

MPEC 2021 Online

21st – 23rd September 2021

PROGRAMME

Tuesday 21st September

09.30 – 10.10	How has Covid changed things for the better? – debate Join us to ask senior members of the Institute if Covid has changed things for the better.
10.20 – 11.35	Adapting to the Pandemic
10.20– 10.35	Flexible working beyond COVID – radiotherapy physics perspective Sarah Misson-Yates, Guy's and St Thomas' NHS Foundation Trust
10.35 – 10.50	You Can't Stop Us Either - Adapting to the Pandemic Shannon Higgins, Gartnavel General Hospital
10.50 – 11.05	ICU Redeployment of Healthcare Scientists at Imperial College Healthcare NHS Trust Meagan de la Bastide, Imperial College Healthcare NHS Trust
11.05-11.20	X-rays at the sharp end – a new era David Rawlings, Northern Medical Physics and Clinical Engineering, Freeman Hospital
11.20 – 11.35	Clinical Scientists experience of clinical reorganisation due to Covid restrictions within the rehabilitation engineering services Fiona Ritchie, Chailey Clinical Services
11.45–12.45	Innovations in Treatment Planning
11.45-12.00	Development of a volumetric modulated arc therapy technique for total body irradiation Lauren Cowie, The London Radiotherapy Centre, HCA Healthcare UK
12.00-12.15	Comparison of Treatment Planning Techniques for Hippocampal Avoidance Peter Houston, Beatson West of Scotland Cancer Centre
12.15-12.30	Evaluating a method of treatment plan selection from daily plans on the MR-Linac Joe Stickley, The Christie NHS Foundation Trust
12.30-12.45	A Comparative Study of Pelvic Re-irradiation Treatments Using Proton Beam Therapy and the MR-Linac James Cummings, The Christie NHS Foundation Trust

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13.00 – 13.55	Emerging technologies in cardiovascular disease
13.00 – 13.15	Screening for Atrial Fibrillation: questions and potential solutions' Prof Jonathan Mant: '
13.15 – 13.30	'Reproducible machine learning of wearable sensors to drive forward the understanding of cardiovascular disease' Dr Aiden Doherty:
13.30 – 13.45	'Photoplethysmography for peripheral arterial disease detection' Prof John Allen:
13.45 – 13.55	Questions
14.00 - 15.45	Inspirational Achievements
14.00 – 14.30	Angela Douglas, Deputy Chief Scientific Officer, NHS England and NHS Improvement
14.30 – 14.55	Roberts Prize Winner Experimental time resolution limits of modern SiPMs and TOF-PET detectors exploring different scintillators and Cherenkov emission. Stefan Gundacker
14.55 – 15.20	Martin Black Prize Winner Investigating the physiological mechanisms of the photoplethysmogram features for blood pressure estimation Wan-Hua Lin, Southern University of Science and Technology, China
15.20 – 15.45	Jack Perkins Prize Winner Enhancing hip fracture risk prediction by statistical modelling and texture analysis on DXA images Fatemeh Jazinizadeh, McMaster University
16.00 – 17.00	Clarke and Carrie Carlisle Mental Wellbeing

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Wednesday 22nd September

8.00 – 08.50	How to get published
Hints and tips for publication from Elsevier	
9.00-09.45	The 4'Fs of Resilience Workshop
Diane Wilkinson, Connecting to Excellence	
10.00 -11.00	Collaborative Working
10.00–10.15	Development of Thermal test objects for HIFU thermal therapy Simone Ambrogio, Guy's and St Thomas' NHS Foundation Trust
10.15–10.30	The use of personalised 3D printing of kidney models to enhance patient understanding of surgery. Sinead Mottishaw, NHS Lothian
10.30–10.45	Leading across Specialities: challenges and growth opportunities Fiammetta Fedele, Guy's and St Thomas NHS Foundation Trust
10.45–11.00	Multidisciplinary, surgical decision-making and treatment planning using patient-specific 3D printed models: application to complex vascular surgery Nick Byrne, Medical Physics, Guy's and St. Thomas' NHS Foundation Trust

Wednesday 22nd September

11.10 – 12.10	Improving diversity in our sector
11.10 – 11.30	Erin Donovan
11.30 – 11.45	Anna Barnes
11.45 – 12.00	BAME STP
12.00 – 12.10	Questions
13.10 – 14.40	Autism Workshop – Girl with the curly hair
Do you deal with patients or colleagues with autism, anxiety or communication difficulties? If so this workshop is for you.	
15.15 - 16.15	Clinical Entrepreneurship and innovation
15.15 – 15.45	Tony Young
15.45 – 16.00	A cross-functional team approach to healthcare innovation Sabrina Ramnarine, Guys' and St Thomas' NHS Foundation Trust
16.00 – 16.15	Questions
16.15 - 17.00	IPEM Update - strategy and meet the trustees

Thursday 23rd September

10.00 – 10.50	Presidents Awards for services during the Pandemic
11.00 - 12.00	Imaging and UNIR
11.00 – 11.15	Breaking through the communication barrier: Building an effective quality assurance system Amy Oana, NHS Tayside
11.15 – 11.30	A general model of whole-body UV phototherapy dosimetry based on the radiance equation: preliminary results. Paul Freeman, Guy's and St Thomas' NHS Foundation Trust
11.30 – 11.45	Analysis of literature surrounding beam quality optimisation for chest posterior-anterior x-ray exposures. Clare Devery, TU Dublin
11.45 – 12.00	A Deep Learning approach to Diagnostic Ultrasound Quality Assurance Ray Lynch, Technological University, Dublin
12.15-13.15	Environmental Sustainability Group
14.00 - 15.00	Planning the recovery – radiotherapy
14.00 – 14.15	An assessment and comparison of the dosimetric and image quality properties of the 2.5MV imaging beam on four Varian TrueBeam linacs Chris Hayes, Northern Ireland Cancer Centre
14.15 – 14.30	Virtual imaging for patient information on radiotherapy planning and delivery for prostate cancer Miguel Martinez-Albaladejo, University Hospitals of North Midlands
14.30 – 14.45	Fabrication, characterization, and clinical investigation of 2d-fr gel dosimeters for surface dose measurement and build-up in mediastinum superficial electron beam irradiation John Paul Cabahug, University of Santo Tomas Graduate School
14.45 – 15.00	HDR applicator reconstruction using MRI for cervical brachytherapy James Gibson, Clatterbridge Cancer Centre

Thursday 23rd September

Proffered paper session	
14.45 – 15.45	
14.45-15.00	Exploring frequency of movement and interface pressures during sleep, using interface pressure measurement technology and accelerometry Pearl Read, Rehabilitation Engineering Unit, Swansea Bay University Health Board
15.00-15.15	Experimental flow phantom study on the dependence of sample volume size with maximum velocity estimates using pulsed wave Doppler ultrasound Kumar Ramnarine, Guy's and St Thomas' NHS Foundation Trust
15.15-15.45	Comparison between Reverberant Shear Wave Elastography and Supersonic Shear Imaging for plantar soft tissue characterization Stefano E. Romero, Pontificia Universidad Catolica del Peru
15.30-15.45	Heart Transplant Bioengineering Amy Edwards, University of Cambridge
Outreach	
16.00 – 17.00	
16.00 – 16.30	The Scouse Scientist
16.30 – 16.45	Building Tomorrow's Healthcare Science Workforce - Our experience in running a webinar for schools and colleges David Cook, Royal Berkshire Hospital NHS FT