

# FISITA 2016 World Automotive Congress

26-30 September 2016 | BEXCO | Busan, KOREA

SATL Kiertokirje 4/2015 Liite 2

Creative Thinking for Future Automobiles

## CALL FOR PAPERS



The Korean Society of Automotive Engineers (KSAE) and FISITA are proud to announce the 36th FISITA World Automotive Congress in Busan, Korea. The FISITA Congress brings together industry and academia to share knowledge and ideas, providing the next generation with a new era of transportation solutions whilst serving as a powerful motivator for the continued growth of the automotive industry and its contributors.

## IMPORTANT DATES

Deadline for Abstract Submission: **30 November 2015**

Notification to Authors: **30 December 2015**

Preliminary Programme: **31 January 2016**

Deadline for Final Papers: **30 May 2016**

## CONGRESS HIGHLIGHTS

### Executive Tracks

Executive tracks will be composed of presentations by international experts that encompass all technical aspects of FISITA 2016. These tracks will create opportunities to explore scientific topics in greater detail than a conventional paper to offer fresh insights and new perspectives.

### Interactive Progress Sessions

Making their debut at FISITA 2016, Interactive Progress Sessions will cover a range of popular and important issues within the industry. These sessions will be available both online and offline. The online format will allow real-time discussion between presenters and audiences.

### Student Congress

The FISITA Student Congress welcomes young engineers from around the world to their ideas on an international stage. The Travelling Fellowship programme offers once-in-a-lifetime opportunity to participate in a week long programme of cultural and technical visits across Korea.

### Islands of Excellence

Universities from around the world are invited to compete for the chance to present their research projects at FISITA 2016. The best concept from each Congress theme will be selected for the Islands of Excellence event, with students themselves presenting the ideas to an audience of leading figures in industry and academia.

### Technical Visits

Tours to a variety of local automotive plants, institutes and research centers will be offered on the 30<sup>th</sup> of September 2016.

### Educators Technical Session

The FISITA Congress attracts leading educators from around the world, and this special technical session will feature presentations from academics on best practice and new forms of education.

Topics include: internationalisation of students, preparing students for the global marketplace and the current disruption effects of online education.

## CONGRESS DESTINATION

### Host Country, Korea

Korea has been the strategic crossroads of Northeast Asia for many centuries. Over the past four decades, the nation's industrial framework has been drastically reshaped, giving rise to major automobile, petrochemical, electronic, shipbuilding, textile and steel manufacturing industries. The Korean economy has relentlessly shown the exponential growth, which has been admired by many. As a proud member of the G20 group of nations, Korea leads the way in advancing the world's scientific and technological progress.

### Host City, Busan

Busan is located on the southeastern tip of the Korean peninsula and is the nation's second-largest city. Its natural endowments and rich history have resulted in Busan's increasing reputation as an international city of tourism and culture and as a renown international conference destination.





## CONGRESS TOPICS

### 1. Engine System

- New SI (Including GDI) Engines and Components
- New CI Engines and Components
- Fuels and Lubricants
- After Treatment and Emission Control
- Heat Transfer and Waste Heat Reutilisation
- Flow and Combustion Diagnostics
- Engine Design and Simulation
- Fuel Injection and Sprays

### 2. Transmissions and Hybrids

- Multi-stepped Automatic Transmissions
- Advanced Automotive Transmissions
- Hybrid, Electric Vehicle Drives, and Electro Mobility
- Transmission Components
- Transmission Simulation and Controls
- New Actuation and Sensory Systems
- Design and Optimisation of Transmissions

### 3. Advanced xEV

- Applications of Electric Motors and Power Electronics
- Advanced xEV Powertrain Technologies
- Advanced Battery System Technologies
- Fuel Cells and Fuel Cell Systems
- Advanced Heating and Cooling Systems for xEV
- xEV Controls and Optimisation

### 4. Active and Passive Safety Technology

- Accident Statistics, Analysis and Reconstruction Technologies
- Biomechanics
- Occupant, Child and Elderly Safety Protection
- Protection of Vulnerable Road Users
- Vehicle Structure Crashworthiness
- Innovative Lighter Frame Design with New Materials
- Crash Avoidance or Mitigation Systems
- Emergency Call System
- International Regulations and New Car Assessment Program

### 5. Noise Vibration and Harshness (NVH)

- Powertrain NVH
- Subsystem NVH
- Aero-Acoustic Wind Noise
- Mechanism of Tire and Road Noise
- NVH in Hybrid Powertrains
- Passive and Active Controls of NVH Problem
- NVH Measurement, Simulation, and Analysis

### 6. Vehicle Dynamics and Controls

- Vehicle Dynamics, Modelling and Simulation
- Integrated Chassis Control
- Human Vehicle Interface
- Advanced Driver Assistance Systems
- Heavy Duty Vehicle Control
- Sensors and Actuators
- Intelligent Tire

### 7. Manufacturing and Materials

- Novel/Emerging Forming Technologies
- Forming of Advanced High Strength Steels
- Forming of Light Weight Metals (Titanium, Magnesium, Aluminum)
- Applications of Non-Metallic Materials (Rubber, Polymer, Composite)
- Fatigue, Fracture and Failure of Traditional and Lightweight Materials
- Computational Methods in Modelling and Designing of Forming Processes
- Welding and Joining/Fastening of Traditional and Lightweight Materials
- Coating, Wear, Corrosion Protection and Surface Engineering
- Weight Reduction Technology in Automotive Industry

### 8. Autonomous and Connected Vehicles

- Environmental Sensors and Sensor Fusion
- Situation Representation and Awareness
- Voice and Motion Recognition
- Autonomous Vehicle Control
- Cellular Network for Vehicles
- V2X Communication
- Cloud-Connected Vehicles
- Digital Maps and Map Watching

### 9. Vehicle Electronics and Software

- E/E Architecture
- In-Vehicle Network
- ECU Consolidation and Multicore ECUs
- Automotive Operating Systems
- AUTOSAR and Software Architecture
- Software Reliability and Safety
- Verification and Validation
- Model-Based Design, Analysis and Verification
- Software Models, Design Methods, Testing, Development Processes
- Telematics and Infotainment Systems
- Automotive HMI

### 10. Advanced Vehicle Concepts

- Personal Mobility and City Vehicle
- Design
- Standards
- Testing
- Policy and Regulation

## TECHNICAL PAPER SUBMISSION

Authors should observe the following requirements:  
**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:

- **Congress Topic**
- **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)**

Submitted papers will be reviewed by the Scientific & Technical Committee (STC). Authors should clearly identify the methodology used in their abstract and indicate the elements of the work undertaken. The STC reserves the right to assign accepted papers for oral presentation to the Technical Sessions. All accepted authors will be required to submit a full paper to be published in the Congress Proceedings with an official ISBN code. All papers should be original works and not have been published elsewhere. A review system for full paper submissions will be proceeded. 20 minutes will be allocated for each oral presentation, including discussion time.