

ROBOTICS AND AUTONOMOUS SYSTEMS IN OFFSHORE WIND OPERATION AND MAINTENANCE SERVICES

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ENGINEERS**

23 May 2019
One Birdcage Walk, London

Power Industries Division, Renewable Power
Committee
Seminar

More details available at:
www.imeche.org/offshorewind

KEY SPEAKERS INCLUDE:

Christopher Rowland, UK Field Manager, Inspection
Management
Ørsted

Andy Lewin, Wind Turbine Package Manager
SSE Seagreen Offshore Wind Farm

Tony Fong, Engineering Team Lead, Balance of Plant and
Robotics & Autonomous Systems
ORE Catapult

Iain Wallace, Chief Technology Officer
Rovco

Mark Emerton, Innovation Lead, Robotics and AI
Innovate UK



SUPPORTING ORGANISATIONS:



EVENT PARTNERS:



Book your place at: **www.imeche.org/offshorewind**

ROBOTICS AND AUTONOMOUS SYSTEMS IN OFFSHORE WIND OPERATION AND MAINTENANCE SERVICES

23 May 2019, One Birdcage Walk, London

COLLABORATION IS NEEDED TO RECOGNISE THE POTENTIAL OF RAS IN OFFSHORE WIND O&M AND MAXIMISE THE BENEFITS FOR THE UK IN TERMS OF JOB CREATION, INCREASED GVA AND EXPORTS. THIS EVENT REVEALS SPECIFIC INDUSTRY INNOVATION CHALLENGES RELATED TO O&M AND REQUIREMENTS FOR RAS (BOTH COMMERCIAL AND TECHNICAL).

Explore the cutting-edge of robotic developments for offshore wind operations and maintenance, and how engineering challenges can be addressed. Case studies of companies who are developing solutions and gaining traction in the industry will be presented, as well as plans for improvements to UK test infrastructure to support and de-risk technology developments. Attendees will leave with an understanding of how RAS are currently being used by offshore wind operators to reduce costs and de-risk O&M activities.

RAS technologies exist and have potential to reduce O&M costs, as well as taking humans out of dangerous offshore environments; but applications in offshore wind are limited. Collaborative work involving the offshore wind industry and the relevant UK supply chain companies, academic institutions, test centres and government programmes is required to accelerate commercialisation of technology in this sector and maximise the economic growth opportunity for the UK.

Utilise opportunities for networking with innovators in the field and discuss key challenges that could be resolved using RAS.

ORGANISING COMMITTEE:

Power Industries Division, Renewable Power Committee
Institution of Mechanical Engineers

MEMBER CREDIT:

Tony Quinn, Test Facilities Director,
ORE Catapult

ATTEND THIS SEMINAR TO:

- Hear from leading organisations about the **challenges facing the delivery of offshore wind O&M services** and opportunities for **cost reduction and health and safety improvements**
- Understand how Robotics and Autonomous Systems can **reduce operational expenditure** and **improve energy generation and health and safety**
- Learn about the **latest developments in RAS** applied to offshore wind O&M and ongoing demonstration projects
- Meet and discuss with **RAS experts, leading academic, research and test centres and end users in the offshore wind industry**
- Ask key questions about **how RAS can be applied to your specific operations and maintenance needs during the Q&A sessions** following each presentation

KEY PROGRAMME HIGHLIGHTS:

- **ORE Catapult** discuss key areas for innovation and application of robotics and autonomous systems in offshore wind operations and maintenance
- **Innovate UK** sheds light on government industrial strategies for robotics and autonomous systems
- **Ørsted** highlights opportunities for autonomous and AI technology with inspection, maintenance and asset integrity
- **Rovco** will discuss how the application of AI and autonomy is changing the way subsea inspection is done, and can provide richer, reliable, repeatable measures of risk for assets
- **SSE Seagreen Offshore Wind Farm** share insights into the status of the offshore wind market in a keynote address

