

DAY 1 Thursday 1st September 2011

09:00 – 09:35

Burke Opening Ceremony

Welcome – **Barry McMahon**, Chairperson Organising Committee

Songs of Joyce
The Shannon Colleens

Welcome & Introduction - **Stelios Christofides**, President, European Federation of Organisations for Medical Physics

Welcome Address – **Elke Anklam**, Director, European Commission Joint Research Centre, Institute for Health and Consumer Protection

09:35 – 10:30

Burke Plenary (Woolmer Lecture)

Welcome and Introduction - **Chris Gibson**, President, Institute of Physics & Engineering in Medicine

Developments in Computed Tomography – is sub-mSv a realistic option?
W Kalender

10.30 – 10.45

Burke Sponsor Presentation

Varian – TrueBeam™
Mr David Scott, Sales Director UK & Ireland

10:30 – 11:00 Refreshment Break - Poster Sessions & Exhibition

11:00 – 12:30

Burke EFOMP/ESMRMB Symposium

Hybrid Systems in Diagnosis and Therapy
Chairs: **A Torresin**, **W van der Putten**

11:00 – 11:05 Introduction : Why Hybrid Systems?
A Torresin, **W van der Putten**

Keynote

11:05 – 11:30 **MRI-Linac : Underlying Physics and Perspectives**
B W Raaymakers

Keynote

11:30 – 12:00 **MRI-PET: Underlying Physics and First Experience**
S Fuerst, **S Ziegler**

Keynote

12:00 – 12:30 **MRI and Focussed Ultrasound: Underlying Physics, Current Status and Therapeutic Applications**
R Salomir

Note that the figure in brackets after presentation titles refers to the abstract number

12:30 – 13:00

Burke Sponsor Educational Presentation

Varian's TrueBeam™ is bringing Radiosurgery to a new level
P. Vereecke

Syngé Imaging (I)

Chairs: TBA

11:00 – 11:15 Correlation of power law noise analysis for 2D digital mammography, 3D tomosynthesis projections and reconstructions with breast density measurements (203)

L Cockmartin, N Marshall, N Geeraert, T Mertelmeier, H Bosmans

11:15 – 11:30 Are the image quality standards in the EU mammography guidelines relevant to clinical performance? (143)

K Young, L Warren, A Mackenzie, D Dance, J Cooke, R Given-Wilson, M Wallis

11:30 – 11:45 Validation of the insertion of micro-calcification into mammographic images for observer studies (91)

L Warren, F Green, L Shrestha, A Mackenzie, D Dance, K Young

11:45 – 12:00 Comparing consequences of rigid and flexible compression paddles on the Automatic Optimization of Parameters in mammography (215)

N Geeraert, M Lemuhot, D Sundermann, R Klausz

12:00 – 12:15 A mathematical model for the evaluation of synchrotron radiation breast imaging (266)

N Fitousi, H Delis, G Panayiotakis

12:15 – 12:30 Image Quality Assessment in Digital Mammography (151)

C Walsh, M Devine, S Cournane, D Gorman, A Gallagher, G O Reilly

12.30 -12.45

Syngé Sponsor Presentation

Imaging Equipment - Product Presentation

12.30-12.45

Emmet Mobility in Education and Training

Chair: S Evans, TBA

11:00 – 11:30 European Union Medical Physics Expert Guidelines Project

E Guibelalde

11:30 – 12:00 Education and Training of the Medical Physics Expert

C Caruana

12:00 – 12:15 Assessment of Education and Training

S. Tabakov

Note that the figure in brackets after presentation titles refers to the abstract number

12:15 – 12:30 EC Project 'GUIDELINES ON MPE': Qualification and Curriculum Frameworks (164)
C Caruana

Davis Non-Ionising

Chairs: L Gaynor

11:00 – 11:15 Probing disease specific breast calcifications using light (320)
N Stone, M Kerssens, M Sattlecker, R Baker, P Matousek, K Rogers

11:15 – 11:30 Dosimetry Modelling in UV Phototherapy (128)
N O'Hare, D Grimes, C Robbins

11:30 – 11:45 Audit and Quality Assurance of Ultraviolet Light Therapy in the West of Ireland (253)
K McGuinness

11:45 – 12:00 Laser Risk Assessment and Management Our Experience at the Local Health Agency ASL CN (239)
W Sartor, **L Gentile**

12:00 – 12:15 Survey on optical non coherent radiation hazards in hospital (61)
R Di Liberto

12:15 – 12:30 Magnetic marker monitoring of enteric tablets, by AC Biosusceptometry. (322)
J Miranda, U Andreis, L Cora

Uí Chadhain Innovative Devices in Bioengineering

Chairs: C Gibson, TBA

Keynote

11:00 – 11:30 **Application of Mechanobiology to the Design of Medical Devices**
P Prendergast

11:30 – 11:45 Time-Dependent Properties of the Human Spinal Column to Loading (62)
H Singh Ranu, A Bhullar, A Zakaria,.

