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# FISITA 2014 World Automotive Congress 2–6 June, Maastricht, the Netherlands

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

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## Call for Papers

Join us at FISITA 2014 in Maastricht:  
the automotive heart of Europe



**Dr. Li Jun**  
FISITA President  
2012–14



**Harrie Schippers MSc**  
Congress Chairman  
FISITA 2014



### Important Dates

#### **1 August 2013**

Deadline for abstract submission

#### **1 November 2013**

Notification of authors

#### **1 February 2014**

Deadline for final Manuscript

#### **2–6 June 2014**

FISITA 2014

### Dear colleagues

**The Royal Institution of Engineers in the Netherlands, KIVI NIRIA, is proud to host the 35th FISITA Congress in Maastricht – at the heart of Europe's high-tech automotive industry. For more than 60 years, the FISITA World Automotive Congress has brought together automotive experts from industry, academia, government and related associations from around the globe to exchange technology information and explore the trends that drive the automotive industry forward.**

For the organisation of FISITA 2014 KIVI NIRIA has formed a cross border cooperation with automotive related organisations AutomotiveNL, Flanders' DRIVE and AutoCluster.NRW and the sister FISITA societies UBIA and VDI in Belgium and Germany.

FISITA 2014 will focus on the theme:

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

Developed and developing countries alike face urgent problems with road traffic congestion and traffic-related environmental problems; the Netherlands more than most. FISITA 2014 will examine the most significant research and development activities in the fields of vehicle propulsion, dynamics, safety, weight-reduction, ITS and more from the world's top companies and universities.

The Netherlands together with neighbouring Belgium and Germany forms a strong automotive region with a network of high tech suppliers, universities and research centres that serve the complete value chain of the automotive industry. The southern part of the region itself, dubbed 'Brainport Eindhoven', won the title of 'Smartest Region in the World' in 2011 and this environment, together with local and national government support, facilitates the role of innovations in the field of sustainable road transportation. In 2014 Maastricht will be the meeting place for engineers and executives from Europe, Asia and America to share knowledge and build collaborations for the creation of greener, safer transport everywhere.

Please join us!

# Submit your Paper

**We invite you to submit a paper detailing your latest work in any of the congress topics**

## 1 Clean and Efficient Engine Technologies

- New SI and CI engines & components
- After treatment and emissions control
- Fuels (including synfuels) and lubricants
- Heat transfer and waste heat revalorisation
- Alternative engine thermodynamics (high efficiency)
- Advanced clean and efficient combustion concepts
- Fuel injection and sprays
- Flow and combustion diagnostics
- Engine systems design and simulation

## 2 New Energy Powertrain

- Plug-in vehicles
- Battery advancements
- Hydrogen and fuel cell powertrains
- Charging infrastructure and smart grid technology
- Demonstration of EVs
- Range extenders
- HVAC/inverters/converters
- Safety issues, EMC, supercapacitors, recycling

## 3 Transmissions and Hybrids

- DCT & AMT transmissions
- AT transmissions
- CVT transmissions
- EV transmissions
- Cost competitive hybrid concepts
- New drive cycles
- Powertrain controls
- New actuation concepts
- Alternatives for permanent magnet electric motors
- Powertrains for long term mobility requirements

## 4 Lightweight Solutions

- New materials developments
- Applications of lightweight metals
- Applications of composite materials
- Applications of high strength steel
- Multi-materials design and concepts
- Design optimisation
- Renewable materials & recycling
- Simulation and experimental validation
- Cost-effective lightweighting strategies
- Joining technologies
- Manufacturing technologies (including QA and QC)
- Lightweight design impact on body architecture and its production

## 5 Automated and Cooperative Driving

- Scalable wireless ad-hoc communications
- Local dynamic maps/object tracking
- Fault-tolerance in communication-based applications
- Integrated vehicle-roadside applications
- Closed-loop, safety-critical automated and cooperative driving applications
- Environment sensing devices
  - opportunities and challenges
- Legal aspects of automated driving technologies
- Driver interaction with automated and cooperative driving applications
- Applications of automated driving

