

## Program

### Day 1 - Thursday, March 28, 2019

7:15	<b>Registration</b>	Ballroom Foyer
7:15 – 8:30	<b>Poster Set-Up</b>	Ballroom West
8:30 – 8:40	<b>Opening Remarks</b>	Ballroom Centre and East
	Tamie Lynn Poepping, Charlie McKenzie & Ali Khan, ImNO 2019 Scientific Committee Chairs	
	<b>Keynote Session</b>	Ballroom Centre and East
8:40 – 9:25	<b>Separating the Hype from the Hope in Medical Imaging AI</b>	
	Amber Simpson, PhD, Memorial Sloan Kettering	
9:25 – 10:25	<b>Poster Session &amp; Nutrition Break</b>	Ballroom West
	<b>Ballroom Centre</b>	<b>Ballroom East</b>
	<b>1 - Instrumentation and Technology</b>	<b>2 - Machine Learning</b>
10:25 – 10:39	1-1 Rui Xu - Designing a Spine-Specific Ultrasound Phased Array	2-1 Ryan M Alfano - Texture-Based Prostate Cancer Classification on MRI: How Does Inter-Class Size Mismatch Affect Measured System Performance?
10:39 – 10:53	1-2 Idan Nemirovsky - Comparing vibrometer and accelerometer measurements of gradient field induced vibration in an MRI	2-2 Emmanuel Edward Ntiri - Ventricular and total intracranial vault segmentations for brains with extensive atrophy using three-dimensional convolutional neural networks
10:53 – 11:07	1-3 Farah N Mushtaha - Varying microstructural properties of a 3D printed phantom for diffusion MRI validation	2-3 Wenchao Han - Automatic High-Grade Prostate Cancer Detection on Digital Histopathology Imaging
11:07 – 11:21	1-4 Brandon Driscoll - Hypoxia Standardization Phantom to Quantify Variation in Hypoxia Measurement with Positron Emission Tomography across Multiple Centres	2-4 Anna Danko - Multi-Contrast Carotid Lumen-wall Segmentation Using Deep Learning
11:21 – 11:35	1-5 Santiago F Cobos - Selective Laser Melted 2D Focused Anti-Scatter Grids for Cone-beam CT	2-5 Grey C Kuling - Tissue Segmentation in Multi-Weighted Breast MRI using a Deep Learning Unet
11:35 – 11:49	1-6 Daniel Lorusso - A novel microfluidic device for real-time microscopic imaging of endothelial cell responses to laminar and disturbed fluid flow	2-6 Geoff Klein - Vertebral Body Segmentation in CT Images using V-Net
11:49 – 13:00	<b>Lunch</b>	

### Day 1 - Thursday, March 28, 2019

	<b>Ballroom Centre</b>	<b>Ballroom East</b>
	<b>3 - Cellular and Molecular Imaging</b>	<b>4 - New MRI Approaches</b>
13:00 – 13:14	3-1 Ann Fernando - Gas Vesicle Nanoparticles for the Photodynamic Treatment of Tumors	4-1 Nico J J Arezza - Clinically-viable and robust measurement of microscopic diffusion anisotropy
13:14 – 13:28	3-2 Olivia C Sehl - Monitoring two cell populations using iron oxides and perfluorocarbons with dual 1H and 19F magnetic resonance imaging at 3 Tesla	4-2 Nadia Bragagnolo - Rapid B1+ Measurement using a Non-Steady-State Progressive Flip Angle Sequence and Parallel Imaging