11:45 – 12:00 Quantitative Computed Tomography(QCT) based Finite Element Method Can predict the Fracture initiation locus in human Vertebrae (249)
A Zeinali, B Hashemi, A Razmjoo

12:00 – 12:15 Surgical implant design based on local bone properties: finite element analysis of the potential benefits on bone strain (101)
D Schiuma, S Rothstock, A Tami, S Brianza

12:15 – 12:30 Application of functional lumen imaging distensibility testing to assess anorectal function (291)
M Alqudah, A Drewes, H Gregersen, B McMahon,

12:30 – 14:00 Lunch

Note that the figure in brackets after presentation titles refers to the abstract number

13:00 – 14:00

Uí Chadhain IPEM Annual General Meeting

14:00 – 15:30

Syngé Radiotherapy I

Chairs: B McClean, A Palmer

- 14:00 – 14:15 Dose Improvements with IMRT, RapidArc and Respiratory Gating for Locally Advanced NSCLC (141)
S O’Keefe, S McNee, R Muirhead, M McJury
- 14:15 – 14:30 Dosimetric Evaluation of Left Breast irradiation using a Deep Inspiration Breath Hold technique with Forward Planned IMRT (269)
A Kennedy, C Burke, L Rock, A Mihai, P Thirion, J Armstrong
- 14:30 – 14:45 The Accuracy of Whole Scalp RT using Static IMRT Technique (285)
A Murphy, R David, S Saju, T Brosnahan, M Moore
- 14:45 – 15:00 Adaptative Radiotherapy protocol in patients treated with IMRT for head and neck cancer. Verification with in Vivo Dosimetry using mosfet detectors (113)
E Salcedo, J Devila
- 15:00 – 15:15 A Retrospective Analysis of IMRT Head & Neck Portal Dosimetry results (268)
E McHugh, H Fitzgerald, C Heeney
- 15:15 – 15:30 Practical collimator optimization in the management of prostate IMRT planning: A feasibility study (329)
A Mohamed, C McGarry

15.30 – 15.45

Syngé Sponsor Presentation

Nucletron – Oncentra Prostate
Mark Charity

15.30 – 15.45

Burke EFOMP Symposium

Image Quality and Dose in Digital Mammography I

Chairs: S Menhart, K Young

Keynote

- 14:00 – 14:45 **Criteria to Evaluate Image Quality in Digital Mammography**
M Yaffe

Keynote

- 14:45 – 15:30 **Dosimetry in Digital Mammography**
D Dance

Note that the figure in brackets after presentation titles refers to the abstract number

Emmet

Education and Training

Chairs: P Jarritt, TBA

Keynote

14:00 – 14:30

Modernising Scientific Careers
S Hill

14:30 – 14:45

How Medical Physicists can contribute to developing Hospital Strategy? (296)
P Egan

14:45 – 15:00

IOMP Model Curriculum Project (53)
S Tabakov, P Sprawls, A Krisanachinda, E Podgorsak, C Lewis

15:00 – 15:15

Master of Advanced Physical Methods in Radiotherapy : Meeting the challenges of delivering an online program at a traditional German university (245)
C Mainka, M Schafer, J Debus, O Jakel, W Schlegel

15:15 – 15:30

EFOMP project "Biomedical physics education for the medical and healthcare professions" an update for EMPEC2011 (163)
C Caruana, M Wasilewska-Radwanska, A Aurengo, P Dendy, V Karenauskaite, M Malisan, J Meijer et al

Davis

Ultrasound

Chairs: TBA

14:00 – 14:15

Are Anthropomorphic Breast Ultrasound Phantoms useful as Training Tools? (152)
J Browne, L Cannon, A Fagan

14:15 – 14:30

Prediction of ultrasound imaging transducers performance through simulated resolution integral (223)
R Ssekitoleko, S Sharma, C Damora S Cochran

14:30 – 14:45

How hot does my ultrasound transducer really get? (243)
R Axell, R Hopper, P Jarritt, P White, C Oxley

14:45 – 15:00

Novel Approach to Ultrasound Transducer Testing (96)
D King, S Stekel, D Tradup, N Hangiadreou,

15:00 – 15:15

Effect of fatty deposits on the measurement accuracy of a transient elastography ultrasound system (117)
S Cournane, J Browne, A Fagan

15:15 – 15:30

Investigation into the role of ultrasound in diagnosing < 50 % renal artery stenosis using renal artery stenosis flow phantoms and velocity flow profiles (138)
C Morgan, A Fagan, D King, J Browne

Uí Chadhain

Rehabilitation Engineering I

Chairs: J McCarthy, TBA

Note that the figure in brackets after presentation titles refers to the abstract number

