



SCIENCE,  
TECHNOLOGY  
& ENGINEERING  
FORUM

**BEYOND BOUNDARIES**

COLLABORATING FOR TOMORROW'S INNOVATIVE SOLUTIONS

Wednesday 9<sup>th</sup> – Thursday 10<sup>th</sup> October 2024

Central Hall Westminster, London

Programme



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Day One Programme

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## Day One Programme 1/2

<b>09:00</b>		Registration/Exhibitions
<b>09:30</b>		<b>Welcoming Address, Dr. Anna Barnes, IPEM President</b>
<b>09:45</b>	<b>Session 1</b>	<b>Woolmer Lecture: Professor Wendy Tindale OBE, Sheffield Teaching Hospitals NHS Foundation Trust</b>
<b>10:30</b>		<b>Key Note: Fanny Burrows, Senior Lead Research &amp; Innovation, NHS England, Greener NHS Programme</b>
<b>11:00</b>	<b>Break</b>	Coffee, Networking & exhibitors
<b>11:30</b>	<b>Session 2</b>	<b>"Our survey says: AI - friend, foe or frenemy?" - Dr Paul Doolan, University Hospitals of Leicester NHS Trust</b>
		<b>Industry Q&amp;A panel on AI in healthcare</b>
<b>13:00</b>	<b>Break</b>	Lunch , Networking & exhibitors

<b>14:15</b>	<b>Session 3</b>	<b>Breakout 1 - AI &amp; Machine Learning</b>	<b>Breakout 2 - Sustainability</b>
		<b>Clinical Decision support for falls management: a machine learning approach</b>	<b>Developing a framework for improving environmental sustainability in Radiotherapy</b>
		<i>Dr Ciaran Finucane, Mercer's Institute for Successful Ageing, St. James's Hospital</i>	<i>Dr Robert Chuter, The Christie NHS Foundation Trust</i>
		<b>Increased Patient Throughput via Implementation of Artificial Intelligence in Diagnostic MRI</b>	<b>Initial estimate of the carbon footprint of UK proton therapy services</b>
		<i>James Harkin, The Christie NHS Foundation Trust</i>	<i>Dr Mark Hardy, The Clatterbridge Cancer Centre NHS Foundation Trust</i>
		<b>How to Implement AI into Breast Screening</b>	<b>First estimate of the carbon footprint of PET imaging</b>
		<i>Dr Roger Staff, NHS Grampian</i>	<i>Gerry Lowe, Mount Vernon Hospital</i>
		<b>Developing a practical local framework for responsible AI deployment</b>	<b>Results of an environmental sustainability survey of radiotherapy professionals: a UK physicist sub analysis</b>
		<i>Eleanor Hesketh, Sheffield Teaching Hospitals NHS Foundation Trust</i>	<i>Rachel Allcock, University Hospitals Coventry and Warwickshire NHS Trust</i>
		<b>The use of deep-learning convolutional neural networks (CNN) for auto-classification of digital histology slides of uveal melanoma</b>	
<i>Professor Azzam Taktak, University Hospitals Bristol and Weston NHS Foundation Trust</i>			
<b>Roberts Prize Winner for best paper in Physics in Medicine and Biology: How deep learning techniques can improve the detector performances in TOF-PET</b>			
<i>Fiammetta Pagano, CERN - European Council for Nuclear Research</i>			
<b>15:45</b>	<b>Break</b>	Coffee, Networking & exhibitors	
<b>16:15</b>	<b>Session 4</b>	<b>John Mallard Lecture: Professor Katia Parodi, Ludwig Maximilian University</b>	
<b>17:00</b>			
<b>17:30</b>			
<b>18:00</b>	<b>Session 5</b>	<b>Industry Showcase &amp; Celebration Reception</b>	
		<i>Sponsored by UKAS</i>	



