

# RELIABILITY AND ASSET MANAGEMENT 2016

## PREVENTING THE DETERIORATION OF ASSETS AND MAINTAINING A HIGH LEVEL OF RELIABILITY

Institution of  
**MECHANICAL ENGINEERS**

**27 April 2016**

Institution of Mechanical Engineers  
One Birdcage Walk, London

More details available at  
[www.imeche.org/assetmanagement](http://www.imeche.org/assetmanagement)

### SPEAKERS INCLUDE:



Andy Mortimer  
Asset Performance Manager  
**Heathrow Airport**



Wolfgang Hahn  
Head of Engineering  
**EDF Energy**



Stephen Foot  
Head of Asset Condition  
**London Underground**



Mark Norris  
Principal Management Consultant  
Asset Management Transformation  
**Atkins**



Gary Knight  
Reliability and Integrity Engineer  
**Sabic Petrochemicals**

Safety and Reliability Group  
**Seminar**



# RELIABILITY AND ASSET MANAGEMENT 2016

27 April 2016,  
Institution of Mechanical Engineers  
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## PREVENTING THE DETERIORATION OF ASSETS AND MAINTAINING A HIGH LEVEL OF RELIABILITY.

Join us at **Reliability and Asset Management 2016** to address the technical engineering challenges in managing products, systems and spares across industries.

The main challenge facing reliability engineers continues to be the deterioration of products through usage and degradation, idleness, treatment and maintenance, as well as human factors such as loss of knowledge and skills.

Our expert speaker panel of thought leaders will outline new methods and processes to identify potential issues before they incur high rectification and compensation costs.

### Who Should Attend

- Reliability Engineer
- Engineering Manager
- Principal Asset Engineer
- Principal Inspector
- Project Engineer
- Design Engineer
- Principal Reliability Engineer
- Asset Engineer
- Validation Engineer

### WHY ATTEND:

- Hear case studies from a diverse range of industries including **transport and power**
- Learn new methods and processes in reliability management including **root cause analysis** and different aspects of life cycle engineering
- Engage in specialised interactive round table discussions on **human factors, storage, software, obsolescence and compatibility**
- Attend the only event to address key principles behind **management and reliability of assets** in the engineering community