Keynote

- 14:00 – 14:30 **Technology for Independent Living**
N Scannell
- 14:30 – 14:45 Development of Outcome Measures and Performance Indicators and their impact upon service improvement in the Cardiff REU Special Seating Service 2002-11 (272)
C Gibson
- 14:45 – 15:00 Testing For Determinism In Gait Data In Fallers Using Body Worn Inertial Sensors (227)
T Foran, R Reilly, R Kenny
- 15:00 – 15:15 Amputees Gait Analysis with Miniature Triaxial Load Cells for Successive Steps (66)
H Singh Ranu
- 15:15 – 15:30 Gait Characteristics of a Sample Population in the Age Range 21 to 97 measured using Inertial Movement Units (IMUs) (336)
I McCarthy, M Monda, M Thornton, A Goldberg

10:30 – 11:00 Refreshment Break - Poster Sessions & Exhibition

16:00 – 17:30

Syngé Radiotherapy II

Chairs: F Bradley, E Hayes

- 16:00 – 16:15 Helical VMAT for treatment of the craniospinal axis (82)
J Bedford, Y Lee, F Saran, A Warrington
- 16:15 – 16:30 Constant and variable dose rate volumetric modulated arc therapy (VMAT): Planning for localized prostate cancer patients using a commercial treatment planning system (179)
C McGarry, J O'Sullivan, A Hounsell
- 16:30 – 16:45 Commissioning and Quality Assurance of volumetric modulated arc radiotherapy with RapidArc® (201)
A Martins, A Pereira, M Barreiros, S Nunes
- 16:45 – 17:00 Development of Automated Early Warning Chart Review Software for Radiotherapy Error Detection (149)
P Collins, F Bradley

17.00 – 17.15

Syngé Sponsor Presentation

Keith Larkin – Sales Director Nelco

Burke EFOMP Symposium

Image Quality and Dose in Digital Mammography II

Chairs: A Torresin, G Gennaro

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16:00 – 17:30 Quality Control in Digital Mammography
Panel Discussion (Industry /Users)
M Yaffe, D Dance, A Albanese, M Aslund, R Klausz, T Mertelmeier, J Muller, A Smith, M Varjonen, N Wieberneit

Emmet EFOMP Round Table

The Future of Medical Physics and Clinical Engineering

16:00 – 17:30 Chair: W van der Putten

T Knoos (ESTRO)
D Oborska-Kumaszynska (EFOMP)
A Seibert (AAPM)
S Christofides (EFOMP)
A del Guerra (PISA)
C Gibson (IPEM)
B McMahon (IAPM)
J McCarthy (IPEM)

Uí Chadhain MRI

Chairs: S Keevil, TBA

16:00 – 16:15 Sodium concentration and Proton ADC/PWI MRI measurements in penumbral tissue during acute stroke (146)

A Fagan, I Macrae, L Gallagher, F Wetterling

16:15 – 16:30 Automated tumor grade classification with artificial neural networks and 1H in vivo MRS (45)

L Boguszewicz, S Blamek, M Sokol

16:30 – 16:45 Left ventricular volume measurements: discrepancy between 3D Echocardiography and Cardiac MR (155)

M Damen, J Gutteling, L Theunissen, G Heijnenman, R Houben, P Wijn

16:45 – 17:00 MRI Velocity Measurement vs. Doppler Ultrasound in the Peripheral Vasculature: A Dual-Modality Flow Phantom Study (150)

A Watson, J Foster, C McComb, K Lanaghan, A Elliott,

17:00 – 17:15 MR Compatibility of Intraocular Lenses at 7 Tesla (265)

J Mourik, G van Rijn, W Teeuwisse, G Luyten, A Webb

17:15 – 17:30 Improvement in Vessel Conspicuity in Whole-Body Magnetic Resonance Angiography images following Image Registration (209)

A Fagan, D Cannon, D Foley, J Meaney

Davis Rehabilitation Engineering II

Chairs: I McCarthy, R Axell

Keynote

16:00 – 16:30 “Crunch and Care”

H Wolff

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(Trainee & Junior Engineers)

- 16:30 – 16:45 Pressure mapping used to evaluate the effectiveness of commercially available and bespoke pressure relieving wheelchair seating surfaces (59)
S Leather
- 16:45 – 17:00 Key Performance Indicators in Medical Equipment Management (304)
A Potter, M Kerr, R Scott
- 17:00 – 17:15 Mechanical properties of Achilles tendons and gastrocnemius muscle bellies in spastic muscle-tendon units (30)
P Sturt
- 17:15 – 17:30 Virtual Power and Quasi-Static Equilibrium in Musculoskeletal Modelling: Mechanical Demand on Lower Limb Muscles in Gait (39)
E Akinluyi

17:30 – 18:30

Burke Plenary (O'Connor Lecture)

Chair: B McClean

Not Your Father's Cobalt Treatments – how modern radiotherapy has revolutionised cancer care

T Mackie

18.30 – 18.45

Burke Sponsor Presentations

- 18.30 – 18.35 Elekta Innovations
Patrick Greally
- 18.35 – 18.40 Imaging Equipment – Opportunities for Collaborations with Industry Partners
Nick Stevens
- 18.40 – 18.45 Nelco
Rick Le Blanc