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Day Two Programme

Thursday 10<sup>th</sup> October 2024

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08:00	Session 1A	Workshop1: "How to get published" workshop facilitated by the Institute of Physics Publishing		
		Workshop 2: Pathway to Success: Expert Strategies for HSST IAPS Preparation: IPEM Training Team & Professor Andrew Reilly, NHS Greater Glasgow & Clyde		
		Workshop 3: Mastering the Art of Grant Writing: Unlocking Funding Success: George Bruce, NHS Greater Glasgow & Clyde & Dr Mohammad Al-Amri, Cardiff University		
08:45	Break	Coffee, Networking & exhibitors		
09:00	Session 2	<i>Breakout 1 - Workforce &amp; Skills</i>	<i>Breakout 2 - Sustainability</i>	<i>Breakout 3 - Ethical Healthcare</i>
		<b>Effective training of the workforce for online adaptive radiotherapy, with particular reference to a career development path for Dosimetrists</b>	Initial estimate of the carbon footprint of Brachytherapy in the UK,	Effectively MR Conditional cardiac implantable electronic devices
		<i>Nicky Whilde, Mid and South Essex Foundation Trust</i>	<i>Amanda Tate, Nottingham University Hospitals</i>	<i>Dr James Harkin, The Christie NHS Foundation Trust</i>
		<b>IPEM Innovation Gold Medal 2023 winner: "My Story"</b>	<b>Single departmental experience of implementing the "Greener NHS" sustainability ambitions,</b>	<b>Smart belt design for monitoring falls, posture and basic physiological parameters in the community</b>
		<i>Dr Darren Hart , Royal United Hospitals Bath NHS Foundation Trust</i>	<i>Gerry Lowe, Mount Vernon Cancer Centre</i>	<i>Professor Azzam Taktak, University Hospitals Bristol and Weston NHS Foundation Trust</i>
		<b>Panel session: "Expanding Horizons: Exploring Career Diversity in Medical Physics and Clinical Engineering"</b>	<b>Industry session: AXREM - Supporting the NHS Net Zero ambition, Chris Taylor, Sustainability Lead UKI, Government &amp; Public Affairs</b>	<b>Rebuilding a Clinical Engineering department</b>
				<i>Dr Marcus Durand, Royal Berkshire NHS Foundation Trust</i>
				<b>We need to fix the basics; exploring the experiences of disabled patients and staff in the NHS</b>
				<i>Helen Chamberlain, National Institute for Health and Care Excellence</i>
				<b>Martin Black Prize Winner - "Towards accurate wearable data for clinical decision making"</b>
<i>Dr Peter Charlton, University of Cambridge</i>				
<b>Honorary Fellow - "From Experience to Innovation: Four Ethical Pillars in Radiotherapy Accessory Design for Breast Cancer Care."</b>				
<i>Prof. Heidi Probst, Sheffield Hallam University</i>				
10:30	Break	Coffee, Networking & exhibitors		

11:00	Session 3	<b>IPEM President's symposium</b>				
		<i>Chair: Dr Anna Barnes, IPEM President</i>				
		Keynote: Professor Thomas "Rock" Mackie, Leo Cancer Care; ICRU Vice Chair Mark Knight, NHS Kent & Medway; IPEM President Elect Professor Stephen Keevil, Guys & Thomas' NHS Foundation Trust; Past President of BIR Victoria Chalker, Office of the Chief Scientific Officer, NHS England				
12:30	Break	Lunch , Networking & exhibitors				
13:30	Session 4	<i>Breakout 1 - Workforce &amp; Skills</i>	<i>Breakout 2 - AI &amp; ML/CE</i>	<i>Breakout 3 - Workforce and Skills</i>		
		Development of a Level 4 Apprenticeship in Medical Physics <i>Clare Anderson, NHSE, EoE</i>	Panel Discussion: AI Revolution: Transforming the Future of Clinical Engineering	"Precision and Innovation: The Role of Metrology in Advancing Medical Physics"		
		Development of a national community of practice for medical physics practice educators <i>Dr Sarah Peel, Guy's and St Thomas' NHS Foundation Trust</i>		Chair Dr Victoria Kidgell, Clinical Engineering Special Interest Group Chair/ Sheffield Teaching Hospital.	National Physical Laboratory led presentations and discussion of the methods and challenges of metrology in Radiotherapy, Radiobiology, Nuclear Medicine, MRI, Ultrasound and Data Science:  <i>NPL Presenters: Professor Catharine Clarke Russell Thomas Dr Spencer Thomas Dr Matt Hall Srinath Rajogopal Dr Andrew Robinson</i>	
		'Back to Basics' Patient Safety Staff Virtual Reality Training <i>Dr Darren Hart, Royal United Hospitals Bath NHS Foundation Trust</i>	Tackling Challenges in Clinical Engineering NHS England  <i>Victoria Chalker, Deputy Chief Scientific Officer, NHS England</i>		Panel session: "Personal insights from Women in Research"	
		Upskilling MR radiographers with physics led, simulator based training <i>Guy Drabble, The Christie NHS Foundation Trust</i>				
		The Success of the Clinical Engineering Internship Programme at the Royal Berkshire Foundation Trust <i>Maria Benedicta-Edwards, Royal Berkshire NHS Foundation Trust</i>				
		The application of computer simulation for Physicist clinical experiential training: experience gained at NPL <i>Professor Andy Beavis, Hull University Teaching Hospitals NHS Trust</i>				
		15:00	Break	Coffee, Networking & exhibitors		
		15:30	Session 5	Keynote: Professor Dame Margaret Whitehead, University of Liverpool		
				Moving Beyond Boundaries - what's next? <i>Dr Mark Knight IPEM President Elect &amp; Claire Sharpe, Deputy CEO</i>		