Actuation of the Countershaft Brake in a Heavy Duty AMT with Face Dog Clutch*

**Dr. Sergei Kharytonchyk, Mr. Mikhail Vysotski,**

**Mr. Andrei Kalesnikov, Mr. Sergey Kochetov,**

**Mr. Sergey Susha**

Joint Machine Engineering Institute, Belarus

*Multibody Simulation of Curvelinear Dynamics while Engineering Superlong Highway Multilink Trucks*

**Mr. Dennis Backofen**

Otto-von-Guericke University, Institute of Mobile Systems,  
Chair of Reciprocating Machines, Germany

*Spray Characterization of Alternative Diesel Fuels*

**Manuel Junoy Memorial Prize**

outstanding paper by an author under 35

**M.Sc. Thomas Ganslmeier, Dipl. Ing. (FH) Mirko Nentwig**

AUDI AG, Germany

**Dipl. Inf. Kilian von Neumann-Cosel, Dipl. Ing. Erwin Roth**

Technische Universität München, Germany

*Vehicle Environment Simulation using Realistic Road Networks for Predictive Driver Assistance Systems*

The Congress Proceedings are available for purchase from FISITA's online bookstore:

[www.fisita.com/bookstore](http://www.fisita.com/bookstore)

Keynote presentations from the various executive sessions may be downloaded free of charge from

[www.fisita2010.com](http://www.fisita2010.com)



# FISITA honours three automotive pioneers with FISITA Medals

The FISITA Medal is the highest honour which FISITA can bestow and it recognises distinguished achievement in the automotive industry. On 2 June, during the FISITA 2010 Gala Dinner held at the Museum of Fine Arts in Heroes' Square, Budapest, FISITA recognised some heroes of its own, with the presentation of the prestigious FISITA Medal to three eminent recipients: Prof. Dr.-Ing. Milan Apetaur, Mr. Hiroshi Okuda and Prof. Harry Watson.



Presenting the medals, FISITA President, Christoph Huss said 'We have not made this award for a number of years, but this evening we will present the FISITA Medal to three very worthy recipients. They are each very different in terms of their backgrounds and what they have done in their long careers, but each has made a truly outstanding contribution to automotive engineering and that is what we are honouring here this evening'.

## Prof. Dr.-Ing. Milan Apetaur, Czech Republic

Prof. Dr.-Ing. Milan Apetaur started his career in the automotive industry in 1952 when he joined Praha Kbely – a factory making automotive accessories in Prague – before moving to the newly founded Automotive Industry Research Institute.

He went on to become a leading designer of vehicles at Tatra Koprivnice, one of the oldest truck and car producers in the world. After thirty years in industry he moved to CVUT, the Czech Technical University, as Professor and leader of the vehicle department. Since retiring at the age of 65, he carried on his work in the educational field at the Jan Evangelista Purkyně University in Ústí nad Labem.

Besides his distinguished career in industry and academia, Prof. Apetaur has also made a huge contribution to the engineering profession in his native Czech Republic. In 1965 he was a cofounder of the Czech and Slovak scientific-technical society – now the Czech FISITA Member Society, CAS.

## Mr. Hiroshi Okuda, Japan

Hiroshi Okuda is a former President and Chairman of Toyota Motor Corporation. Based on his vision of 'Harmonious Growth', Mr. Okuda furthered Toyota's localisation and internationalisation in harmony with the environment, world economy, industry and local communities.

Mr. Okuda achieved the commercialisation of the Prius, the first mass-produced hybrid electric vehicle. This bold move set a new standard for the environmental performance of passenger cars in the 21st century. It has also had a profound effect on automotive engineering, helping to accelerate the electrification of automobiles on a worldwide scale, as seen in the recent developments of hybrids, plug-in hybrids and battery electric vehicles by

manufacturers around the world. Mr. Okuda championed excellence in engineering. He inspired Toyota's engineers to push themselves further by directing the company's active participation in motor sports, especially in Formula One. He also contributed much to the international growth and cooperation of the wider automotive industry through his Chairman of JAMA – the Japan Automotive Manufacturers Association.

## Prof. Harry Watson, Australia

As a Professor at the University of Melbourne, Prof. Harry Watson's vision and research have led to some outstanding contributions to the development of automotive engineering. His work has focussed on the chemistry and physics of internal combustion engine processes.

