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# FISITA Technology of Mobility Conference and Exhibition

# Student Opportunities Programme (SOP)

# Application form

Please complete this form if you would like to apply for the FISITA SOP at the Technology of Mobility Conference and Exhibition this September 12-15 in Barcelona, Spain. Once complete, please submit it to Kirstie Bali, FISITA events officer, email: k.bali@fisita.com.

Deadline for applications is Friday 2nd June 2023.

1. **Which SOP are you applying for?**

FISITA World Congress [ ]

EuroBrake [ ]

1. **Your personal details:**

|  |  |
| --- | --- |
| Name: |  |
| Address: |  |
| Email: |  |
| Phone: |  |
| If you are a member of an engineering society eg. SAE please give the society name and your membership number/ID: |  |

1. **Education and course details:**

|  |  |
| --- | --- |
| Name of educationalEstablishment: |  |
| Course name: |  |
| Course level/degree:(under/postgraduate) |  |
| Technical interests: |  |
| Supervisor/course leader name: |  |

Note: please attach proof of your student status or student ID

1. **How did you hear about FISITA’s SOP?**

FISITA website [ ]

Your university/college [ ]

FISITA newsletter [ ]

Social media eg LinkedIn [ ]

Other [ ]

If other, please specify:

1. **What benefits are you hoping to gain by participating in the SOP 2023 programme?**

|  |
| --- |
| Your Personal statement: |

Note: please submit a copy of your CV (maximum two pages).

1. **Your poster abstract:**
* Maximum 500 words
* The poster should align with at least one of the themes of the appropriate conference (see below).
* No figures preferred but can be included if essential
* Written in English
* Your poster abstracts should contain a clear description of the main scientific, technical, economic and/or practical points to be addressed, applied methodology and achieved results paying particular attention to those aspects of the work which are new, innovative and unique.

|  |
| --- |
| Poster abstract: |

Once complete, please email this document to k.bali@fisita.com. Please ensure you have attached your student ID and your CV. We will advise if your application has been successful by 16 June 2023.

WORLD CONGRESS THEMES

Design:

* Personal, commercial & multimodal mobility (road, off road and non road vehicles)
* Integrated safety, connected & automated driving
* Propulsion, power & energy efficiency
* Software defined vehicle
* Lightweight & advanced vehicle platforms
* Comfort technologies

Manufacture:

* Industry 4.0
* New manufacturing technology & methodology
* Smart logistics
* Advanced & sustainable materials

Use:

* New mobility transport models, smart communities & cities
* User experience, lifestyle & aftermarket
* Planning & management
* ITS
* Road & energy infrastructure

Universal Themes:

* Safety & cybersecurity
* Sustainability, circular economy & LCA
* Digitalisation
* Regulatory environment
* Automotive disruption

EUROBRAKE THEMES

Brake Systems:

* Intelligent braking and braking control
* Environmentally friendly braking systems
* Digital twins – link between modelling, simulation and testing
* Challenges of ADAS requirements

Testing:

* Brake wear and emissions - testing
* NVH – testing
* Testing and standardisation
* Simulation, testing, innovative development processes

Modelling and Simulation:

* Brake wear and emissions - simulation
* NVH - simulation
* Artificial intelligence
* New simulation techniques and data driven methods

Technologies:

* Regenerative braking
* Brake-by-wire
* New developments in braking
* Systems engineering
* The future of braking
* Electromechanical braking

Environmentally Friendly Approaches:

* Sustainability (logistics, manufacturing processes, testing efforts, material selection, environmental impact, recycling)
* Green / zero emission manufacturing
* Life cycle assessment
* GTR / regulation related topics

Components and Materials:

* Fundamentals of brakes
* Materials and design
* Friction material testing & requirements for EVs / BEVs
* Future coating materials development
* Brake rotors

Commercial Vehicle:

* Outlook on brake particle emissions of LCV and HDV
* Challenges of electrified LCV and HDV in terms of endurance brake systems
* Challenges of electrified LCV and HDV for truck/trailer brake balance

Railway:

* Impact of railway on (urban) air quality issues
* Technological measures to reduce non-exhaust emissions from rail