

**SINAPSE ASM**  
**Thur 16<sup>th</sup> and Fri 17<sup>th</sup> September 2021**

Thursday 16 <sup>th</sup> September 2021			
Hopin			
1020	Gather		
Plenary Session 1			
Chair: Dr Jennifer Macfarlane, NHS Tayside			
1030	Welcome – Dr William McGeown, University of Strathclyde		
1035	Welcome – Dr Jennifer Macfarlane, SINAPSE Director, NHS Tayside		
1040	<u>Keynote: Connectome based spreading of pathology and factors of resilience in Alzheimer's disease</u> - Prof Michael Ewers, Institute for Stroke and Dementia Research, University of Munich		
1140	Poster Lightning Pitches 1-12		
1200	Lunch (60 mins)		
Parallel Sessions – See Next Page for Details on Talks			
1300	Session 1 – Neuroimaging	Session 2 – Breast Cancer	Session 3 – Ultrasound & Misc
1400	Tea Break (30 mins)		
Plenary Session 2			
Chair: Dr Richard Mosses, SINAPSE			
1430	<u>Keynote: The development of Imaging Biomarkers is a multi-disciplinary process</u> - Dr Anna Barnes, King's College London		
1530	<u>Keynote: Imaging in robotic endoscopy, from autonomous navigation to diagnosis</u> - Dr Bruno Scaglioni, University of Leeds		
1615	Short Break (10mins)		
1625	Virtual Social Event <i>An opportunity to meet new colleagues and/or catch up with those you haven't seen in a while</i>		
1730	Close		

## Parallel Sessions (1300-1400)

<b>Session 1 – Neuroimaging</b>			
<b>Chair: Dr Magdalena Ietswaart, University of Stirling</b>			
1300	<i>Dynamic functional networks in Alzheimer's disease, mild-cognitive impairment, and healthy ageing</i>	Nicolas Rubido, University of Aberdeen	001
1315	<i>Delusions in Alzheimer's disease: neuroanatomical, cognitive and psychiatric correlates</i>	Sara Scarfo, University of Strathclyde	002
1330	<i>The Impact of Brain Iron on Neurodegeneration and Cognitive Decline</i>	Holly Spence, University of Aberdeen	003
1345	<i>From cognition to molecules: tracking Alzheimer's disease with cognitive biomarkers</i>	Mario Parra, University of Strathclyde	004

<b>Session 2 – Breast Cancer</b>			
<b>Chair: Dr Sarah Savaridas, NHS Tayside</b>			
1300	<i>Lipid composition in peri-tumoural adipose tissue in postmenopausal patients with breast cancer</i>	Sai Man Cheung, University of Aberdeen	005
1315	<i>Peri-tumoural spatial distribution of lipid composition and tumour cellular differentiation in breast cancer</i>	Sai Man Cheung, University of Aberdeen	006
1330	<i>Are baseline mammographic and ultrasound features associated with metastasis free survival in women receiving neoadjuvant chemotherapy for invasive breast cancer?</i>	Andy Evans, University of Dundee	007
1345	<i>Is skin thickening and enhancement on breast MRI associated with metastasis-free survival (MFS)?</i>	Valentine Mberu, University of Dundee	008

<b>Session 3 – Ultrasound and Miscellaneous Topics</b>			
<b>Chair: Dr Rosalind Mitchell-Hay, NHS Grampian</b>			
1300	<i>Scotland's First MR Guided Focused Ultrasound Surgical Treatment</i>	Dr Jennifer Macfarlane, NHS Tayside	009
1315	<i>Segmentation of Thalamic Nuclei for Targeting MR Guided Focused Ultrasound Surgery</i>	Graeme Mackenzie, Ninewells Hospital	010
1330	<i>Examining Cognitive Aspects of Relevance Judgement</i>	Zuzana Pinkosova, University of Strathclyde	011