Practical experience in building petrol and gas turbine engines led to a PhD on reaction kinetic rate constants for hydrogen combustion in engines and thus an understanding, for the first time, of the role of chemistry in the HCCI engine process. This led to lifelong work developing computer models for engine efficiency and emissions, as well as building some world leading natural gas and hydrogen engines. Taking a holistic approach to engineering problems, Prof. Watson identified energy and emissions benefits from changing car driving patterns and his methods have been used by the US EPA to revise their testing.

His many consultancies range from Formula 1 and Le Mans racing car engine and F1 body design to forecasting the benefits from more stringent Australian Design Rule exhaust emission standards and from lower fuel consumption targets for the Australian Light Duty vehicle Fleet.

*Congratulations to all three 2010 FISITA Medal winners!*



The 2010 FISITA Medal winners, top to bottom Prof. Dr.-Ing. Milan Apetaur, Mr. Hiroshi Okuda, and Prof. Harry Watson

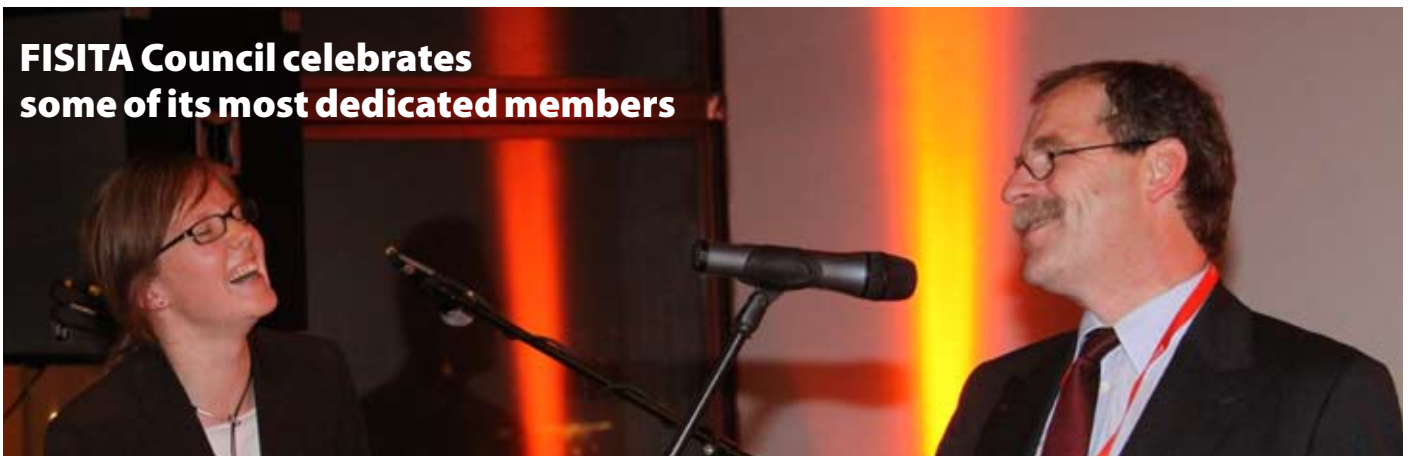
## 2011 FISITA Medal nominations

**FISITA's Medal Committee is currently accepting nominations for the 2011 FISITA Medal.**

If you would like to nominate an outstanding automotive leader to receive this award, please contact:

**Kelly Williams**  
k.williams@fisita.com

## FISITA Council celebrates some of its most dedicated members



The FISITA Council Dinner in Budapest on 3 June saw the presentation of the first FISITA Awards for Outstanding Service. The awards, established by the Internal & External Relations Committee in 2009, recognise individuals who have given exemplary service and/or leadership to FISITA.

Individuals may be nominated by any member of a FISITA Member Society and can be for a long-standing contribution, or a single, exceptional achievement. The awards, consisting of a handmade silver lapel pin and framed certificate signed by both the FISITA President & Chief Executive on behalf of Council, were presented by 2008–10 President, Christoph Huss, and 2010–12 President, Ted Robertson.

Dan Hancock, Martin Rowell and Jacques Lacambre were unable to attend the dinner and arrangements will be made to present their awards at a future occasion.

