

# NON DESTRUCTIVE TESTING 2019

## ENSURING INTEGRITY OF ASSETS

Institution of  
**MECHANICAL ENGINEERS**

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### Seminar

**14 March 2019**

Manchester United Football Ground,  
Old Trafford, Manchester

### KEY SPEAKERS INCLUDE:

James Downing, Chief NDT Engineer  
**Babcock International**

Robert Smith, Director  
**UK Research Centre in NDE**

Tom O'Hare, Senior Project Engineer, NDT Level 3  
Specialist  
**Bombardier Aerospace**

Jérôme Delemontez, NDT Expert Engineer  
**EDF - Division Technique Générale**

Gethin Davies, Lead Innovation Engineer  
**Jaguar Land Rover**



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ENGINEERS

# NON DESTRUCTIVE TESTING 2019

14 March 2019, Manchester United Football Ground,  
Old Trafford, Manchester

**WITH BUDGETS BEING HEAVILY SCRUTINISED FOR NEW DEVELOPMENTS, ENSURING THE PERFORMANCE, RELIABILITY AND UPTIME OF EXISTING MACHINERY, SYSTEMS AND INFRASTRUCTURE IS KEY. IT IS THEREFORE CRUCIAL THAT NON DESTRUCTIVE TESTING (NDT) IS OPTIMISED TO ENSURE THE STRUCTURAL INTEGRITY OF ASSETS AND REDUCE COST IN THE PROCESS.**

Attend Non Destructive Testing 2019 to hear best practice from key players across multiple industries, including power, aerospace, military and marine. Discover the latest methods being trialled to improve the efficiency of your organisation's testing procedures.

With the increasing use of new materials, understand how to design for and carry out NDT that reduces costs across the lifecycle of your products.

Meet and discuss the benefits and challenges of various NDT techniques across sector with NDT specialists, design, development engineers, inspectors and solution providers.

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## KEY PROGRAMME HIGHLIGHTS:

- Hear insights from the **RCNDE** about the future strategy for NDT across the UK
- **Jaguar Land Rover** share an automotive OEM's perspective on NDT
- **University of Bristol** discuss their latest work in non-linear ultrasonic development
- **BAE Systems** outline their use of machine learning and machine vision for testing of submarines
- **Office for Nuclear Regulation** share about requirements for the manufacturing NDT of safety critical components

## ATTEND THIS SEMINAR TO:

- Hear direct experience of NDT from leading engineering companies including **Jaguar Land Rover, EDF - Division Technique Générale, GKN Aerospace, BAE Systems, Babcock International, Rolls-Royce and Bombardier Aerospace**
- **Optimise your use of current NDT techniques** by hearing about successful operations
- **Understand the latest pioneering research into new methodologies**, including non-linear ultrasonics and design defect modelling
- **Improve your application of NDT for composites** through best practice from the transport sector
- **Network with pioneers in NDT**, including OEMS, inspection bodies, academia and solution providers

## WITH THANKS TO:

Simon Brittle, Assistant Chief Engineer – PWR1 & PWR2  
**Rolls-Royce**

Simon Quinn, Professorial Fellow (Enterprise), Faculty of Engineering and Physical Sciences  
**University of Southampton**

Bruce Drinkwater, Professor of Ultrasonics  
**University of Bristol**

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TERMS AND  
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# PROGRAMME