Friday 17 <sup>th</sup> September 2021			
Hopin			
0945	Gather		
Plenary Session 3			
Chair: Dr Jennifer Macfarlane, NHS Tayside			
0955	<i>Developing advanced imaging as a tool for precision medicine in The Living Laboratory – Dr Kristin Flegal, University of Glasgow O12</i>		
1015	<i>ECR Rising Star: Magnetic resonance elastography of the brain and its application in dementia research – Dr Lucy Hiscox, University of Bath</i>		
1100	Poster Lightning Pitches 13-25		
1130	Tea break (30 mins)		
Parallel Sessions – See Next Page for Details on Talks			
1200	Session 4 – Neuroimaging Methods	Session 5 – Preclinical & Optical Imaging	Session 6 – Vascular
1315	Lunch (45 mins)		
Plenary Session 4			
Chair: Dr William McGeown, University of Strathclyde			
1400	<i>Keynote: CCTA for planning coronary intervention - lessons from TAVR - Dr Jonathan Leipsic, University of British Columbia</i>		
1500	Closing Remarks and Prize Giving – Dr Jennifer Macfarlane, NHS Tayside		
1510	Main Programme Close		
Workshops			
1500	SCCT		
1530	NVIDIA		

## Parallel Sessions (1200-1315)

<b>Session 4 – Neuroimaging Methods</b>			
<b>Chair: Prof Adam Waldman, University of Edinburgh</b>			
1200	<i>Automated brain tumour identification using magnetic resonance imaging: a systematic review and meta-analysis</i>	Omar Kouli, University of Dundee	O13
1215	<i>Joint multi-field T1 quantification for Fast Field-Cycling imaging identifies ischaemic stroke at magnetic field strength below 20 mT</i>	Vasiliki Mallikourti, University of Aberdeen	O14
1230	<i>Eigenvector alignment: Assessing functional network changes in Alzheimer's disease</i>	Ruaridh Clark, University of Glasgow	O15
1245	<i>Efficiency of marking and rendering software for epilepsy surgery</i>	Mateo Gregory, University of Edinburgh	O16
1300	<i>Measurement of microbubble backscattering signals in 3D-printed, physiologically-relevant platforms</i>	Dr Roger Domingo-Roca, University of Strathclyde	O17

<b>Session 5 – Preclinical and Optical Imaging</b>			
<b>Chair: Dr Gordon Waiter, University of Aberdeen</b>			
1200	<i>Direct imaging of glymphatic transport using H2170 MRI</i>	Alaa Alghanimy, University of Glasgow	O18
1215	<i>Comparison of [18F]MNI-1038 (racemate) and [18F]MNI-1126 (R-enantiomer) kinetics in the mouse brain</i>	Catriona Wimberley, University of Edinburgh	O19
1230	<i>Mesoscopic imaging of pediatric palatine tonsil infection</i>	Megan Clapperton, University of Strathclyde	O20
1245	<i>Towards Robust Real-World Decision Support for Skin Lesion Diagnosis</i>	Jacob Carse, University of Dundee	O21

<b>Session 6 – Vascular</b>			
<b>Chair: Dr Michelle Williams, University of Edinburgh</b>			
1200	<i>Strain estimation in aortic roots from 4D echocardiographic images using medial modelling and deformable registration</i>	Peter Mortensen, University of Glasgow	O22
1215	<i>Quantitative Comparison of Arterial Spin Labelling Imaging Sequence in Ischaemic Stroke Patients: A Bland-Altman Analysis</i>	Zanariah Mohd, University of Glasgow	O23
1230	<i><sup>68</sup>Ga-FAPI as a marker of fibrosis activity and matrix remodelling in patients with myocardial infarction</i>	Anna Barton, University of Edinburgh	O24
1245	<i>Synthetic workflow for validation of wall shear stress estimated using plane wave in carotid stenosis</i>	Ke Yang, University of Dundee	O25
1300	<i>Longitudinal TSPO PET imaging with [18F]LW223 in a rat myocardial infarction model</i>	Mark MacAskill, University of Edinburgh	O26