13:28 – 13:42	3-3 Fiona Li - Molecular Imaging of Hypoxia: Kinetic Analysis of Dynamic PET Data from Pancreatic Cancer	4-3 Olivia W Stanley - Using low resolution pre-scans and singular value decomposition derived sensitivities to allow for the combination of large phase datasets
13:42 – 13:56	3-4 TianDuo Wang - Tumour-activatable minicircles expressing prodrug-suicide gene systems for prostate cancer therapy	4-4 Gregory Hong - Validation of simulated vs. experimentally acquired B0 field maps surrounding metal
13:56 – 14:10	3-5 Nivin N Nyström - In vivo cell tracking via multimodality reporter-based fluorescence, photoacoustic, and magnetic resonance imaging at 3 Tesla	4-5 Amgad Louka - Initial comparison of RF-induced heating in the ASTM phantom and a cadaver leg: a pilot study
14:10 – 15:15	<b>Poster Session &amp; Nutrition Break</b>	
	Ballroom Centre	Ballroom East
	<b>5 - Image Guided Intervention and Augmented</b>	<b>6 - Bone and Joint Imaging</b>
15:15 – 15:29	5-1 Zachary Baum - Assessment of intraoperative neurosurgical planning with the Microsoft HoloLens	6-1 Allison J Clement - Differentiation of Osteoblastic and Healthy Bone Tissue in Metastatically Involved Vertebrae using Radiomic Features
15:29 – 15:43	5-2 Reid Vassallo - Augmented reality guidance in cerebrovascular surgery using microscopic video enhancement	6-2 Adam DM Paish - Iterative Design of a Small-Animal Hip-Hemiarthroplasty Model for Preclinical Orthopaedic Research
15:43 – 15:57	5-3 Mark Asselin - Navigation of the iKnife for intra-operative tissue characterization in neurosurgery	6-3 Joseph U. Umoh - Micro-CT of Kangaroo Cervical Spine: Analysis of Bone Mineral Density of C3-C7
15:57 – 16:11	5-4 Claire K Park - Design and evaluation of a new positron emission mammography ultrasound-guidance device for core needle biopsy in breast tumours	6-4 Melissa J Prickaerts - Multimodal Image-based Analysis of Ultrafast Burst Mode Laser Ablation on Articular Cartilage
16:11 – 16:25	5-5 Jay B Soni - Characterizing the Accuracy and Precision of Micro-Coil Tracking in Ablation Catheters	6-5 Rudy Baronette - Three-dimensional computed tomographic reconstruction in a natural weight-bearing stance using ceiling-mounted x-ray fluoroscopy
16:25 – 16:39	5-6 Derek J Gillies - Geometrically Variable 3D Ultrasound with Mechanical Assistance for Interventional Liver Cancer Therapies	6-6 David Burns - Intra-Operative Verification of the Glenoid Implant Position with Structured Light Imaging in Total Shoulder Arthroplasty
16:39 – 16:55	<b>Break</b>	
16:55 – 17:40	<b>Keynote Session</b>	
	Chair:	
16:55 – 17:40	<b>Integration, Intelligence and Multi-Modality Image Guidance for Procedural Therapies</b> Rebecca Fahrig, PhD, Siemens Healthineers	

Ballroom West

Ballroom East

Ballroom Centre and East

## Day 2 - Friday, March 29, 2019

8:00	<b>Registration</b>	Ballroom Foyer
8:00 – 8:50	<b>Poster Set-Up</b>	Ballroom West
8:50 – 8:55	<b>Opening Remarks</b>	Ballroom Centre and East
	Tamie Lynn Poepping, Charlie Mckenzie & Ali Khan, ImNO 2019 Scientific Committee Chairs	
	<b>Keynote Session</b>	Ballroom Centre and East
8:55 – 9:40	<b>The Placental Pump</b>	
	Penny Gowland, PhD, University of Nottingham	
9:40 – 10:40	<b>Poster Session &amp; Nutrition Break</b>	Ballroom West
	<b>Ballroom Centre</b>	<b>Ballroom East</b>
	<b>7 - Cancer Imaging</b>	<b>8 - Fetal, Neonatal and Pediatric Imaging</b>
10:40 – 10:54	7-1 Salma Dammak - Radiomics for detecting recurrence after stereotactic ablative radiotherapy: sensitivity of performance to sample size	8-1 Simran Sethi - Quantifying T1 and T2* Relaxation Times of Fetal Tissues at 1.5 T
10:54 – 11:08	7-2 Dae-Myoung Yang - Detection and Localization of Dominant Intra-prostatic Nodules with CT Perfusion	8-2 Priyanka Roy - Lateral ventricle volume based on posture of the neonate having intraventricular hemorrhage
11:08 – 11:22	7-3 Christopher W Smith - Prostate MRI delineated lesion boosting through high dose rate brachytherapy dwell time adjustment	8-3 Estee Goldberg - User Friendly Fetal fMRI Image Segmentation Pipeline
11:22 – 11:36	7-4 Casey Y Lee - Metabolic Imaging of a Renal Cell Carcinoma Patient with Brain Metastasis using Hyperpolarized <sup>13</sup> C MRI	8-4 Ajay Rajaram - NNeMo (Neonatal NeuroMonitor): A non-invasive optical device for assessing the coupling of cerebral blood flow and energy metabolism in the developing brain
11:36 – 11:50	7-5 Katie M Parkins - Dual bioluminescence imaging reveals remarkable tumour self-seeding of spontaneous and experimental metastases in mice	8-5 Sancgeetha Kulaseharan - Identifying Lesions in Paediatric Epilepsy using Morphometric and Textural Analysis of MRI
11:50 – 13:00	<b>Lunch</b>	