*Congratulations to all the 2010 Award Winners.*

### 2011 nominations

#### Nominate someone to receive an Outstanding Service Award

For more information and a nomination form contact: **Kelly Williams** on +44 (0) 20 2996630 or k.williams@fisita.com

Deadline for nominations: 1 February 2011



Above Daniela Hein and Christoph Huss

Top left Christoph Huss and Gunter Hohl

Top right Matti Juhala and Ted Robertson

Bottom left András Voith and Ted Robertson

Bottom right Ted Robertson presents a gift to outgoing President Christoph Huss

### 2010 Outstanding Service Award winners

#### Dipl.-Ing. Detlef Frank VDI-FVT Germany

For being the driving force behind bringing the FISITA Congress back to Germany in 2008 and a key member of the organising committee of one of the most successful events in FISITA's history. Detlef Frank has also been among the most active members of the FISITA Technical Committee and helped to create the World Automotive Summit.

#### Daniel M. Hancock SAE International

For almost two decades of distinguished service to FISITA, including a term as President (2004-06) and chairmanship of the Finance and Technical Committees. Dan Hancock is recognised as one of FISITA's most popular and effective leaders, steering the organisation towards greater professionalism and building links at the highest levels of the industry.

#### Dr.-Ing. Daniela Hein (née Senftleben) VDI-FVT Germany

For hard work and great organisational skills as Project Leader for the highly successful FISITA 2008 World Automotive Congress in Munich. Daniela Hein helped to introduce many new bright ideas and put them into practice for the congress.

#### Brigadier ret. Prof. Günter Hohl ÖVK

For serving as FISITA VP Europe and President of EAEC. Prof. Günter Hohl has done more than anyone to forge a sense of common purpose among FISITA's European societies to encourage and support the development of new automotive societies in Europe and to take the FISITA message to the furthest corners of the continent.

#### Prof. Matti Juhala SATL

For dedicated and effective service to FISITA as a member of the Executive Board for more than a decade – firstly as Congress Chairman for FISITA 2002 in Helsinki, then as Vice President – Education. Matti Juhala has ensured that the needs of students and educators remain high on FISITA's agenda.

#### Jacques Lacambre SIA

For serving FISITA for five years as Delegate General and Treasurer, and since 2008, as Vice President Finance and Chairman of the Finance Committee. Jacques Lacambre provided the FISITA board with his wisdom and insight, helping the association to navigate and even to flourish in tough economic times.

#### J. Martin Rowell IMechE

For serving FISITA enthusiastically for more than 25 years, including more than 10 years on the Executive Board. Martin Rowell has helped to shape FISITA's growth, especially that of the Congress. He foresaw the 'connected car' and is responsible for the strong and highly valuable connections FISITA now enjoys with the road engineering and ITS communities.

#### Dr. András Voith GTE

For organising a successful FISITA Congress in Budapest in 2010, despite the financial crisis. András Voith's commitment to this challenge never wavered and he overcame numerous obstacles and setbacks to inspire his team within GTE and deliver a world-class quality Congress of which FISITA could be proud.

## 2010 FISITA World Automotive Summit to tackle traffic safety



David Strickland  
NHTSA Administrator

**Participation at the World Automotive Summit is by invitation only. For more information contact Zoltan Farkas**  
[z.farkas@fisita.com](mailto:z.farkas@fisita.com)  
**+44 (0) 20 2996630**

**NHTSA boss, David Strickland, is among the top policy-makers who will address the 2010 FISITA World Automotive Summit, to be held in Mainz, Germany from 4–5 November.**

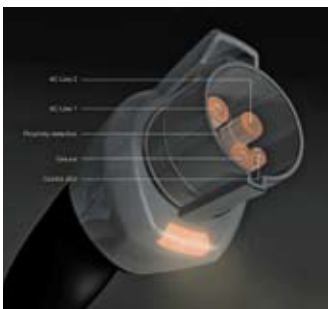
The FISITA Summit is a unique annual meeting of automotive leaders. It brings the world's top technical executives together with scientists, public policy-makers and influential NGOs to work on an issue of central importance to the automobile and society. For 2010 the chosen topic is traffic safety.

Each year, more than 1.2 million people lose their lives in traffic accidents. In response to the UN's announcement of a Decade of Action on Road Safety, this year's FISITA Summit will lead a re-evaluation of the industry's priorities in accident prevention and mitigation. The agenda will begin with a strategic overview of traffic safety at the global level, including presentations from the World Health Organisation and European Commission.