## 6 Advanced Safety Technologies

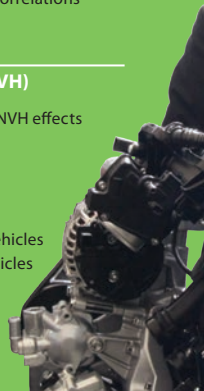
- Accidentology in the light of integrated safety (Pre-crash – In-crash – Post-crash)
- New requirements, standards, regulations, consumer tests
- Protection of vulnerable road users
- Crashworthiness and occupant protection
- New vehicle concepts and their impact on road safety
- Aspects and factors in the pre-impact phase
- New systems for crash avoidance or mitigation
- Cooperative systems to reduce traffic accidents

## 7 Vehicle Dynamics and Intelligent Vehicle Controls

- By Wire technologies
- Regenerative technologies
- Intelligent chassis controls
- Advanced driveline controls
- Functional safety
- Vehicle dynamics – subjective/objective correlations
- Vehicle dynamics and chassis CAE

## 8 Noise Vibration and Harshness (NVH)

- Engine and powertrain NVH, downsizing NVH effects
- Tyre and road noise
- Transient NVH phenomena
- NVH of lightweight structures
- Vehicle sound quality and brand sound
- NVH phenomena in hybrid and electric vehicles
- Pedestrian warning sound for electric vehicles
- Car and truck pass-by noise
- Aero-acoustic noise
- New developments in NVH simulation
- Experimental NVH analysis methods



## 9 Automotive Human Factors

- Digital human body modelling
- Anthropometric databases
- Accident analysis
- Human factors of advanced driver assistance systems
- Distraction, workload
- Interfaces
- Methodology, driving simulators
- Automation
- Field studies
- Human factors and electric vehicles/eco driving
- Safety
- Comfort

## 10 New Mobility and Vehicle Concepts

- Future commercial vehicles architectures
- Bus of the future
- Ultra-light urban vehicles
- Innovative two- and three-wheeler concepts
- Micro-mobility for the last mile
- Modularisation of vehicle architectures
- Advanced design concepts
- Innovative ergonomics and interior design
- Novel aerodynamics concepts
- Demonstration of new mobility concepts
- Field operational tests with electric vehicles
- Seamless integration of different modes
- Future mobility concepts for rural areas

## Submitting your Abstract

Authors should observe the following requirements :

- FISITA 2014 Requirements for Extended Abstracts
- 1 x A4 page, approximately 500 words include spaces
- Font Arial 10, single line spacing
- No figures preferred, but can be included if essential
- Official language: English

The following headings should be included in the abstract:

- Paper Title
- Research and/or Engineering Questions/Objective (maximum 100 words);
- Methodology (maximum 150 words)
- Results (maximum 150 words)
- Limitations of this study (maximum 100 words)
- What does the paper offer that is new in the field in comparison to other works of the author (maximum 100 words)
- Conclusions (maximum 100 words)

All abstracts must be submitted on-line at [www.fisita2014.com](http://www.fisita2014.com) by 1 August 2013.

## Abstract Selection

The Scientific & Technical Committee will decide to accept papers on the basis of the abstract. Therefore the abstract should clearly set out the methodology to be used. In particular, your abstract should indicate those aspects of the work which are new, innovative and unique.

All accepted authors will be required to submit a full written paper to be published in the Congress Proceedings (ISBN).

## Author Presentation Slots

Two kinds of author presentation slots will be offered: normal presentation slots of 20 minutes (15 + 5 discussion) and short presentation slots of 7 minutes, which may be offered to authors whose subject matter is more suited to a short, stimulating talk, rather than a repetition of information and concepts already familiar to the audience (details which are included in the published paper). Panel discussions will take place with the presenters after each group of 6 short presentations, providing the audience with a variety and pace sometimes lacking in the traditional conference format.

Authors can give a preference when they submit their abstracts but the Technical committee will make the final decision, based on the topic of the presentation, number and variety of the abstracts submitted.



# FISITA 2014 Congress Highlights

## Exhibition

The accompanying technical exhibition is an ideal occasion for you to present your products and services to an interested and qualified audience of global specialists and decision-makers.