## Day 2 - Friday, March 29, 2019

	<b>Ballroom Centre</b>	<b>Ballroom East</b>
	<b>9 - Lung Imaging</b>	<b>10 - New Contrast Agents</b>
13:00 – 13:14	9-1 Jonathan MacNeil - Novel COPD Multi-parametric Response Map Phenotypes	10-1 Veronica Dubois - Safe harbor targeted CRISPR/Cas9 tools for molecular-genetic imaging of cells in living subjects
13:14 – 13:28	9-2 Alexander M Matheson - Multi-scalar Perfusion and Ventilation Defects in Asthma	10-2 Yohannes Soenjaya - Multimodality organic contrast agents for ultrasound and photoacoustic imaging
13:28 – 13:42	9-3 Parya Jafari - Improved Tumor Motion Estimation by Incorporating Patho-physiology in Biomechanical Model of the Lung	10-3 Charmaine Cruje - Lanthanide nanoparticles as vascular contrast agents for in vivo dual energy microcomputed tomography
13:42 – 13:56	9-4 Andrea L Barker - Is Vascular Pruning Related to MRI Ventilation Defects in Bronchiectasis and COPD patients?	10-4 Kirsten Cardinell - Lymphatic Drainage from the Eye Quantified Non-Invasively by Photoacoustic Imaging Using a Near Infrared Tracer
13:56 – 14:10	9-5 Rachel L Eddy - Can Oscillometry Explain Differences Between <sup>3</sup> He and <sup>129</sup> Xe Ventilation Heterogeneity?	10-5 Ryan M Jones - Ultrafast three-dimensional microbubble imaging for monitoring nonthermal brain ablation

14:10 – 15:00	<b>Poster Session &amp; Nutrition Break</b>		Ballroom West
	<b>Ballroom Centre</b>		<b>Ballroom East</b>
	<b>11 - Neuroimaging</b>		<b>12 - Cardiac and Vascular Imaging</b>
15:00 – 15:14	11-1 Lucas D L Narciso - Error Analysis of a Non-Invasive Hybrid PET/MRI Method for Imaging CMRO2	12-1 Praveen Sankajith B Dassanayake - Examining the effect of hepcidin on cardiac inflammation using THP-1 monocytes and MRI	
15:14 – 15:28	11-2 Stefan E Poirier - Empirical evaluation of a DTI tractography pipeline using whole-brain tractograms from a white matter phantom.	12-2 Sergio A Vega - Development of an ex vivo porcine model of coarctation of the aorta: Possible treatment applications with MR-guided HIFU using boiling histotripsy	
15:28 – 15:42	11-3 Erind Alushaj - Differentiating the substantia nigra pars compacta and ventral tegmental area in early-stage Parkinson's Disease using structural magnetic resonance imaging	12-3 Justin J Tse - Soft Tissue and Vascular Visualization of Iodine-Enhanced Samples via Dual-Energy Computed Tomography	
15:42 – 15:56	11-4 Roy AM Haast - Sub-millimeter blood flow mapping of cortical and hippocampal gray matter	12-4 Seva Ioussoufovitch - Towards quantifying tissue perfusion with dynamic contrast-enhanced near-infrared imaging	
15:56 – 16:10	11-5 Tracy Ssali - Optimization of Phase Contrast for CBF Quantification by the Non-Invasive Hybrid PET/MR-approach	12-5 Raanan Marants - Exploring the Effects of Standard and Cooled Hemodialysis on Renal Blood Flow using CT Perfusion	
16:10 – 16:24	11-6 Jason Kai - Assessing the reliability and reproducibility of NeuroBundle Extraction and Evaluation Resource, an automated tool for clustering diffusion tractography	12-6 Jill Weyers - Effects of the iron chelator deferiprone on porcine acute myocardial infarction and cardiac remodeling	
16:24 – 16:40	<b>Break</b>		
	<b>Keynote Session</b>		Ballroom Centre and East
16:40 – 17:25	<b>Tissue Characterization with Cardiac Magnetic Resonance</b> Rebecca Thornhill, PhD, University of Ottawa		
17:25 – 17:45	<b>Awards and Closing Remarks</b>		Ballroom Centre and East
17:45 – 18:15	<b>Poster Take Down</b>		Ballroom West