This will be followed by discussions on the Engineering response, considering technology solutions in the vehicle itself as well as in the infrastructure and vehicle safety communications. Finally, there will be an exploration of the environmental factors driving traffic safety – including driver distraction, education and enforcement. In particular the Summit will address the need for different technology and policy strategies to tackle accident prevention in developed vs. developing countries.

Other high-level speakers include Prof. Shouen Fang of the School of Transportation Engineering, Tongji University, and key advisor to the Chinese National Road Safety Plan; Prof. Dinesh Mohan, Volvo Chair Professor for Biomechanics and Transportation Safety and Co-ordinator of the Transportation Research and Injury Prevention Programme at the Indian Institute of Technology, Delhi; and Dr. Michael Strugala, Head of Safety Development at Robert Bosch.

## SAE creates standard for EV charging connector



“This standard . . . eliminates any confusion or uncertainty about being able to easily connect to home, work, or public charging stations.”

**Steve Matsil**  
Executive Director  
Vehicle Systems (retired)  
General Motors

**SAE International gets public exposure beyond its famous oil-can identifier, and the automotive industry gets guidelines that help pave the way for an electric vehicle (EV) future now that the organisation has approved an updated standard for connectors used to charge full- and partial-electric vehicles.**

It is the first and only such standard in the world reached by industry consensus, according to SAE. The update of J1772 – the standard was originally approved in 1996 – accommodates the latest generation of vehicles that need to be plugged in for charging of their high-energy batteries.

The standard – codified as J1772-Electric Vehicle and Plug-in Hybrid Electric Vehicle Conductive Charge Coupler – spells out the physical and electrical characteristics of the connector and the vehicle electrical inlet. It enables charging at 120 or 240 V with a connector

of standardised dimension and function to optimise ease of use for consumers while reining in expenses that multiple, non-standardised charging interfaces otherwise would entail for automakers, their suppliers, and other parties including consumers, according to Jack Pokrzywa, Manager of Ground Vehicle Standards for SAE. Makers of connectors meeting the standard have the option of incorporating an ‘SAE J1772’ marking onto the surface of the device. Use of the marking on the connector is seen as a consumer aid – in the same way the oil-can identifier is – to assure buyers that the product is designed to the standard.

‘Future consumers of plug-in vehicles will benefit from this standard, which eliminates any confusion or uncertainty about being able to easily connect to home, work, or public charging stations,’ said Steve Matsil, Executive Director, Vehicle Systems (retired), General Motors. As Chairman of the SAE Motor Vehicle Council from 2007 to

2009, Matsil championed the updating of J1772.

‘The development of J1772 is an excellent example of global automotive OEMs/suppliers, electrical utility industry, and government collaboration by very talented and dedicated engineers,’ he added.

The standard as now written addresses two charging levels: AC Level 1: 120 V, 1 phase, up to 16 A; and AC Level 2: 240 V, 1 phase, up to 80 A. The J1772 task force has begun work on specifications for higher-voltage, fast-rate dc charging.

It was developed in cooperation with U.S., European, and Japanese experts, but given the differences in electrical architectures among some countries, it is too soon to say how widely J1772 will be adopted outside the U.S. At the least, Pokrzywa said ‘the SAE standard represents a big step forward in the move toward electrification of the vehicle on a global scale.’

# FISITA Educators Seminar goes from strength-to-strength



**Academics, educators, and industry professionals were among the participants at the second FISITA Seminar for Educators held in Budapest on 1 June. The theme for the Seminar was the education of automotive engineers to meet the demands of the 21st century and the programme encompassed the main challenges surrounding automotive engineering education today.**

“A major strength of FISITA is that we bring engineers from both the industry and the academic world together to share ideas.”

**Christoph Huss**  
President 2008–10  
FISITA

Opening the seminar, FISITA President, Christoph Huss said: ‘A major strength of FISITA is that we bring engineers from both the industry and the academic world together to share ideas. Traditionally, these discussions have been confined to the technology and policy framework around vehicles. Looking at how engineers are educated is a new direction for us, but I think it’s a very important one.’

‘It’s clear that the next generation of engineers in our business are going to face very different challenges. Today we are seeing a convergence between mechanical and electrical engineering; between hardware and software issues; between vehicles and communication systems.’

‘This means that tomorrow’s engineers are going to need a different kind of preparation to be successful in their careers’.