For further information visit  
[www.fisita2014.com/exhibition](http://www.fisita2014.com/exhibition)

## Sponsorship and Advertising

If you are interested in sponsoring the FISITA 2014 World Automotive Congress or if you want to advertise in any of our congress publications please contact us directly at [congress@fisita2014.com](mailto:congress@fisita2014.com)

and we will arrange to present our packages to you or tailor something special to meet your requirements.

## Special Sessions

FISITA 2014 welcomes proposals for Special Sessions, where delegates can get together and discuss recent interesting issues with related specialists. The Special Sessions will address specific topics, research studies and projects being carried by governments, industry or academia in the field of automotive technology. Each session will concentrate on its own specific topic and will offer participants interested in that particular subject the opportunity to engage with the experts.

Applicants will be requested to provide the following information:

- Proposed session title
- Organiser's information, including name, job title, company and country
- Proposed moderator's information (can be the same person as the organiser)
- Proposal information regarding 4-5 potential speakers
- 200–300 words description of session content

Proposed time duration, one slot (1.5 hours) or two slots (3 hours) are recommended.

If you are interested in organising a Special Session please contact:  
[congress@fisita2014.com](mailto:congress@fisita2014.com)



## Student Activities

The Student Congress and Travelling Fellowship Programme will provide BSc and MSc students with an invaluable experience. They will have the opportunity to present their paper and to visit automotive sites in Germany, Belgium and the Netherlands.

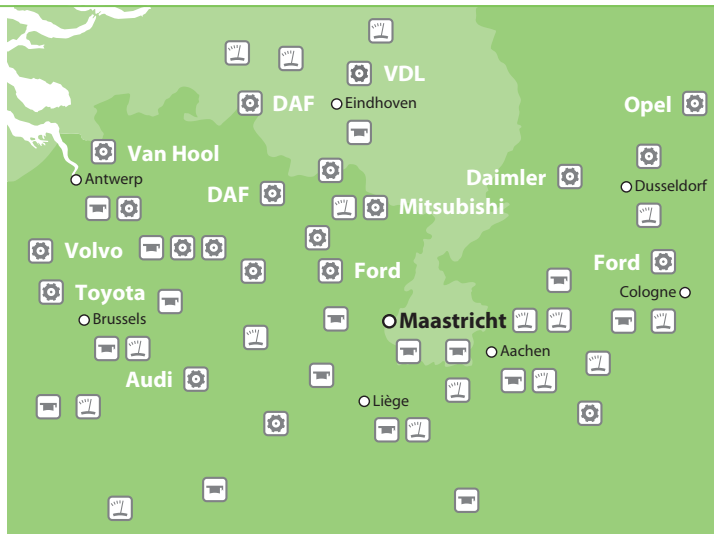
Universities from around the world are invited to compete to win the chance to present their research projects at FISITA 2014 as *Islands of Excellence*, a dedicated part of the exhibition space.

To find out more about the programmes please visit  
[www.fisita2014.com](http://www.fisita2014.com)




## Technical and Social Visits

Tours to a variety of local automotive plants, institutes and research centres will be offered on 6 June 2014.

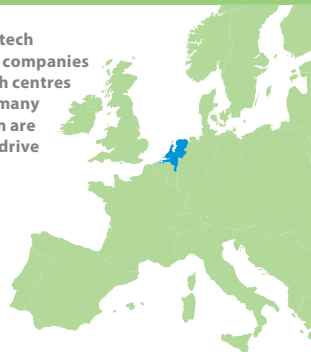
# Maastricht – Ready to welcome the world!



Maastricht is the Netherlands' oldest city, and arguably its most picturesque. Visitors will be rewarded with a wealth of historical architecture, quality museums and art galleries, first class food and easily accessible attractions. Lively and international, it offers an excellent base for congress social activities. Its central location offers the possibility to extend your trip to visit other cities in the Netherlands, Germany and Belgium.

-  Automotive-related company
-  Automotive-related university
-  Research and development or test center

Major high-tech automotive companies and research centres in both Germany and Belgium are just a short drive away



## Organised by



## Supported by



## The Royal Institution of Engineers in the Netherlands – KIVI NIRIA

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