



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



SCIENCE,  
TECHNOLOGY  
& ENGINEERING  
FORUM

**BEYOND BOUNDARIES**

COLLABORATING FOR TOMORROW'S INNOVATIVE SOLUTIONS

Day One Programme

Wednesday 9<sup>th</sup> October 2024

\*details subject to change

## 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>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, Ludwif 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>  |   |





SCIENCE,  
TECHNOLOGY  
& ENGINEERING  
FORUM

**BEYOND BOUNDARIES**

COLLABORATING FOR TOMORROW'S INNOVATIVE SOLUTIONS

Day Two Programme

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

\*details subject to change

|   |            |  |   |  |  |
|---|------------|--|---|--|--|
| 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:<br/>"Expanding Horizons: Exploring Career Diversity in Medical Physics and Clinical Engineering"</b>   | <b>Industry session:<br/>AXREM - Supporting the NHS Net Zero ambition, Chris Taylor, Sustainability Lead UKI, Government &amp; Public Affairs</b> | <b>Rebuilding a Clinical Engineering department</b>  |  |
|   |            |  |   | Dr Marcus Durand, Royal Berkshire NHS Foundation Trust   |  |
|   |            |  |   | <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  |   |  |  |

|              |                  |  |   |   |   |  |
|--------------|------------------|--|---|---|---|--|
| <b>11:00</b> | <b>Session 3</b> | <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<br>Mark Knight, NHS Kent & Medway; IPEM President Elect<br>Professor Stephen Keevil, Guys & Thomas' NHS Foundation Trust; Past President of BIR<br>Victoria Chalker, Office of the Chief Scientific Officer, NHS England |   |   |   |  |
| <b>12:30</b> | <b>Break</b>     | Lunch , Networking & exhibitors  |   |   |   |  |
| <b>13:30</b> | <b>Session 4</b> | <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<br><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<br><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:<br><br><i>NPL Presenters:<br/>Professor Catharine Clarke<br/>Russell Thomas<br/>Dr Spencer Thomas<br/>Dr Matt Hall<br/>Srinath Rajogopal<br/>Dr Andrew Robinson</i> |  |
|              |                  | 'Back to Basics' Patient Safety Staff Virtual Reality Training<br><i>Dr Darren Hart, Royal United Hospitals Bath NHS Foundation Trust</i>  | Tackling Challenges in Clinical Engineering<br>NHS England<br><br><i>Victoria Chalker, Deputy Chief Scientific Officer, NHS England</i> |   | Panel session:<br>"Personal insights from Women in Research"  |  |
|              |                  | Upskilling MR radiographers with physics led, simulator based training<br><i>Guy Drabble, The Christie NHS Foundation Trust</i>  |   |   |   |  |
|              |                  | The Success of the Clinical Engineering Internship Programme at the Royal Berkshire Foundation Trust<br><i>Maria Benedicta-Edwards, Royal Berkshire NHS Foundation Trust</i>   |   |   |   |  |
|              |                  | The application of computer simulation for Physicist clinical experiential training: experience gained at NPL<br><i>Professor Andy Beavis, Hull University Teaching Hospitals NHS Trust</i>  |   |   |   |  |
|              |                  |  |   |   |   |  |
|              |                  | <b>15:00</b>   | <b>Break</b>  | Coffee, Networking & exhibitors   |   |  |
|              |                  | <b>15:30</b>   | <b>Session 5</b>  | Keynote: Professor Dame Margaret Whitehead, University of Liverpool   |   |  |
|              |                  |  |   | Moving Beyond Boundaries - what's next?<br><i>Dr Mark Knight IPEM President Elect &amp; Claire Sharpe, Deputy CEO</i> |   |  |