The Seminar was chaired by Professor Matti Juhala, FISITA’s outgoing Vice President for Education. Its aim was to equip engineering educators with fresh insights into the current and future needs of industry with regard to technology and wider competencies, thus helping them to ensure the relevancy of their courses and the employability of their graduates. The first presentation from Professor Christopher Onder, ETH Zurich (Swiss Federal Institute of Technology, Zurich) discussed the opportunities and risks of various types and content of lectures and teaching technologies.

Professor Lazlo Palkovics, who until recently was the Director of Advanced Engineering at Knorr Bremse but is now an academic at the Budapest University of Technology and Economics, outlined a number of projects in which universities worked collaboratively with Knorr Bremse and described the benefits of such partnerships to both parties. Professor Dr. Werner Stedtnitz described how his institution,

University of Applied Sciences, Berlin, has successfully integrated industry placements, international student exchange programmes and Formula Student into their curriculum, leading to close collaboration on industry-led research projects and giving the university the chance to secure lecturers from companies including Daimler and Continental.

Participants then heard from Dr. Christoph Anz, Director of Education Policy for BMW, who outlined how the company cooperates with higher education institutions to recruit and retain the highest quality engineering graduates. The final speaker of the afternoon was Martina Herlyn from AutoUni: an institution of further education of the Volkswagen Group, who described how VW set up this unique facility to promote the development, both personal and core competencies, of selected professionals and executives.

A lively discussion followed the presentations and a full report of the event, including the presentations and discussion, will be disseminated by FISITA in September 2010.

**For a copy of the report contact  
Emer Padden, Education Officer, FISITA:  
[e.padden@fisita.com](mailto:e.padden@fisita.com)**

## Get involved!

**FISITA would like to play a more active role in the Education area and we would welcome your thoughts and ideas and on how we can do this.**

Please feel free to send your feedback or suggestions to:

**Daniela Hein**  
Vice President, Education  
[hein@vdi.de](mailto:hein@vdi.de)

**Emer Padden**  
FISITA, Education Officer  
[e.padden@fisita.com](mailto:e.padden@fisita.com)

## AVL devotes Conference on Engine & Environment to considering the innovative IC engine in the context of powertrain electrification



**In spite of the current trend towards electrification, the automotive industry continues to invest heavily in the development of innovative gasoline and diesel engines.**

At its 22nd annual conference, taking place in Graz from 9–10 September, 2010, AVL will discuss the important roles the future IC engine will play in achieving a reduction in fleet CO<sub>2</sub> emissions. Developments necessary to enable current HEVs and EVs to enter the high-volume market will also be discussed.

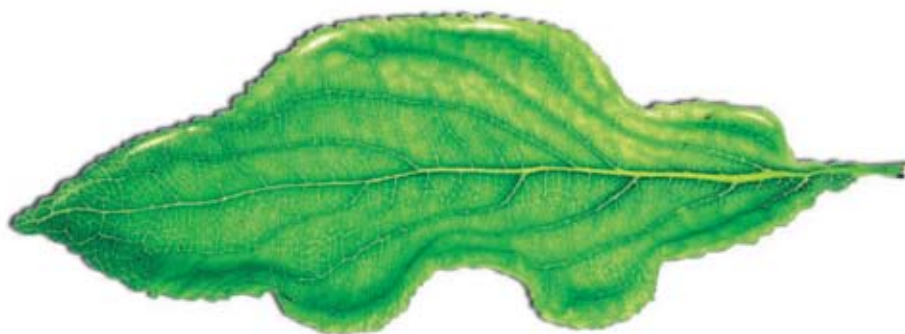
The company has assembled industry experts to tackle, amongst others, the following questions:

- IC engine innovations
- Scale effects through volume solutions: rather 90% solutions for 100% of the vehicles than 100% solutions for 10% of the vehicles?
- Optimisation of the IC engine as the strategy of major OEMs for the next 20 years
- Transition scenarios: from niche to high-volume
- The battery as handicap or chance on the way to the high-volume electric drive?
- Electric vehicles with and without range extenders
- The transmission as system enabler, etc.

**For more information visit:**  
[www.avl.com/engine\\_environment](http://www.avl.com/engine_environment)  
 or email: [event@avl.com](mailto:event@avl.com)

### THE INNOVATIVE INTERNAL COMBUSTION ENGINE IN THE CONTEXT OF POWERTRAIN ELECTRIFICATION— A MAJOR KEY TO LONG-TERM CO<sub>2</sub> REDUCTION?