18:30 – 20:00 Welcome Reception, Dining Hall TCD

DAY 2 Friday 2nd September 2011

08:00 – 08:45

Burke Tutorial

Chair: TBA

- 08:00 – 08:45 **Rotational Therapy**
C Stacey

Note that the figure in brackets after presentation titles refers to the abstract number

Synge

Tutorial

Chair: A Fagan

08:00 – 08:45

Recent Advances in Image Registration and Data Fusion
D Hawkes

Emmet

Tutorial

Chair: TBA

08:00 – 08:45

1-D Systems
D Simpson

Davis

Tutorial

Chair: J Amooore

08:00 – 08:45

Fault Mode Effect Analysis (FMEA)
M Durand

09:00 – 10:30

Burke

ESTRO / EFOMP Symposium

Imaging in Radiotherapy I

Chairs: T Knoos, A Torresin

09:00 – 09:40

Clinical Requirements for Image Guidance
M van Herk

09:40 – 10:00

Cone beam CT: Principles and Implementation
J-J Sonke

10:00 – 10:20

Cone beam CT: Clinical use in Radiotherapy
M Guckenberger

10.20 – 10.35

Burke

Sponsor Presentation

Oncology Systems - Delta4 IMRT QA device freeing up crucial linac slots
Adrian Fleet

Synge

Imaging II

Chairs: P Clinch, TBA

09:00 – 09:30

Keynote

Integrating Computational Modelling and Image Registration in Image Guided Interventions
D Hawkes

Note that the figure in brackets after presentation titles refers to the abstract number

- 09:30 - 09:45 Comparison of protocols for testing of Automatic Exposure Control (AEC) devices on Direct Digital Radiographic (DDR) X-ray systems using new IPEM guidelines (132)
L Bowden, R Faulkner, A Gallagher, U O'Connor, G O'Reilly
- 09:45 – 10:00 Testing CT AEC systems with a purpose built test Object (282)
P Hiles, L Bateman, S Jones
- 10:00 – 10:15 Audit of Dose and Image Quality of CT in HSE West (292)
B Tuohy, A Foley, D Lavin, W Van Der Putten

Emmet Trainee and Junior Scientists I

Chairs: S Higgins, TBA

IAPM Young Investigator Presentation

- 09:00 – 09:12** 'Development of perfusion flow phantom for use with ultrasound contrast agents'
D Bazou (presented by J Browne)
- 09:12 – 09:24 Motion-Induced Inaccuracy of ADC quantification via Whole-Body MRI-DWIBS (99)
A Stone, J Browne, B Lennon, J Meaney, A Fagan
- 09:24 – 09:36 Development of a novel synthetic collimator small animal SPECT imaging system (133)
M Foley, R Havelin, B Miller, H Barrett
- 09:36 – 09:48 Attenuation correction for PET using Ultrashort Echo Time MRI (54)
A Aitken, C Buerger, T Schaeffter
- 09:48 – 10:00 Molecular Optical Imaging Using an Organic Fluorophore and a Clinical Fluorescence Diffuse Optical Tomography System - Extensive Phantom Experiments (258)
J Mourik, A Adams, M van der Voort, W Mali, S Elias
- 10:00 – 10:12 Does Resolution Recovery improve planar DMSA imaging? (130)
L Lorimer, R Staff
- 10:12 – 10:24 Optimising lung V/Q scintigraphy using a novel phantom which mimics pulmonary embolism (312)
P Lally, M Burniston, J Page

Davis Modelling and Simulation in Medicine I

Chairs: S Cournane, TBA

- 09:00 – 09:30 **Modelling in human patient simulators**
M Tooley
- 09:30 – 10:00 **Predicting clinical outcome following radiotherapy: modelling tumour control probability and complication risks**
C Baker

Note that the figure in brackets after presentation titles refers to the abstract number

10:00 – 10:30 **Modelling and Simulation of Radiation Transport in Image Guided Radiotherapy**
E Spezi

Organised by the Institute of Physics

Uí Chadhain Physiological Measurement I

Chairs: C McGivern, TBA

09:00 – 09:15 **Measurement Uncertainty Evaluation – The Basics**
M Cox

09:15 – 09:30 **Infrared Ear Thermometers – Calibration and Training Issues**
H McEvoy

09:30 – 09:45 **Uncertainty in Proton Dosimetry**
R Thomas

09:45 – 10:00 **Acoustic Output Measurements in Medical Ultrasound**
S Rajagopal

10:00 – 10:15 Non-invasive blood pressure measurement: a critical appraisal of current technology (242)
J Amoire

10:15 – 10:30 Non-Contact Ocular MicroTremor Measurement Using Laser Speckle Metrology (195)
E Kenny, D Coakley, G Boyle