### ORGANISING COMMITTEE

Safety and Reliability Group,  
Institution of Mechanical Engineers

### Members Credits:

Bob Wilson  
Safety and Reliability Group,  
Institution of Mechanical Engineers

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# PROGRAMME

## WEDNESDAY 27 APRIL 2016

<b>08:30</b>	<b>REGISTRATION AND REFRESHMENTS</b>
<b>09:00</b>	<b>CHAIR'S OPENING REMARKS</b>
<b>09:15</b>	<b>KEYNOTE: ASSET MANAGEMENT AND RELIABILITY LANDSCAPE</b> Mark Norris, Principal Management Consultant, Asset Management Transformation, Atkins <ul style="list-style-type: none"><li>• What is Asset Management?</li><li>• The Asset Management landscape and the principles of Asset Management</li><li>• The scope of Asset Management and the 39 subjects of Asset Management</li><li>• How Reliability Engineering contributes to Asset Management</li></ul>
	<b>RISK AND REVIEW</b>
<b>09:40</b>	<b>LARGE POWER PLANT SHORT TO MEDIUM TERM LAY-UP AND PRESERVATION</b> Wolfgang Hahn, Head of Engineering, EDF Energy <ul style="list-style-type: none"><li>• General good practise to boiler and steam turbine lay-up</li><li>• Practical approaches to achieving lay-up conditions</li><li>• Risks and impacts of incorrect plant lay-up: Degradation mechanisms and potential failure modes</li><li>• How to find the correct balance between plant preservation and response to starting plants up for generation</li><li>• Challenges in achieving reliability after deep preservation during plant start up and return to service</li></ul>
<b>10:05</b>	<b>QUESTION AND ANSWER SESSION</b>
<b>10:20</b>	<b>NETWORKING REFRESHMENT BREAK</b>
	<b>ASSET KNOWLEDGE ENABLERS</b>
<b>10:50</b>	<b>OBSERVING THE GAPS IN EFFECTIVE ROOT CAUSE ANALYSIS (RCA) IMPLEMENTATION</b> Jane Goodacre, Principal Consultant, Performance 247 <ul style="list-style-type: none"><li>• Understanding the real benefits of RCA</li><li>• The Power of Inclusive Team Investigation</li><li>• Understanding the Process of Failure versus a Solution Tool</li></ul>
	<b>LIFECYCLE DELIVERY ACTIVITIES</b>
<b>11:15</b>	<b>LIFE CYCLE ENGINEERING: USAGE AND DEGRADATION</b> Gary Knight, Senior Reliability Engineer, Sabic Petrochemicals <ul style="list-style-type: none"><li>• How environmental, operational and maintenance aspects affect equipment</li><li>• Degradation mechanisms and performance deterioration</li><li>• Asset Performance Management principles</li></ul>
	<b>STRATEGY AND PLANNING</b>
<b>11:40</b>	<b>HUMAN FACTORS ENGINEERING: A COGNITIVE APPROACH</b> James Neophytou, Associate Partner, IBM Global Business Services <ul style="list-style-type: none"><li>• How human factors influence design</li><li>• Practical examples in the field</li><li>• Using Artificial Intelligence and the new "Cognitive" era to improve outcomes</li></ul>
<b>12:05</b>	<b>QUESTION AND ANSWER SESSION</b>
<b>12:20</b>	<b>NETWORKING LUNCH</b>
	<b>ASSET MANAGEMENT</b>
<b>13:20</b>	<b>A DATA DRIVEN APPROACH FOR THE MAINTENANCE AND MANAGEMENT OF LONDON UNDERGROUND'S ASSETS</b> Stephen Foot, Head of Asset Condition Maintenance Engineering, London Underground <ul style="list-style-type: none"><li>• London Underground's business context and challenges, which are driving a need to change our approach to maintaining and managing our assets</li><li>• The objectives and scope of the Predict and Prevent Programme to support London Underground's service through the effective use of asset data</li><li>• Case study demonstrating the effective use of asset data to support managing an integrated railway system</li></ul>
	<b>DECISION MAKING</b>
<b>13:45</b>	<b>THE RELIABILITY JOURNEY AT HEATHROW</b> Andy Mortimer, Asset Performance Manager, Heathrow Airport <ul style="list-style-type: none"><li>• Why good reliability is important to Heathrow and the impact on the passenger</li><li>• Turning "data" into "information"</li><li>• Engaging with the workforce</li><li>• What next?</li></ul>
	<b>RISK AND REVIEW</b>
<b>14:10</b>	<b>MARINE RELIABILITY: SYSTEMS REDUNDANCY ON PASSENGER SHIPS</b> Fergus McCulloch, Mechanical Engineer, Brookes Bell Safety at Sea <ul style="list-style-type: none"><li>• Safe Return to Port philosophy: Why the ship is its own best lifeboat</li><li>• System complexity on large passenger ships</li><li>• Exploring the software solution</li></ul>
<b>14:35</b>	<b>QUESTION AND ANSWER SESSION</b>
<b>14:50</b>	<b>NETWORKING REFRESHMENT BREAK</b>
<b>15:20</b>	<b>ROUND TABLE DISCUSSIONS</b> <ul style="list-style-type: none"><li>• How do we address human factors including retention of knowledge and ensuring continuity of support?</li><li>• How does long term storage affect equipment and what are the best methods to prolong shelf life?</li><li>• What are the best methods to safeguard against obsolescence and compatibility complications?</li><li>• How can we prevent issues arising with software, particularly on ongoing developments?</li></ul>
<b>16:20</b>	<b>SUMMARY OF DISCUSSIONS</b>
<b>16:40</b>	<b>CHAIR'S CLOSING REMARKS</b>
<b>16:50</b>	<b>END OF SEMINAR</b>

**For the most up-to-date and detailed programme for the event, please visit [www.imeche.org/assetmanagement](http://www.imeche.org/assetmanagement)**

- This programme is subject to change.
- The Institution is not responsible for the views or opinions expressed by individual speakers.

# SPEAKERS AND CONTRIBUTORS

## KEYNOTE SPEAKER

### **MARK NORRIS** PRINCIPAL MANAGEMENT CONSULTANT, ASSET MANAGEMENT TRANSFORMATION, ATKINS

Mark Norris has been a Reliability professional since 1998 and an Asset Management professional since 2007. Mark has been a Reliability and Asset Management Consultant since 2011 and is now a Principal Consultant with Atkins Management Consultancy division, providing Reliability Centred Maintenance training to Network Rail. He regularly presents on his specialist areas at seminars and symposia.

## SPEAKERS

### **WOLFGANG HAHN** HEAD OF ENGINEERING, EDF ENERGY

Wolfgang Hahn has 28 years of industry experience, including roles in the Marine Engineering Industry, Manufacturing Industry and Power Generation Industry (nuclear and non-nuclear). His current role as Head of Engineering within the Central Technical Organisation of EDF Energy means that he is responsible for dealing with all engineering matters related to the assets within the UK non-nuclear portfolio, exercise governance in terms of plant risk, integrity and safety, but also provide oversight against plant design intent to support safe, reliable operation of the UK fleet of coal, gas fired and wind driven generation within the UK.

