2019 SINAPSE Annual Scientific Meeting

Friday 21 June 2019
Apex City Quay Hotel, Dundee

09.30	Registration and Coffee		
10.00	Welcome		
	Session 1		
10.05	*Optimal multi-channel signal combination for the measurement of polyunsaturated fatty acids in breast cancer using multiple quantum coherence MR spectroscopy*	Ms Vasiliki Mallikourti, University of Aberdeen	Proffered
10.20	*Development of a preoperative prognostic index for breast cancer based on ultrasound and ultrasound guided biopsy findings*	Prof Andy Evans, University of Dundee	Proffered
10.35	*A deep learning computer assisted diagnosis system for detection, characterisation and growth rate estimation of lung nodules*	Prof Edwin van Beek, University of Edinburgh	Proffered
10.50	*'Lightning talk' poster pitches*		
11.15	**Morning Tea Break** including exhibition and networking		
	Session 2 – *Artificial Intelligence in Medical Imaging*		
11.45	*AI in breast imaging*	Prof Fiona Gilbert, University of Cambridge	Keynote
12.15	*AI in healthcare: a SWOT analysis*	Dr Keith Goatman, Canon Medical Research Europe	Keynote
12.45	*Deep learning for automated prioritisation and interpretation of chest X-rays*	Prof Giovanni Montana, University of Warwick	Keynote
13.15	**Lunch** including exhibition and networking		
	Session 3		
14.00	Parallel sessions [*see next page*]		
	TOPIC 1 – *Image Analysis*	TOPIC 2 – *Methods Development: Emerging Techniques*	TOPIC 3 – *Methods Development: Applying & Refining Techniques*
15.00	**Afternoon Tea Break and poster session**		
	Session 4		
16.00	*Enabling scalable research access to heterogeneous, routinely collected, linked clinical images for the Scottish Population: the PICTURES Programme*	Dr Emily Jefferson, University of Dundee	Invited
16.25	*Preparing paediatric patients for MRI with a free and accessible Virtual Reality experience*	Dr Jonathan Ashmore, NHS Highland	Proffered
16.40	*Public engagement hints and tips for early career academics*	Dr Ourania Varsou, University of Glasgow & Dr Michael S. Stringer, University of Edinburgh	Proffered
16.55	Announcements and prizes		
17.00	Close		

Parallel sessions (14.00-15.00)

	TOPIC 1 – *Image Analysis*		
14.00	*Towards establishing a standard for parafoveal vascular phenotyping: a reference OCTA based dataset and evaluation of automated segmentation algorithms*	Miss Ylenia Giarratano, University of Edinburgh	Proffered
14.12	*Capillary mapping of human skin in-vivo based on OCTA technique*	Mr Yubo Ji, University of Dundee	Proffered
14.24	*Multiparametric q-space imaging provides sensitive assessment of complex breast tumour heterogeneity*	Mr Nicholas Senn, University of Aberdeen	Proffered
14.36	*Lipid composition is associated with lymphovascular invasion (LVI) and serotonin turnover in human breast tumours*	Dr Sai Man Cheung, University of Aberdeen	Proffered
14.48	*Can baseline ultrasound and mammographic features help predict metastasis free survival in patients receiving neoadjuvant chemotherapy?*	Dr Sarah Savaridas, University of Dundee	Proffered

	TOPIC 2 – *Methods Development: Emerging Techniques*		
14.00	*Development of Tau binding molecules for use as Tau PET probes*	Ms Kotryna Baronaite, University of Aberdeen	Proffered
14.12	*Assessment of myocardial fibrosis activity using 18F-Fluoroproline Positron Emission Tomography (PET) in rat models of cardiovascular disease*	Ms Viktoria Balogh, University of Edinburgh	Proffered
14.24	*Navigated percutaneous interventions: demonstration and training using Thiel embalmed human cadaveric model*	Mrs Helen Donald-Simpson, University of Dundee	Proffered
14.36	*Simulating Respiratory Motion in Pre-clinical Validation of MRgFUS Systems*	Mr Andrew Paul Dennison, University of Dundee	Proffered
14.48	*Development of High Performance Brain-Computer Interfacing Technologies for Neuromodulation*	Mr Jetsada Arnin, University of Strathclyde	Proffered