Room 4047 Clinical Engineering SIG Workshop

Fault Mode Effect Analysis (FMEA)

Chair:

09:00 – 09:30 **Introduction to HFMEA**
D Hale

09:30 – 10:00 **Problems with HFMEA and Possible Solutions**
E Fallon

10:00 – 10:30 **FMEA in Industry : Lessons for Healthcare**
M Dennehy

10:30 – 11:00 **Refreshment Break - Poster Sessions & Exhibition**

11:00 – 12:30

Burke ESTRO / EFOMP Symposium

Imaging in Radiotherapy II

Chairs: A Torresin, T Knoos

Note that the figure in brackets after presentation titles refers to the abstract number

- 11:00 – 11:20 **Organ Motion in Diagnostic Imaging**
M van Straten
- 11:20 – 11:50 **Organ Motion in Radiotherapy & Projection Radiography in Radiotherapy**
D Verellen
- 11:50 – 12:10 **Dose Calculations in Cone Beam CT**
K Geleijns
- 12:10 – 12:30 Panel Discussion

12.30 – 12.45

Burke Sponsor Presentation

Elekta Symmetry 4D IGRT for Lung
Ian Morgan

Syngé Imaging III

Chairs: D Hawkes, Peter Hiles

- 11:00 – 11:15 Towards blood velocity measurements using DSA (109)
L Gaynor, P Kenny, F Bolster, M Moynagh, L Lawler
- 11:15 – 11:30 Performance characteristic evaluation of Telepathology scanners: proposal of standard indicators (28)
M De Marco, S Maggi
- 11:30 – 11:45 Image Quality Performance of Critical Radiological Equipment Exposed to Dynamic Electromagnetic Fields (287)
P Gilligan, S Maguire, J MacCauley, B Kernan, D Cope, N Duignan, J Launder
- 11:45 – 12:00 Acceptance testing of state-of-the-art CT scanners using a new national protocol: first experience on a large number of scanners of different make and model (230)
H Bosmans, K Bacher, K Lemmens, F Malchair, N Buls, F Bleeser, T Clarijs
- 12:00 – 12:15 Proposal of phantom-based metrics for the characterization of interventional cardiology systems (275)
R Padovani, A Trianni, G Bernardi, A Negri
- 12:00 – 12:30 Pilot implementation in Bulgaria of the European protocol for the quality control of the physical and technical aspects of digital mammography systems (176)
S Avramova-Cholakova, J Toneva, J Hristova-Popova, I Dyakov

Emmet Trainee and Junior Scientists II

Chairs: R Ruddlesden

- 11:00 – 11:12 Comparison of Fat Quantification using two point Dixon MRI and MRI Spectroscopy in the gluteus maximus (90)
R Nazareth, D Price, D Patel

Note that the figure in brackets after presentation titles refers to the abstract number

- 11:12 – 11:24 Objective Investigation of the Presence of the Colour Doppler Artefact known as the Twinkle Artefact in a Range of Ultrasound Scanners (108)
D Cassidy, A Fagan, J Browne
- 11:24 – 11:36 Exposure Optimisations for a Wireless Digital Detector (50)
N Hogg
- 11:36 – 11:48 Development of a PPG system for non-invasive cardiac output measurements (238)
R Richards, J Pickett
- 11:48 – 12:00 Speeding up Gamma Camera QC: Count Rate Capability (105)
S Higgins, R Gadd, S Dainty, C Williams
- 12:00 – 12:12 Dosimetric Validation of Large Treatment Volumes in Tomotherapy (131)
E Hogg, A Greener, M McGovern
- 12:12 – 12:24 A global TCP model for external beam treatment of intermediate risk prostate cancer (196)
S Walsh, W van der Putten

Davis Modelling and Simulation in Medicine II

Chairs: C Baker

- 11:00 – 11:15 Performance of a dynamically adapted MDCT beam-shaping filtration in dependence of projection angle (314)
L Veloza, H Kauczor, W Stiller
- 11:15 – 11:30 Development of a Monte Carlo model to simulate digital mammography (95)
T Sakellaris, A Pascoal, M Koutaloni, G Spyrou
- 11:30 – 11:45 An extendable multi-leaf collimator for electron beam Therapy (112)
T O'Shea, **M Foley**, B Faddegon,
- 11:45 – 12:00 Implementation of a human head and neck phantom for cone beam CT imaging simulation (169)
G Zhang, R Jacobs, H Bosmans,
- 12:00 – 12:15 PMMC - a high-performance Monte Carlo code for proton beam dose calculation (168)
D Jacqmin
- 12:15 – 12:30 Diode detector modelling for Monte Carlo small field MV photon dosimetry (81)
G Cranmer-Sargison, S Weston, N Sidhu, D Thwaites,

Organised by the Institute of Physics

Uí Chadhain Physiological Measurement II

Chairs: TBA

Note that the figure in brackets after presentation titles refers to the abstract number