### **STEPHEN FOOT** HEAD OF ASSET CONDITION, MAINTENANCE ENGINEERING, LONDON UNDERGROUND

Stephen Foot has worked within the railway industry for 28 years primarily in roles associated with, and directly responsible for, the maintenance of railway infrastructure. A graduate from Sheffield University in Electrical and Electronic Engineering, his career started with railway signalling maintenance and progressed to managing infrastructure (signals, track, telecoms) maintenance and renewals. For the last 9 years he has been with London Underground, developing the use of monitoring technology to support asset maintenance. This role has evolved into being the technical lead for the Predict and Prevent Programme. This is about developing a data driven approach for the maintenance and management of London Underground's assets.

### **JANE GOODACRE** PRINCIPAL CONSULTANT, PERFORMANCE 247

Jane Goodacre has delivered a wide range of performance improvement projects across different sectors but particularly specialises in maintenance, process and operational improvement. Although Jane has held senior positions in consulting she also has direct operating experience as the Reliability Facilitator for Shell Stanlowe Refinery. She has a very pragmatic approach to improvement work always looking for practical solutions and effective ways for these to be implemented. An international consultant, Jane has led projects in South America, Europe, Singapore and the USA. She is a highly regarded conference speaker and has chaired many of the leading reliability conferences globally.

### **FERGUS MCCULLOCH** MECHANICAL ENGINEER, BROOKES BELL SAFETY AT SEA

Fergus McCulloch, for the last 20 years, has worked in a range of industries, including rail, oil and gas, nuclear power, offshore renewables and nuclear submarines, as well as being an apple packer in New Zealand. He got into Safety and Reliability almost by accident when a last-minute postgrad opportunity came up at Aberdeen University in 1995. In 2011 Safety at Sea, part of the Brookes Bell Group, welcomed him onto their team where he has been involved in a diverse range of marine safety projects.

### **JAMES NEOPHYTOU** ASSOCIATE PARTNER, IBM GLOBAL BUSINESS SERVICES

James Neophytou is an Associate Partner at IBM. He leads the Asset Lifecycle Management practice in the UK and Ireland. James works extensively with industrial clients across Europe on predictive analytics and the Internet of Things. Born in Cyprus and raised in London, he attended the University of Birmingham. James' client-projects include engineering design, operational reliability and maintenance, capital construction and supply chain. He has worked at IBM for 14 years and with clients globally in the petroleum, manufacturing, industrial products and utilities sectors. He is a member of the Energy Institute.

### **ANDY MORTIMER** ASSET PERFORMANCE MANAGER, HEATHROW AIRPORT

Andy Mortimer joined the Merchant Navy with Shell Tankers in 1976 as an Engineering Cadet, and sailed with Shell as an Engineer until 1985, developing a broad range of technical skills and a clear understanding of the need to be resourceful and creative in developing solutions. He joined Mars in 1985 covering a number of roles in both Engineering and Production Management, learning and growing in a process driven production environment. Andy started at Heathrow in 2009 as a Maintenance Manager for the Track Transit System in Terminal 5, and have subsequently been in a number of Asset Manager roles, more recently the Asset Performance Manager within the Engineering Delivery Team.

### **GARY KNIGHT** SENIOR RELIABILITY ENGINEER, SABIC PETROCHEMICALS

Gary Knight is currently Senior Reliability Engineer on a petrochemical processing and polymer production site. Gary has had extensive experience in process and equipment improvement across a diverse industry base which includes automotive, food, steel and petrochemical.

# BOOKING FORM

EVENT CODE: SEM6354

## RELIABILITY AND ASSET MANAGEMENT 2016

27 April 2016, Institution of Mechanical Engineers, One Birdcage Walk, London  
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Member, Institution of Mechanical Engineers	£340.00 + VAT	£
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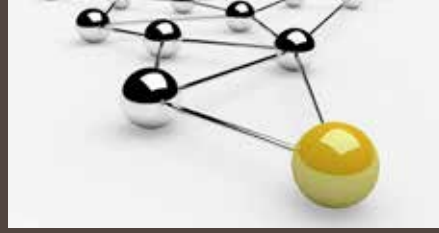


11 March 2016  
ICC, Birmingham

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### INSTITUTION OF MECHANICAL ENGINEERS' ANNUAL DINNER

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[www.imeche.org/annualdinner2016](http://www.imeche.org/annualdinner2016)

## INFORMATION AND BOOKINGS

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