	TOPIC 3 – *Methods Development: Applying & Refining Techniques*		
14.00	*The optimisation of paediatric CT examinations in Scotland: phase one; benchmarking current performance*	Mr Mark Worrall, NHS Tayside	Proffered
14.12	*Initial Investigation of a Spokes Slice-Selective pTx RF Pulse Design for MRI at 7 Tesla*	Dr Sydney N. Williams, University of Glasgow	Proffered
14.24	*Spectroscopic Imaging with Ultra-High Field MRI: Improving Spectral Bandwidth with Readout Segmentation at 7 Tesla*	Dr Graeme A. Keith, University of Glasgow	Proffered
14.36	*Assessing the feasibility of non-invasive cerebral blood flow and cerebrovascular reactivity regional estimates in mild stroke adults*	Dr Michael S. Stringer, University of Edinburgh	Proffered
14.48	*Comparison of Magnetic resonance imaging (MRI) and Ultrasound shear wave elastography (USWE) in prostate cancer detection*	Mr Yilong Zhang, University of Dundee	Proffered

Poster Session (15.00-16.00)

Poster No.	Title	Presenting Author
P1	*Facilitating clinical decision-making through introduction of Artificial Intelligence technology into the dementia care pathway: a pilot study from the Scottish Dementia Informatics Partnership programme*	Samuel O. Danso
P2	*Evaluation of therapeutic response using FDG-PET in Alzheimer's disease*	Shailendra Mohan Tripathi
P3*	*Individual cortical morphological network in Alzheimer's disease*	Philipp Loske
P4	*Structural correlation networks and anatomical sub-types in behavioural variant Fronto-Temporal Dementia*	Vesna Vuksanović
P5	*Optimal Subspace Filtering of Event Related Signals Using Machine Learning*	Justin Ales
P6	*Role of spatial and temporal interactions in apparent motion*	Marlene Poncet
P7*	*Dance is not like Everyday! Experts' sensorimotor, visual and frontal areas of the action observation network are tuned into dance-specific actions*	Elise Imison
P8	*Effect of Working Memory Updating Training on Functional Brain Activity and Behavioural Outcomes in Neuroimaging studies in Adults: A Systematic Review*	Katerina Pappa
P9	*Correcting latency variability reveals that the ERP correlate of episodic recollection is sensitive to memory precision among healthy older adults*	Jamie G. Murray
P10*	*Multimodal Imaging Biomarkers of Cognitive Reserve: A Machine Learning Approach*	Shaun R. Stone
P11	*Photoperiod is associated with sub-cortical brain volume changes in a large population*	Naif Majrashi
P12	*Effective connectivity within the insula mediates the association between inflammation and human sickness behaviour*	Kristian Stefanov
P13	*Differences in brain functional connectivity networks between cognitive decliners and sustainers*	Anca-Larisa Sandu
P14	*Life-course factors affecting brain health in older people*	Chris McNeil
P15	*Aspirin moderates the association between WMH total lesion volume and processing speed in normal ageing*	Mina Khezrian
P16	*White matter hyperintensity burden is a significant predictor of global measures of white matter integrity and cognitive processing speed*	Jennifer Waymont
P17*	*Carotid arteries, brain structure and cognition in people with ischaemic stroke: A systematic review of MRI studies*	Fraser Sneden
P18*	*Clinical outcome of thrombolytic acute ischemic stroke patients: Differences between positive and negative clinical-CT mismatch*	Manal Alnaas