- 11:00 – 11:15 Quantification of Oesophagogastric Junction Function Intraoperatively using the Functional Luminal Imaging Probe (323)
B McMahon, S Bligh, P Ridgway, K Conlon,
- 11:15 – 11:30 Use of the Functional Lumen Imaging Probe to Measure Upper Oesophageal Sphincter Opening During Swallowing (302)
J Regan, B McMahon
- 11:30 – 11:45 A clinical trial of cumulative oxygen saturation data analysis in neonates (87)
A Taktak, S Harigopal, H Satish, K Southern, B Shaw
- 11:45 – 12:00 Photoplethysmography for the Evaluation of Diabetic Autonomic Neuropathy (100)
D Ravindranathan, J Woodcock, R Morris
- 12:00 – 12:15 Effects of short-term heavy resistance training on intramuscular EMG recordings (192)
A Malanda, L Gila, M Izquierdo, F Mallor, J Rodriguez, J Navallas, I Rodriguez
- 12:15 – 12:30 Can Human Deceased Cardiac Donors Be Used as an Alternative To The Traditional Brain Stem Dead Donor To Reverse International Shortages- Translational Experience From Animal to Man
P White, A Ali, S Colah, S Large

12:30 – 14:00 Lunch

13:00 – 14:00

Uí Chadhain Irish Association of Physicists in Medicine (IAPM) Annual General Meeting

14:00 – 15:30

Davis Dosimetry

Chairs: TBA

- 14:00 – 14:15 Ge-doped optical fibres as thermoluminescence dosimeters for HDR Ir-192 brachytherapy sources (75)
F Issa, R Hugtenburg, D Bradley, A Nisbet
- 14:15 – 14:30 Study of 1-D and 3-D Detectors for Therapy Dosimetry (328)
A Abdul-Rahman, S Doran, D Bradley
- 14:30 – 14:45 Gafchromic Film Calibration Curve: Initial Experience and Control Dose Comparison (225)
G Wardlaw, D Gillis
- 14:45 – 15:00 Characterizing small field MV photon output factors using various diode detector and accelerator combinations (118)
G Cranmer-Sargison, S Weston, N Sidhu, D Thwaites
- 15:00 – 15:15 Properties of Radiophotoluminescence Dosimeters for Radiotherapy Verification Measurements (170)
H Hietala, A Koivula

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15:15 – 15:30 Radioprotection problems in the use of Radiopharmaceutical ^{223}Ra -chlorine for cancer therapy (235)
A Russo, M Casale, M Italiani, R Delia

Syngne Nuclear Medicine I (Gastroenterology)

Chairs: H Blundell, TBA

14:00 – 14:30 **Nuclear Medicine and the Gastrointestinal Tract**
A Perkins

14:30 – 15:00 **SeHCAT in Practice**
M Smith

15:00 – 15:30 **Bile Acid Malabsorption : the world's most frequently missed, life-changing diagnosis**
J Andreyev

Emmet Trainee and Junior Scientists III

Chairs:

14:00 – 14:12 Adapting a well-validated Pinnacle Varian beam model for the Novalis (313)
L Mortimer, A Scott, H Mayles, P Mayles

14:12 – 14:24 Dosimetric Comparison of 3D CRT and Rotational IMRT Plans for CHHIP Protocol Prostate Cancer Patients (294)
F Leek, A Esmail

14:24 – 14:36 Quantitative Assessment of Measurements taken from 3D Vessel Reconstructions Generated via Rotational Angiograms of Coronary Phantoms using 3D-CA software (295)
D Duncan, A Davies, A Cowen

14:36 – 14:48 A Comparison of Mapcheck2 and EPID against film for Pre treatment IMRT QA (80)
A Walsh, T Natarajan, H Winter

14:48 – 15:00 Feasibility study for lesion localisation using ^{18}F FDG uptake in PET Scans (106)
N Vennart

Burke Innovation

Chairs: B McMahon, TBA

14:00 – 14:20 **Entrepreneurship – Bringing Your Idea to Market**
J Coleman

14:20 – 14:40 **Getting Funding – Private and Grants**
K O'Neill

14:40 – 15:00 **Marketing a new technology in Medicine**
J Bouchier Hayes

15:00 – 15:20 **Measuring Success Commercial Vs Academic**
B McMahon

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Burke Sponsor Presentation

15.20 - 15.40 **Kjaya - Cloud Computing in Radiology**
Kovey Kovalan (via Video from U.S)

14.00 – 15.30

Uí Chadhain Medical Devices: Training and Patient Safety

Chairs: M Durand, TBA

Keynote

14:00 – 14:30 **Medical Devices : what do users want?**
M Lyons

14:30 – 14:45 Towards a Classification of Medical Device Adverse Incidents (126)
J Amoire

14:45 – 15:00 Medical Device Training and Meeting NHSLA Standards - the Challenges (305)
E Palayiwa

