

**The Engineering
Integrity Society**

Tyre/Road Runway Interaction: Modelling, Simulation & Validation

**HORIBA MIRA, Nuneaton
22 November 2018**



This seminar is aimed at not just the motor industry but any industry wishing to understand better the reaction between tyre and road. The presenters will discuss the current understanding and work undertaken to model/predict the interaction between rubber and tarmac. This should provide an insight and we would welcome delegate participation in the interactive discussions. There will also be a demonstration of tyre modelling and the effects of tyre wall ratio on loading inputs using a design and simulation model.

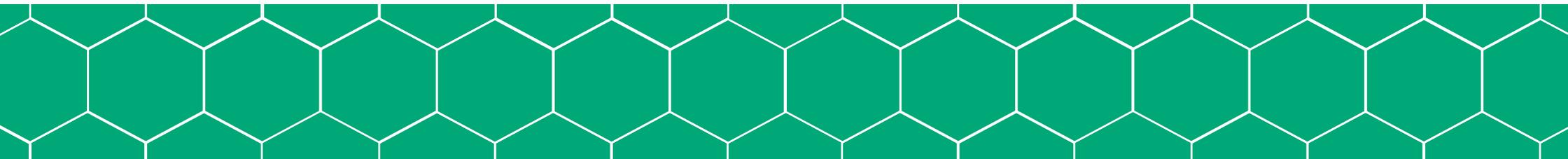
PROVISIONAL PROGRAMME

- 09.15 Registration, Tea and Coffee
- 09.45 Introduction to the EIS - Norman Thornton/Steve Payne (EIS)
An overview of EIS and the day's presentations on modelling and understanding the interactive between tyre and road/runway.
- 10.00 HORIBA MIRA's Virtual Proving Ground - Stratos Stratoudakis, HORIBA MIRA
The modern view of vehicle design is that much of it can be done in the virtual world. This presentation looks at the integrated approach to the process from obtaining load case information using virtual engineering techniques. This methods include building a representative full vehicle model coupled with a high fidelity tyre model which is in 3-d contact with MIRA's scanned road surfaces.
- 11.00 Road Surface Characterisation - David Woodward, Ulster University
A look into how we objectively characterise the road surface.
- 12.00 Lunch & Networking
- 12.45 Interactive demonstration highlighting high and low profile tyres and resultant forces
- 13.00 Testing Rubber to Road Surface Contact - Alex O'Neill, University of Surrey
The practical applications and considerations of testing the tyre contact to road surface.
- 13.45 A Vehicle Manufacturer's Perception of Tyre Modelling - Jan Prins & Marco Furlan, Jaguar Land Rover
The effect of the road surface, the vehicle and the tyre from a vehicle manufacturer's perspective.
- 14.30 Road scanning - measurement technologies and modelling methods - Gian Matteo Bianchi, University of Rome Tor Vergata
The importance of scanning resolution and its influence on vehicle attributes
- 15.15 Understanding Tyre, Road & Runway Surface Topography - Do traditional profile measuring methods and Ra roughness outputs, really provide the analytical "traction" we need? - Pete Clements, Optimax & Daniel Steinkellner, Alicona
Overview of the latest innovations in mobile high resolution 3D surface metrology and the use of area based roughness, waviness and profile geometry.
- 16.00 Discussion - Steve Payne & Norman Thornton (EIS)

BOOKING FORM

	EIS Member	Non EIS Member
Delegate	£100+VAT	£125+VAT
Student/Apprentice	£25+VAT	
	UK	Rest of the World
Personal Membership of the EIS	£25 per year	£30 per year
I enclose a cheque for £_____ made payable to the Engineering Integrity Society. Payment can also be made by BACS.		
Name:		
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Any Special Dietary Requirements		
Please tick this box if you are happy to have future contact with the EIS. We limit the emails we send and will never pass your details to any other organisation. You are able to unsubscribe at any time. Our privacy statement can be viewed on our website. <input type="checkbox"/>		
Please tick this box if do not want to receive any information from the EIS. <input type="checkbox"/>		

Please return completed forms to the following address:
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Telephone: +44(0)1623 884225 Email: info@e-i-s.org.uk



The **Engineering Integrity Society** is an independent not-for-profit organisation which aims to inspire all engineers, both experienced and newly qualified, across a broad spectrum of technologies. The Society is committed to promoting events and publications, providing a forum for engineers to discuss present industrial needs, new technologies and to stimulate both company and personal development.

The annual subscription rates are £25 for UK residents and £30 for non-UK residents. Upon joining the Society you will also have the additional advantages of preferential attendance rates at EIS events, together with selected events held by some of the associated organisations. In addition you will have access to CDs containing archived copies of EIS presentations.

HORIBA MIRA is a highly customer-focused, world-class, independent vehicle engineering consultancy, shaping everything we do around the partnerships we create. We harness the skills, experience and knowledge of our talented experts to provide our customers with intelligent solutions to their challenging problems. HORIBA MIRA offers full system design, test and integration expertise to the global automotive, defence, rail and transport industries. HORIBA MIRA's technical facilities provide a truly global centre of excellence from which to innovate, engineer, test and implement market changing solutions.

The **Engineering Integrity Society** is pleased to acknowledge the support of the following organisations:

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