22<sup>nd</sup> International AVL Conference "Engine & Environment"  
 9<sup>th</sup> – 10<sup>th</sup> September, 2010, Helmut-List-Halle, Graz, Austria



MOTOR & UMWELT – ENGINE & ENVIRONMENT

Stimulating Panel Discussion with  
 Rita Forst, GM  
 Jörg Grottel, Continental  
 Dr. Rolf Leimbard, Bosch  
 Dr. Wolfgang Stütz, BMW  
 Dr. Robert Fischer, AVL





## SATL leadership take part in EcoTour 2010

**Finnish FISITA member, SATL, took part in EcoTour 2010, the economy driving contests in Finland. The contest, which is part of the FIA Foundation's 50by50 initiative, was arranged by the Automobile and Touring Club of Finland, the Finnish member of the FIA.**

Keijo Mäenpää, President of SATL and Pasi Perhoniemi, Executive Director represented the society in the competition. Mr. Mäenpää was the co-driver reading the pace notes while Mr. Perhoniemi as the driver, tried to resist the temptation to put his foot down. Their challenge was to drive the 640 km route in two days using as few litres of gasoline as possible. The chosen vehicle was a Citroën C3 equipped with a 1.4 litre gasoline engine and provided by the sponsor – a rental car company. The SATL pair competed in the 'small gasoline engine car' category along with five other teams.

In all, 35 teams competed in six different categories (three gasoline engine and three diesel engine categories). There was also one special team competing in its own class with an electric vehicle.

The contest began in Helsinki on Friday 7 May and ventured through the Southern parts of Finland. The challenging route included a variety of roads and surfaces including highways and rural roads, through the cities of Tampere and Lahti, before returning to Helsinki. The route was divided into seven different length sections on the Friday followed by six on the Saturday. Each section had a time limit which meant the competitors had an average speed to maintain. Every additional minute taken to reach the checkpoint meant a 2% penalty increase to the fuel consumption. Reaching the checkpoint early also meant a higher fuel consumption due to unnecessarily high speeds. What's more, if speeding was detected, a 5% increase to the fuel consumption

was served as a penalty. As part of the challenge, the drivers also had to successfully complete several driving tests.

The SATL team finished third in their category and eleventh overall. Of the 15 gasoline cars competing, the team managed to get the 5th best fuel consumption with the measured value of 5.19 litre/100 km. They received just one penalty for being one minute late at one checkpoint, increasing their total to 5,297 litre/100 km. The official average fuel consumption figure for the Citroen they were driving is 6.1 litre/100 km, which the SATL team managed to beat! Only one other team with the same make and model managed to complete the challenge with a lower fuel consumption (0,2 litre/100 km better). Pasi believes there is room for the team to improve their performance in time for next year's race!

The winning team in this class drove a Toyota IQ. Their fuel consumption was only 3.479 litre/100 km – almost enough to win the overall contest. However the overall winning team managed to get an astonishing 3.473 litre/100 km from a Volvo V70 equipped with a 1.6 litre turbo diesel engine. The car was driven by automotive journalists: driver Martti Merilinna (former editor in chief from *Tekniikan Maailma* magazine) and co-driver Hannu Ahonen (a journalist from the same magazine.)

The contest showed that an individual can make a big difference to a vehicle's fuel consumption figures, just by changing his or her driving style.

Above SATL's President Keijo Mäenpää (left) and Executive Director Pasi Perhoniemi get ready for their EcoTour challenge.

## FISITA/PIARC Joint Task Force member receives top ITS Honour



**ITS (UK), the Intelligent Transport Society for the United Kingdom, has presented FISITA/PIARC Joint Task Force member, Richard Harris, with the prestigious Rees Hills Award for Outstanding Personal Contribution to Excellence in ITS. Harris, who is Director of Intelligent Transport Systems for Logica, received his award from ITS (UK) President and former Transport Minister, Steven Norris at the ITS United Kingdom President's Dinner at Painters Hall in the City of London on 30 March 2010.**

Harris has been active in ITS since DRIVE I and PROMETHEUS in the late 1980s / early 1990s. In recent years he has held Director-level appointments with Faber-Maunsel, WSP and now Logica. He was instrumental in organising the intelligent car demonstrations at the Information Society showcase for the G7 Heads of State as far back as February 1995. He continued to make his mark on a string of pioneering projects such as SOCRATES, ATLANTIC and EASYWAY and with Faber-Maunsel he took a very prominent role in the Euro-regional project, STREETWISE. He has been a leading protagonist for the European Action Plan on ITS and through Logica he has led a successful bid to be appointed to support the development of the Plan under a Framework contract awarded in November 2009.

