### For Further Information

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## The Engineering Integrity Society

The Engineering Integrity Society is a professional body formed in 1985. The objectives are to stimulate the exchange of ideas and information between engineers and technologists whose interest lie in designing, developing or manufacturing products which must achieve high standards of integrity.

The society comprises three groups: Durability & Fatigue, Simulation Test & Measurement and Noise Vibration & Harshness. The society groups have made a recognisable and significant contribution to advancing Engineering Science. Over the last twenty-one years the EIS has established itself as a professional body dedicated to the engineering integrity of manufactured products.

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

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The Engineering Integrity Society

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# **The Engineering Integrity Society**

Durability and Fatigue Challenges in Wind, Wave and Tidal Energy

to be held at



Wednesday, 29 November 2006

Co-sponsored by IMechE, IoM<sup>3</sup> and BWEA









# Durability and Fatigue Challenges in Wind, Wave and Tidal Energy

## Wednesday, 29 November 2006

This one-day event in Bristol brings together developers, professionals and academics in the rapidly developing world of renewable energy systems. The event is focused on the technical durability assessment of renewable energy structures and, in particular highlights the design and development of offshore systems, which includes recent progress in power generation from the wind, wave and tide energy. The speakers are drawn from established companies in this sector as well as from emerging technologies together with experienced professionals in advanced monitoring and theoretical assessment of renewable energy structures. The event is suitable to everyone involved with renewable technology and is held at BAWA centre near Airbus UK, Filton Bristol with easy access by car (M4 and M5) and by train (Parkway station is 10 minutes by taxi).

### **Programme**

09:00	Registration				
09:45	KEYNOTE PRESENTATION Steve Gilkes – Garrad Hassan Current status of the wind energy development				
10:15	Geoff Dutton – RAL Energy Research Unit Thermoelastic stress analysis and acoustic emission monitoring during full scale tests of wind turbine rotor blades				
10:45	Jarek Rosinski, Martin Rosinski, Andrew Wechsler – Transmission Dynamics Remote torque measurements and gearbox condition monitoring for wind turbines				
11:15	Coffee/Tea				
11:30	Roger Haines - Garrad Hassan Techniques & pitfalls in the analysis of fatigue histories in wind turbine hub assemblies				
12:00	Daniel Ng - Hexcel Compression-compression fatigue behaviour of composite blade				
12:30	Lunch				
13:30	Daniel Shuter - Corus Group Cost reduction and life extension of offshore wind farms (CORLEX)				
14:00	Charles Taylor - Ocean Power Delivery Fatigue analysis approach of Pelamis main structural elements				
14:30	Peter Fraenkel - Marine Current Turbines Marine Current Turbines: towards commercial reality				
15:00	Coffee/Tea				
15:15	Tim Camp – Garrad Hassan Fatigue loading of offshore wind turbines - the importance of integrated analysis				

	Measurements at the Blyth offshore wind turbines						
The certification	io Bittencourt - DNV ertification views on the structural survivability / reliability for wave and nergy converters						
•	- Safe Technology Ided joints, the Battelle structural stress method						
17:15 Closing discu	ıssion						
Times of presentations may vary. Please check the website for the latest information.							
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