15:00 – 15:15 The Users Missing Link (231)
D Jennings, G Dempsey

15:15 – 15:30 Getting the Point.... developing safer systems for drug calculations in healthcare (262)
P Lee

15.30 – 15.45

Uí Chadhain Sponsor Presentation

15.30 – 15.45 **ECRI - Our Role in Patient Safety**

Room 2026 Informatics and Computing SIG Workshop

Clinical Computing: Networking and DICOM
Chairs: D Withers, A Reilly

14:00 – 14:45 **Networking**
D Withers

14:45 – 15:30 **DICOM**
A Reilly

15:30 – 16:00 Refreshment Break - Poster Sessions & Exhibition

16:00 – 17:30

Burke Plenary (HPA Lecture)

Chair: R Scott, President, HPA

Clinical Engineering – Vital for the health of the nation?
J McCarthy

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DAY 3 Saturday 3rd September 2011

09:00 – 10:30

Burke Radiation Protection I

Chairs: C Lewis: TBA

Keynote

09:00 – 09:30 **Skin Doses in the UK – Preliminary Results from the BIR National Survey**
A Rogers

09:30 – 09:45 Establishment of a procedure for the identification and follow-up of patients at risk of skin injury from cardiac catheterisation procedures (48)
L Sweetman, A Moran

09:45 – 10:00 Reduction of radiation exposure during catheter ablation procedures with a systematic use of 3D non-fluoroscopic mapping systems (71)
D Ravanelli, M Marini, M Del Greco, A Coser, A Valentini, R Bonmassari

10:00 – 10:15 Measurement and optimization of Patient Doses in Endovascular Aneurysm Repair (153)
C Walsh, A O Callighan, D Moore, M P Colgan, P Madhavan, A O Reilly, G O Reilly

10:15 – 10:30 Nurses or Radiographers - study into patient doses delivered by each group in a cardiac catheter lab setting (171)
A Rogers, E Inness

Syngé Nuclear Medicine II

Intraoperative Gamma Cameras, Probes and Tracking Systems

Chairs: A Perkins, W Waddington

09:00 – 09:20 **Introduction to intraoperative systems**
A Perkins

09:20 – 09:50 **High resolution SFOV gamma camera systems**
J Lees

09:50 – 10:10 **POCI, TRECAM : portable gamma cameras for radioguided surgery**
M-A Duval

10:10 – 10:30 **Position tracked gamma probes and small area imagers**
A Britten

Organised by the British Nuclear Medicine Society

Emmet Trainee and Junior Scientists IV

Chairs: N Rivers

09:00 – 09:12 Electron treatment of the eye using a lens shield (188)
S Michopoulou, M Folkard, M Govindu, C Hardiman, K Venables

09:12 – 09:24 Characterisation of Energy and Spatial Distribution for scattered photons in Technetium-99m Myocardial Perfusion Imaging (241)
K McKay, S Cade, M Evans

Note that the figure in brackets after presentation titles refers to the abstract number

- 09:24 – 09:36 Commercially Available Tofu as a Tissue Mimicking Material (190)
A-L Smith, M Brewin
- 09:36 – 09:48 What impact do administered activity and collimator choice have on the achievability of the recommended count statistics in myocardial perfusion SPECT? (32)
Z Glossop
- 09:48 – 10:00 Evaluation of the absorbed dose under lead eye shields for orthovoltage x-ray therapy (85)
L Humbert-Vidan, J Calvert, S Stevens
- 10:00 – 10:12 Evaluation of urethral warmer on isotherms during interstitial cryoablations for prostate cancer in a phantom model (98)
D King, K Gorny, J Felmlee, P Rossman, D Woodrum, L Mynderse
- 10:12 – 10:24 The Use of PET in Proton Therapy Verification (236)
M Baker

10:30 – 11:00 Refreshment Break - Poster Sessions & Exhibition

Davis Medical Devices: ICT and Software

Chairs: N O'Hare, TBA

Keynote

- 09:00 – 09:30 **Connecting Devices – Advancing Care**
F Hegarty

- 09:30 – 09:45 The Development of an RFID-based Hand Washing Compliance Monitoring and Alerting System (335)
E Solomon, C Lewis

- 09:45 – 10:00 The National Integrated Medical Imaging System Project, Ireland (129)
N O'Hare, K Morrissey, J Bellew, N Sheehy, Y Goff, S MacGabhann, P Thornton,

- 10:00 – 10:15 A web-based tool for genetic abnormalities in uveal melanoma using multiplex ligation-dependent probe amplification analysis (89)
A Taktak, S Lake, J Dopierala, A Fisher, S Coupland, B Damato

- 10:15 – 10:30 Imputation of missing data in longitudinal cohort studies using Gibbs sampling method (88)
A Taktak

11:00 – 12:30

Burke Radiation Protection II

Chairs: B Johnson

- 11:00 – 11:15 Anomalous radiation survey measurement in the primary shielding of a new radiotherapy linear accelerator treatment room (111)
P Hill, L Coleman