Presenting the award, Steven Norris, said 'Richard's huge creativity, commitment, enthusiasm and ability to cut through humbug have touched many in the ITS community over the years, not only in the UK and Europe but further afield.'

Above  
Richard Harris (right) makes his acceptance speech after receiving the Rees Hills Award from ITS UK President Steven Norris (left).

## News in brief

### India

SAE India are the host society for the 16th Asia Pacific Automotive Engineering Conference from 6–8 October 2011 in Chennai. The focus will be 'sustainable mobility for people and goods'.

The deadline for abstracts is 20 December 2010.

Find out more at:  
[www.apac16.org](http://www.apac16.org)

### Japan

Submit your abstract by 10 October 2010 for the 2011 Powertrains, Fuels & Lubricants Meeting to be held from 30 August–2 September 2011 at Kyoto TERRSA. The conference covers topics on electrical propulsions, new powertrains, engine combustions, emissions, fuels, lubricants and measurements and is co-organized by JSAE and SAE International.

### Korea

KSAE beat off strong competition from Sweden and Brazil to be the chosen host society for the 2016 FISITA World Automotive Congress. The society plans to organise the Congress in Incheon.

## FISITA and John Wiley open new chapter with Encyclopedia of Automotive Engineering



Prof. David Crolla

**FISITA has teamed up with leading technical publishers, John Wiley & Sons, to develop a groundbreaking reference work for publication in late 2012. The Encyclopedia of Automotive Engineering will be available as an updating online resource, and also in a print edition comprising five volumes.**

Although the automotive field is well served in terms of professional handbooks, educational texts and journals, the Encyclopedia will provide for the first time a large, unified knowledge base that lays the foundation for advanced study and in-depth research. Through extensive cross-referencing and search functionality it will provide a gateway to detailed but scattered information on best industry practice, and help to engender a better understanding of interrelated concepts and

techniques that cut across specialised areas of engineering.

Prof. David Crolla, Emeritus Professor of Automotive Engineering at the University of Leeds (UK) is Executive Editor in Chief for the ambitious project. He is supported by two other Editors in Chief, covering the Americas and Asia Pacific namely: Prof. David Foster of the University of Wisconsin; and Prof. Toshio Kobayashi, President of the Japan Automotive Research Institute (JARI).

FISITA and Wiley are currently signing up experts to join the project as Subject Editors and authors.

**To find out more, please contact Zoltan Farkas:**  
[z.farkas@fisita.com](mailto:z.farkas@fisita.com)  
**+44 (0) 20 72996630**





# Formula Student Germany lights up the Hockenheimring

Julien van Campen



**Electromobility will be a determining factor in future mobility. The industrial development of electric cars is going from strength-to-strength and their economical, technological, as well as ecological potential, is undeniable. Formula Student Germany (FSG) has recognised this trend, and therefore introduces Formula Student Electric (FSE).**

In August this year, the first Formula Student Electric took place at the Hockenheimring. 16 student teams competed in the very first Formula SAE contest for fully electric vehicles. FSE is part of the successful Formula Student Germany, which is held annually at the Hockenheimring since 2006.

Formula Student is a spin-off of Formula SAE, which was founded in the United States at the beginning of the 1980's. The intention of the organisers was, and still is, to offer engineering students the opportunity to acquire practical experience

alongside their studies. Designing, building, testing, costing, marketing and racing a formula-style race car turned out to be a perfect vehicle for this goal. Today there are eight competitions in the Formula FSAE-series, and FSG is one of them.

A 'conventional' Formula Student car is equipped with a four-stroke internal combustion engine. Apart from this, however, the cars can hardly be called conventional, for the competition rules leave much design freedom. This year at Formula Student Germany, 78 student teams competed in Formula Student Combustion (FSC) while the 16 FSE teams joined them for the first time.

There was another innovation at Formula Student Germany this year: the first ever Endurance race by night. With the additional 16 FSE, the total number of cars at this year's competition added up to 94. This posed new challenges

to the logistics of the event, and especially to its time schedule. One day is hardly enough to let 78 cars complete the Endurance, a 22km race to test the stamina of both driver and vehicle, let alone 94 cars.