## Poster Session

Poster Number	Title	Presenting Author
P1	<i>Potential solution to stop the improper use of abdominal x-rays for abdominal pain</i>	Winnie Tam
P2	<i>Analysis of Positron Emission Tomography Data for Tumour Detection and Delineation</i>	Wenhui Zhang
P3	<i>Sex differences in the murine brain identified using [18F]LW223 PET, a marker of TSPO expression in vivo</i>	Agne Knyzeliene
P4	<i>Brain Networks: Challenges of high correlations and how to overcome them.</i>	Philipp Loske
P5	<i>Pre-operative Coronary Artery Calcification (CAC) in patients undergoing potentially curative colorectal cancer surgery</i>	Shea Roddy
P6	<i>Are Reported Volume Abnormalities in Autism Consistent? A Meta-Analysis of Morphometric Data</i>	Michelle Sader
P7	<i>A Meta-Analytic Investigation of Grey Matter changes in Anorexia Nervosa</i>	Michelle Sader
P8	<i>The Cerebellum Plays More Than One Role in Appetite Control: Evidence from Typical and Pathological Populations</i>	Michelle Sader
P9	<i>Comparing Specific Absorption Rate (Tissue Heating) Management Methods for Parallel Transmit MRI at 7 Tesla</i>	Sydney Williams
P10	<i>Drug discovery and repurposing using biomimetic chromatography and body-on-chip technology.</i>	Liam Carr
P11	<i>Machine Learning methods for the classification of Dementia using images from the Genetics of Diabetes Audit and Research in Tayside Scotland (GoDARTS) cohort</i>	Esma Mansouri-Benssassi
P12	<i>Automated Radiosynthesis of cis- and trans-4-[18F]Fluoro-L-proline</i>	Tim Morgan
P13	<i>Providing a neuro-imaging evidence-base for motor neuro-rehabilitation</i>	Magda Mustile
P14	<i>3D-printed tissue-mimicking and cell compatible hybrid hydrogels for ultrasound and microbubble-mediated drug delivery research</i>	Lauren Gilmour
P15	<i>Low Cost Photoacoustic Computed Tomography System Based on Adaptive Back Projection Reconstruction</i>	Yang Zhang
P16	<i>Assessment of Lungman Anthropomorphic Phantom</i>	Amy Oana
P17	<i>Developing new biomarkers for imaging oligodendrocyte function in vivo.</i>	Robert Shaw
P18	<i>Study to establish the parameter space of ultrasound imaging based detection of tissue stiffness variations</i>	Patricia Foia
P19	<i>Association of the regional cortical complexity with fluid cognition and life course factors</i>	Nafeesa Nazlee
P20	<i>Evaluation of the stiffness of flexor digitorum superficialis muscle using ultrasound shear wave elastography in healthy volunteer: a preliminary study</i>	Phongpan Tantipoon
P21	<i>Improving Needle Visualization in Ultrasound-Guided Regional Anaesthesia</i>	Ashraf Agweder
P22	<i>Application of Swept-Source Optical Coherence Tomography (SS-OCT) System for Wound Healing Monitoring based on a Murine Model</i>	Tianyu Zhang
P23	<i>Using deep learning and transfer learning to accurately assess the epithelial region in human skin based on Optical Coherence Tomography</i>	Yubo Ji

P24	<i>Viscoelastic properties of a corneal stromal model measured by surface acoustic wave optical coherence elastography (SAW-OCE)</i>	Yilong Zhang
P25	<i>Assessment of MR imaging quality with MRgFUS installation</i>	Katherine McLellan
P26	<i>Is diagnostic imaging of the breast possible with a Magseed in situ?</i>	Jennifer Summersgill
P27	<i>Optimising Navigator Scans for Use in MRI Prospective Motion Correction</i>	Steven Winata
P28	<i>3D printed tissue equivalent material anthropomorphic rodent phantom for designing preclinical study specific imaging protocols and scanner quality control/calibration</i>	Wendy McDougald
P29	<i>RF simulations of cranial fixation plates in 7 tesla MRI</i>	Andrew McDevitt
P30	<i>Ex-vivo investigation of inflammation and thrombus PET radiotracers in lung, heart and brain tissue from COVID-19 related deaths</i>	Mark MacAskill
P31	<i>Characterisation of a Diffusion Phantom used for Diffusion MRI QA</i>	Christopher Taylor
P32	<i>Lymph node characterisation of a metastatic mouse model of CRC using pre-clinical ultrasound</i>	Marion Bacou
P33	<i>Automated detection of faint and blurred features</i>	Bohdan Starosta
P34	<i>SAR Simulation of a Close-fitting 8-channel Transceiver Head Coil Including EEG Electrodes for Safety Validation at 7T</i>	Paul McElhinney
P35	<i>Contrast enhanced magneto-motive ultrasound (CE- MMUS) as a promising imaging technique for improved lymph node identification</i>	Katarzyna Kaczmarek