- 11:15 – 11:30 Assessment of lead-composite and lead-free shielding materials using an x-ray spectrometer (184)
A Fender, G Iball, D Brettle

Note that the figure in brackets after presentation titles refers to the abstract number

- 11:30 – 11:45 Occupational Radiation Dose to Eyes from ERCP Procedures in light of concerns over current ICRP Lens (135) Dose Limit
U O'Connor, A Gallagher, L Malone, G O'Reilly
- 11:45 – 12:00 Performance of active electronic personal dosimeters in radiological diagnostics (301)
M Borowski, S Wrede, J Feldmann, M Lapke, H von Boetticher, B Poppe,
- 12:00 – 12:15 Should we reassess structural shielding design of mammographic installations? (224)
J Sampaio, C Abreu, L Peralta, P Sousa
- 12:15 – 12:30 Evaluation of the performance of bismuth shields on a variety of Multislice CT scanners and the impact of Tube Current Modulation (140)
R Faulkner, U O'Connor, A Gallagher, G O'Reilly

Syngé Nuclear Medicine III

Chairs: TBA

- 11:00 – 11:15 Frequency and radiation exposure of nuclear medical diagnostics in Germany (297)
W Sanders, R Cain, M Foley, V Smith
- 11:15 – 11:30 Half-time SPECT imaging: a feasibility study (185)
M Sheehy, A Doyle, J Cooke
- 11:30 – 11:45 Retention of radioactivity in disposable plastic syringes used in Nuclear Medicine (84)
M Manley, T Carty, M Sheehy
- 11:45 – 12:00 Image Quality assessment in PET (182)
C Walsh, C Johnson, N Sheehy, G O'Reilly
- 12:00 – 12:15 Novel Ideas To Reduce Radioiodine Contamination in 131I Ablation rooms (156)
W Sanders, R Cain, M Foley, V Smith
- 12:15 – 12:30 Why Lutetium-177 could be the ideal Radionuclide for peptide receptor radiotherapy (229)
I Baka, M Lyra

Emmet Trainee and Junior Scientists V

Chairs: A Fagan

- 11:00 – 11:12 Estimation of the Radionuclide Dose Calibrator Gain Settings for Novel PET Radionuclides (248)
E Woods, D Gallacher, J Mackewn
- 11:12 – 11:24 GFR measurements using Cr-51 EDTA of 81 potential live kidney donors at James Cook University Hospital (290)
S Hedley, M Richardson
- 11:24 – 11:36 Commissioning of the Multi-Lumen Mammosite catheter for clinical use for Accelerated Partial Breast Radiotherapy (APBI) (286)
M Dennehy, A Zuchora

Note that the figure in brackets after presentation titles refers to the abstract number

- 11:36 – 11:48 A study of hand-marked breast boosts at UHG (299)
J French, M Moore
- 11:48 – 12:00 Patient doses from pediatric head CT examination in Bulgaria (206)
D Kostova-Letterova, **J Vassileva**
- 12:00 – 12:12 Personal Dosimetry in Interventional Radiology – A three pronged approach (79)
H McMeekin
- 12:12 – 12:24 Anisotropy measurements for a HDR 192Ir brachytherapy source using radiochromic films (35)
D Darios, M Bidmead, C Nalder

Davis Medical Devices: Equipment Management

Chairs: J Amooore, TBA

Keynote

- 11:00 – 11:30 **Pushing the Boundaries of Device Replacement – introducing the keystone model**
P Black
- 11:30 – 11:45 Mind the Gap: A review of infusion pump error logs and their significance for healthcare staff (277)
P Lee, F Thompson
- 11:45 – 12:00 Seven Years Experience of Using Key Performance Indicators in the Management of a Medical Physics & Clinical Engineering Department (307)
B McMahan, J Mahady, L Curry, A Glass, R Kinsella
- 12:00 – 12:15 'Engineering World Health' - Clinical Engineering in a Global Healthcare Setting (257)
E Akinluyi
- 12:15 – 12:30 Politics, risk and bias: evolving a system to allocate medical equipment funding (220)
K Ison

12:30 – 13:00

Burke Plenary (EFOMP Honorary Membership Award)

Chair: S Christofides, President, EFOMP
I-L Lamm

13:00 – 13:30

Burke Closing Ceremony

Awards & Closing Remarks

13:30 – 14:30 Refreshment Break - Poster Sessions & Exhibition

The Organisers wish to express their thanks to the [Institute of Physics Computational Physics](#) and [Medical Physics](#) Groups for organising and supporting the [Modelling and Simulation](#) sessions and to the [British Nuclear Medicine Society](#) for organising the session on [Intraoperative Gamma Cameras and Probes](#). They would also like to thank the [European Society for Magnetic Resonance in Medicine and Biology](#) for sponsoring the [EFOMP/ESMRMB Symposium, Hybrid Systems in Diagnosis and Therapy](#).