P19*	*Interaction of Hypoperfusion Intensity Ratio and Hyperglycaemia Predicts Functional Outcome in Ischaemic Stroke*	Viveka Biswas
P20	*Application of Arterial Spin Labelling in Cerebral Blood Flow Quantification in Ischaemic Stroke Patients: A Systematic Review*	Zanariah Mohd
P21*	*Q-space imaging is more sensitive to breast tumour heterogeneity than conventional diffusion MRI*	Nicholas Senn
P22	*Non-invasive measurement of lactate concentration in whole human breast tumours using advanced magnetic resonance spectroscopy (MRS)*	Sai Man Cheung
P23	*Outcomes of false positive and false negative lesions on screening 3T MR imaging in men suspected of having prostate cancer*	Saeed Alqahtani
P24	*Deep Active Learning for Histological Semantic Segmentation*	Jacob Carse
P25	*Whole Brain Tissue Segmentation for Brain Tumours*	Fatemeh Amini
P26	*A Fully Volumetric Deep Learning Approach to MRI Brain Segmentation*	Michele Svanera
P27*	*Validation of a deep-learning based drusen detection in ultra-widefield retinal images*	Emma Pead
P28*	*Optic disc and fovea localisation in ultra-widefield scanning laser ophthalmoscope images captured in multiple modalities*	Peter R. Wakeford
P29*	*On optic disc contour detection in scanning laser ophthalmoscope images of the retina*	Andrea Peroni
P30	*A framework to generate synthetic test image sets parameterized by difficulty level*	Mohammad Ghouse Syed
P31*	*Analysis of PET imaging for tumor delineation*	Surajit Ray
P32	*Evaluation of different measurements of texture analysis in myocardial quantification*	Ping Tie
P33*	*Thiel Cadaveric Model Validation: A Literature Review*	Claire Fitton
P34*	*Force and pressure measurements during simulated nerve block on the soft embalmed Thiel cadaver*	Shengli Zhang
P35*	*Simulated abdominal motion with an MR safe Robotic model using MRgFUS*	Ross Coupar
P36*	*Some practicalities of using Doppler phantoms in supporting the development of commercial ultrasound scanners*	Jiahui He
P37	*Quantitative Ultrasound to Differentiate Brain and Brain Tumour Phantoms with Binary Classifier*	Hannah Thomson
P38	*Acoustic Radiation Force Elastography (ARFE) Combines Optical Coherence Elastography (OCE) for Diseases Diagnose: A Feasibility Study*	Xiao Zhang
P39	*Heterogeneous elastical property characterization of Achilles tendon using Optical Coherence Elastography*	Kairui Feng

P40*	*Optimal Frequency for Vibrational OCE*	Duo Zhang
P41	*iPlacenta – tackling the challenge of imaging vasculature endoscopically*	Lukas Markwalder
P42	*Development of new rodent anthropomorphic 3D printed phantom for preclinical PET/CT imaging*	Wendy McDougald
P43*	*Imaging of cerebral and myocardial inflammation following acute myocardial infarction with 18F-LW223, a novel TSPO radiotracer*	Mark G. MacAskill
P44	*Cellular expression of the 18kDa translocator protein (TSPO) in relation to novel PET TSPO radiotracer, 18F-LW223, binding in mouse brain*	Agne Stadulyte
P45*	*Chromatographic method for assessment of pharmacokinetics/ pharmacodynamics of TEFM180, a new Positron Emission Tomography (PET) radiotracer for imaging Sphingosine-1- Phosphate-5 receptors in brain*	Robert Shaw
P46*	*Computed Tomography (CT) Imaging of Coordination Cages, Potentially Biocompatible CT Contrast Agents*	Carlos José Alcaide-Corral
P47*	*The use of Water-Equivalent Diameter for calculating patient size and Size-Specific Dose Estimates in CT Scans*	Kate Sexton
P48*	*Determining patient thickness from a single digital radiograph - the results of a clinical trial*	Mark Worrall
P49*	*The potential of mobile 3D imaging using flat panel X-ray sources*	Steve Wells
P50	*Expanding Research Imaging Facilities in Dundee: Maximising Imaging Capability while Maintaining Safety*	Jennifer Macfarlane
P51	*Developing a Model for Multi-disciplinary, Multi-centre Pathway of Care for Patients with Low Grade Gliomas: A Case Report*	Helen Swanson
P52	*Imaging in Myanmar – A Scottish Perspective*	Matthew Marzetti

*Included in 'lightning talks' at 10.50