PROGRAMME

THURSDAY, 23 MAY 2019	
08:30	REGISTRATION AND REFRESHMENTS
09:00	CHAIR'S OPENING REMARKS
09:10	KEYNOTE ADDRESS: OFFSHORE WIND MARKET OVERVIEW Andy Lewin, Wind Turbine Package Manager, SSE Seagreen Offshore Wind Farm
09:40	THE APPLICATION OF ROBOTICS AND AUTONOMOUS SYSTEMS IN OFFSHORE WIND Tony Fong, Engineering Team Lead, Balance of Plant and Robotics & Autonomous Systems, ORE Catapult
10:05	QUESTION AND ANSWER SESSION
	ONGOING PROJECTS
10:10	MAKING OFFSHORE INFRASTRUCTURE SMART USING LIMPETS Alistair McConnell, Research Associate, University of Edinburgh
10:30	QUESTION AND ANSWER SESSION
10:35	INSPECTION EYES IN THE SKY: DRIVING EFFICIENCY WITH DRONES AND DATA Phil Buchan, Commercial Director, Cyberhawk
10:55	QUESTION AND ANSWER SESSION
11:00	NETWORKING BREAK
11:30	THE ROLES FOR MAS IN THE OFFSHORE WIND FARM INDUSTRY Dan Hook, Senior Director, Business Development, ASV Global
11:50	QUESTION AND ANSWER SESSION
11:55	ARTIFICIAL INTELLIGENCE POWERED 3D INSPECTION FOR AUVS AND ROVS Iain Wallace, Chief Technology Officer, Rovco
12:15	QUESTION AND ANSWER SESSION
12:20	PRESENTATION FROM MODUS Andy Baker, UAV Manager, MODUS
12:40	QUESTION AND ANSWER SESSION
12:45	NETWORKING LUNCH
	IMPLEMENTATION OF RAS IN OFFSHORE WIND
13:45	OPPORTUNITIES AND OPERATIONAL CHALLENGES IN THE ADOPTION OF AUTONOMOUS AND AI TECHNOLOGIES IN O&M SERVICES Christopher Rowland, UK Field Manager, Inspection Management, Ørsted
14:10	QUESTION AND ANSWER SESSION
14:15	ROBOTS CHANGE THE GAME: AUTONOMOUS UAVS AND ROVS AS DISRUPTORS IN OFFSHORE RENEWABLES ASSET MANAGEMENT Elizabeth Ann Traiger, Senior Researcher in AI, Power & Renewables, DNV GL
14:40	QUESTION AND ANSWER SESSION
14:45	Presentation to be announced Lars Nielsen, Head of Export Controls and Customs, Siemens Gamesa Denmark
15:10	QUESTION AND ANSWER SESSION
15:15	NETWORKING REFRESHMENT BREAK
	FUTURE OF ROBOTICS AND AUTONOMOUS SYSTEMS IN OFFSHORE WIND
15:45	INDUSTRIAL STRATEGY CHALLENGE FUND - ROBOTICS FOR A SAFER WORLD Mark Emerton, Senior Innovation Lead, Robotics and AI, Innovate UK
16:10	QUESTION AND ANSWER SESSION
16:15	CAREERS PANEL: ADDRESSING THE SKILLS GAP Chair: Professor David Flynn, Director of the Smart Systems Group, Heriot-Watt University
16:50	CHAIR'S CLOSING REMARKS
17:00	END OF SEMINAR

For the most up-to-date and detailed programme for the event, please visit:
www.imeche.org/offshorewind

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

HOW TO BOOK YOUR PLACE

FEES AND CHARGES

Registration fees include entry to the sessions, refreshments and a copy of the conference proceedings.

Delegate Type	EARLY BIRD RATE Until 12 April 2019	STANDARD RATE
Member, Institution of Mechanical Engineers / Supporting Organisation	£190 + VAT = £228	£240 + VAT = £288
Non-member	£230 + VAT = £276	£280 + VAT = £336
Full-time Student/Retired	£90 + VAT = £108	£90 + VAT = £108

THREE WAYS TO BOOK

- 1 online:
www.imeche.org/offshorewind
- 2 email:
eventenquiries@imeche.org
- 3 phone:
+44 (0)20 7973 1251

Please read the information listed below as each booking is subject to the Institution's standard terms and conditions.

CONDITIONS OF BOOKING

Completed application forms should be returned to the address above, along with the correct payment. Attendance at the event will be confirmed on receipt of the full balance. All participants are advised to bring a copy of their confirmation with them on the day, to ensure the fastest possible entry.

SPECIAL REQUIREMENTS

Please inform us of any special requirements, ie dietary or access, on the relevant section of the booking form or email eventenquiries@imeche.org

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the fee paid. The Institution is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. The Institution shall assume no liability whatsoever if this event is cancelled, rescheduled or postponed due to a fortuitous event, Act of God, unforeseen occurrence or any other event that renders performance of this conference impracticable, illegal or impossible. For the purposes of this clause, a fortuitous event shall include, but not be limited to: war, fire, labour strike, extreme weather or other emergency.

Please note that while speakers and topics were confirmed at the time of publishing, circumstances beyond the control of the organisers may necessitate substitutions, alterations or cancellations of the speakers and/or topics. The Institution reserves the right to alter or modify the advertised speakers and/or topics if necessary without any liability to you whatsoever. Any substitutions or alterations will be updated on the event's webpage as soon as possible.

LIABILITY

The organisers do not accept liability for any injuries or losses of any nature incurred by delegates and/or accompanying persons, nor for loss or damage to their luggage and/or personal belongings.

CONFERENCE VENUE

Institution of Mechanical Engineers
One Birdcage Walk
Westminster
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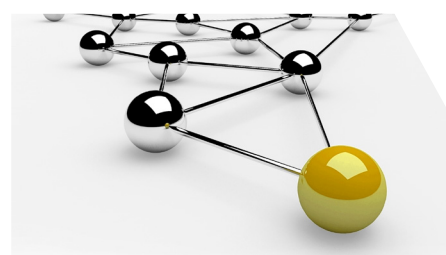
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OTHER EVENTS TO LOOK FOR

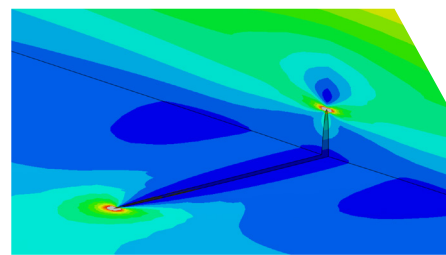


ESSENTIAL MANAGEMENT SKILLS 2019

3-5 April 2019, Coventry

Improve your ability to manage people, projects and teams, as well as motivate you to take control of your own development. This hugely popular annual programme focuses on developing leadership, communication and project management skills for engineers.

www.imeche.org/ems



IMPROVING SAFETY WITH ADVANCED FRACTURE MECHANICS

15 May 2019, London

As codes and standards such as BS7910 and R6 are updated, it is important for industry to follow the direction of the latest research in order to reduce risk, enhance safety and gain more accurate results. Join this seminar to address the key challenges around the industry's adoption of new testing methods, bridging the gap between academic innovation and industry application.

www.imeche.org/fracturemechanics

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