<b>THURSDAY 14TH MARCH</b>	
08:30	REGISTRATION AND REFRESHMENTS
09:00	<b>CHAIR'S OPENING REMARKS</b> Peter Wood, Head of NDE, Rolls-Royce Submarines
<b>APPLICATIONS OF CURRENT NON DESTRUCTIVE TESTING (NDT) TECHNIQUES</b>	
09:10 Morning Keynote	<b>NDT INITIATIVES ON IN-SERVICE NAVAL SUBMARINES AND SURFACE SHIPS</b> James Downing, Chief NDT Engineer, Babcock International
09:40	<b>NDT INSPECTION OF PELTON TURBINE WITH HARD COATING HVOF</b> Jérôme Delemontez, NDT Expert Engineer, EDF - Division Technique Générale
10:05	<b>PROPORTIONATE INSPECTION ASSURANCE: BALANCING THE VENN DIAGRAM INTERSECTION OF CREDIBLE DEFECTS, TOLERABLE SIZE AND POTENTIAL CONSEQUENCES</b> Speaker to be announced, Rolls-Royce
10:30	<b>QUESTION AND ANSWER SESSION</b>
10:45	NETWORKING REFRESHMENT BREAK
<b>DETECTING DEFECTS EFFECTIVELY IN COMPOSITES</b>	
11:15	<b>SMART NDT PLATFORMS FOR IMPROVED FIDELITY AND ADVANCED DIAGNOSTIC EVALUATION IN COMPLEX COMPOSITE AND NOVEL METALLIC AEROSPACE COMPONENTS</b> Tom O'Hare, Senior Project Engineer, NDT Level 3 Specialist, Bombardier Aerospace
11:40	<b>AN AUTOMOTIVE OEM'S PERSPECTIVE ON NDT</b> Gethin Davies, Lead Innovation Engineer, Jaguar Land Rover
12:05	<b>GKN AEROSPACE CASE STUDY</b> Kalliroi Sapountzi, NDT Development Engineer, GKN Aerospace
12:30	<b>QUESTION AND ANSWER SESSION</b>
12:45	NETWORKING LUNCH
<b>NON-DESTRUCTIVE TESTING UK PERSPECTIVE AND STANDARDS</b>	
13:45 Afternoon Keynote	<b>FUTURE STRATEGIC LEADERSHIP IN THE UK FOR TRL1-6 NDT TECHNOLOGY R&amp;D</b> Robert Smith, Director, UK Research Centre in NDE
14:15	<b>MANUFACTURING NDT OF NUCLEAR SAFETY SIGNIFICANT COMPONENTS OF NEW UK REACTORS</b> Russ Booter, Principal Inspector – Nuclear Safety, Office for Nuclear Regulation
<b>HEIGHTENED DETECTION THROUGH LATEST TECHNIQUE DEVELOPMENTS</b>	
14:40	<b>NONLINEAR ULTRASONIC INSPECTION TECHNIQUES</b> Anthony Croxford, Professor of Ultrasonics and Dynamics, University of Bristol
15:05	<b>QUESTION AND ANSWER SESSION</b>
15:15	NETWORKING REFRESHMENT BREAK
15:45	<b>EXPEDITING NDT DEVELOPMENTS FOR PRACTICAL APPLICATIONS</b> Gordon Kanyike, NDT Consultant Engineer, Wood Group
16:10	<b>AN INTRODUCTION TO AUTOMATION AND DATA TECHNIQUES FOR NDT AND STRUCTURAL HEALTH MONITORING (SHM)</b> Ben Karkera, Mechanical Engineer, NDE Technology, BAE Systems, Maritime - Submarines
16:35	<b>QUESTION AND ANSWER SESSION</b>
16:45 Panel Discussion	<b>MOVING FORWARD WITH NDT IN THE FUTURE</b> Panellists: Tom O'Hare, Senior Project Engineer, NDT Level 3 Specialist, Bombardier Aerospace Anthony Croxford, Professor of Ultrasonics and Dynamics, University of Bristol Ben Karkera, Mechanical Engineer, NDE Technology, BAE Systems, Maritime - Submarines <ul style="list-style-type: none"><li>• What standards does the industry need to ensure testing methods are regulated in new sectors?</li><li>• How can we increase the speed of analysing the data to match the speed of carrying out phased array?</li><li>• How can we ensure effective testing whilst cutting costs?</li></ul>
17:25	<b>CHAIR'S CLOSING REMARKS</b>
17:30	<b>END OF SEMINAR</b>

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

- 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.

Seminar	Early Bird Rate Until 1 February 2019	Standard Rate
Member, Institution of Mechanical Engineers / Supporting Organisation	£285 + VAT = £342	£320 + VAT = £384
Non-member	£325 + VAT = £390	£365 + VAT = £438
Full-time Student/Retired	£100 + VAT = £120	£100 + VAT = £120
Access Non Invasive Inspections Technologies as well	£75 + VAT = £90	£75 + VAT = £90

Group booking discounts are available. Contact us for more information.

### THREE WAYS TO BOOK

- 1 Online:  
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- 2 Email:  
[eventenquiries@imeche.org](mailto: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 this form.

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For a refund (minus £25+VAT admin charge), cancellations must be received at least 30 days prior to the event. Replacement delegates are welcome at any time. The Institution reserves the right to cancel any event. In this case, the full fee will be refunded unless a mutually convenient transfer can be arranged. In the event that the Institution postpones an event for any reason and the delegate is unable or unwilling to attend on the rescheduled date, they will receive a full refund of the fee paid. The Institution is not

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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

Manchester United Football Club  
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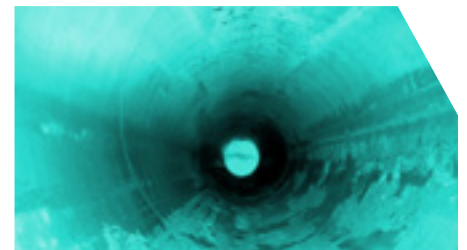
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### OTHER EVENTS TO LOOK FOR

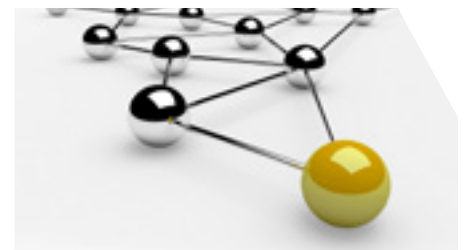


### NON INVASIVE INSPECTIONS TECHNOLOGIES

**14 March 2019, Manchester**

Hear how site operators are currently employing these new technologies and learn key lessons to overcome the challenge of inspecting previously inaccessible areas while balancing safety and costs.

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



### ESSENTIAL MANAGEMENT SKILLS 2019

**3-5 April 2019, Coventry**

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The Institution of Mechanical Engineers organises over 120 events a year, including free-to-attend lectures as well as conferences, seminars, annual luncheons and dinners. Please visit [www.imeche.org/events](http://www.imeche.org/events) for the complete list of events.

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