Therefore the first FSE Endurance took place on Saturday evening, August 7th. Of course good lighting conditions are essential to a car race. Hence, the track was lit by brightly shining helium balloons, making this the highlight of Formula Student Germany in the most literal sense.

The Green Team Uni Stuttgart from the University of Stuttgart were the winners of the first ever FSE. The overall winner of this year's combustion engine category at Formula Student Germany was the DUT Racing team of TU Delft.

*Congratulations to all the teams who took part.*

**More information:**

[www.formulastudent.de/events/event-2010/visitors/](http://www.formulastudent.de/events/event-2010/visitors/)



# F1 stars turn out for Formula Student UK



**IMechE's 2010 Formula Student competition got off to a flying start on 15 July, with F1 racing legend David Coulthard visiting the Silverstone-based event.**

Above  
David Coulthard passes on some tips to Karlsruhe's driver.

Above right  
Formula Student UK Chairman, Jon Hilton (second from the right) presents the FISITA Award to the team from Ravensburg.

He toured the pit garages and met with students before taking part in a Q&A session where he was joined by Andrew Shovlin, Senior Race Engineer at Mercedes GP Petronas; Bob Bell, Managing Director of Renault F1 Team and Nick Wirth, Technical Director of Virgin Racing.

Coulthard, who won 13 Grands Prix during his F1 career, said: 'This is the first time I have visited Formula Student and the level of engineering talent here is



amazing.' He visited, amongst others, the University of Hertfordshire's electric car and one designed by Germany's, Karlsruhe Institute of Technology. FISITA sponsors the award for Engineering Excellence at Formula Student UK which this

year went to the University of DHBW Ravensburg.

The overall winner of Formula Student UK 2010 was TU Munich with a total score of 848.3 (51.9 points ahead of runners-up Stuttgart).

## News in brief

### Netherlands

The CVT – Hybrid International Conference 2010 will take place on November 17-19 in Helmond, organised by KIVI NIRIA. The topics are shared among: Fundamental Research and Applied Technology.

For more information email [info@cvt2010.org](mailto:info@cvt2010.org) or visit [www.cvt2010.org](http://www.cvt2010.org)

### Spain

STA will host the 13th EAEC Congress in Valencia from 14-17 June 2011.

For the First Announcement visit: [http://stauto.org/pdf/EAEC\\_2011.pdf](http://stauto.org/pdf/EAEC_2011.pdf)

### United States

SAE International has introduced a new four-tier membership system to offer greater flexibility and access to member benefits.

Find out more at: [www.sae.org/membership](http://www.sae.org/membership)

Congratulations to Oregon State University who gained the highest overall score in the static events and won the prestigious FISITA Award at the 2010 Formula SAE.

## FISITA 2010 World Automotive Congress Proceedings now available

Get the complete proceedings on CD ROM, plus book of abstracts, including more than 400 international technical papers covering today's most important topics in automotive engineering and technology.

Available only from the FISITA Bookstore.

Members of FISITA societies receive 20% discount!



[www.fisita.com/bookstore](http://www.fisita.com/bookstore)

## Contact update

**Prof. Peter White** Associate Dean, Coventry University, is the new Chairman of the IMechE Automobile Division.

**Mr. Tomiji Sugimoto** Executive General Manager, Corporate Planning Division Honda Motor Co., Ltd., is now a Council Delegate for JSAE.

**Mr. Akio Hamada** Senior Managing Director, Honda Motor Co., Ltd. is the new President of JSAE.

## insidetrack

Published by FISITA – the International Federation of Automotive Engineering Societies

**President**  
Ted Robertson

**Chief Executive**  
Ian Dickie

Please send your contributions or suggestions to:

insidetrack  
FISITA  
30 Percy Street  
London W1T 2DB  
United Kingdom

Phone: +44 (0) 20 7299 6630  
Fax: +44 (0) 20 7299 6633  
Email: [insidetrack@fisita.com](mailto:insidetrack@fisita.com)

Copyright © FISITA 2010



## FISITA diary

4–5 November 2010

**FISITA World Automotive Summit**  
Mainz, Germany

12–13 April 2011

**Executive Board Meeting**  
Detroit, USA

16–17 June 2011

**Council, Executive Board, Committees**  
Valencia, Spain

4–5 October 2011

**Council, Executive Board, Committees**  
Chennai, India



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