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.

About Moog

Moog is a worldwide designer, manufacturer, and integrator of precision motion control products and systems. Moog's high-performance systems control military and commercial aircraft, satellites and space vehicles, launch vehicles, missiles, industrial machinery, wind energy, marine applications, and medical equipment.

Moog has been established in the United Kingdom since the late 60s, providing local expertise and advanced facilities that are growing to meet our customer's needs such as: the supply and service of Moog servo valves, complete primary and secondary flight control and actuation systems for all types of aircraft, designing test systems, supporting OEM and End Users in industrial automation and global motorsport.

The **ENGINEERING INTEGRITY SOCIETY** is pleased to acknowledge the support of the following organisations:

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The Engineering Integrity Society

The Future of Hydraulics in Mechanical Testing

Moog, Tewkesbury
Thursday 25 September 2014

A one day event is being held at Moog, Tewkesbury for engineers interested in the use of Electro-Hydraulics (EH) in mechanical testing for performance, durability and fatigue and developments in force application.

Registered Address: Engineering Integrity Society, c/o Hollis & Co., 35 Wilkinson Street, Sheffield S10 2GB
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The Future of Hydraulics in MechanicalTesting

Moog, Tewkesbury
Thursday 25 September 2014

An initial overview will discuss the often misunderstood impact of frequency, amplitude and actuator dimensions on equipment performance and required power. A fundamental need in all testing is repeatability which is enhanced by equipment operating in a stable and reliable condition. Changes should be to the specimen not the equipment used for the test.

The differences between techniques employed in Aerospace, Automotive and Civil testing will be explored. This will be followed by a presentation discussing the use of rotary hydraulic actuators. Over the lunch period delegates will have the opportunity to view Moog's Aircraft and Industrial facilities which includes Class 100,000 Clean Rooms, extensive machine shop, Wimbledon Roof Actuator Test Rig, Motorsport facility and to try out force feedback technology with the Moog Dental Trainer.

The final session of the day will focus on how new types of electric actuators can complement existing equipment.

Programme

9am	**Registration, tea and coffee**
9.20am	**Introduction - Chris Curr, Entity Manager, Moog Industrial Group**
9.30am	**Hydraulic System Overview - Norman Thornton, Engineering Consultant** A brief description of the basic elements system will be followed by the effect of performance when specifiying amplitude, frequency combined with equipment.
10.30am	**Tea and Coffee**
11.00am	**An Insight into the Complex Nature of Structural Testing - Stephen Barrett, MIET, MRAeS, Systems Services** Differences between the nature of the specimens, the definition of service life and techniques used to test between Automotive, Aerospace and Structural Industries will be explored.
12.00pm	**Rotary hydraulic actuators; applications in testing and shaft torque calibration - Jarek Rosinski, CEO, Transmission Dynamics** The use of rotary torque actuators in back-to-back testing of transmission systems and shaft torque calibration is discussed, exploring typical challenges and examples.
1.00pm	**Lunch and Tour of Moog facilities**
2.30pm	**The Application of Elecro-Mechanical Test Systems and their use in Load Application - Job Moermon (Test Systems, Moog Nieuw Vennep)** EH Test systems has been the natural choice for static and dynamic load applications. However, recent advances in EM technology offers complementary technology. Job Moermon gives an insight into the development of this technology, considers the cost and practical benefits and reviews the pros and cons of both EH and EM when applied to Mechanical Testing.
3.30pm	**Q&A Session**
4.30pm	**Closing Comments**

Booking Form

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	UK	Rest of the World
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I enclose a cheque for £_____ made payable to the Engineering Integrity Society. Payment can also be made by BACS.		
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