Medical Biophysics Undergraduate Research Day 2019

Department of Medical Biophysics

Western University

Location: University Hospital Auditorium A

Time	Monday, April 8th 2019
12:00-1:00	Lunch and Student Registration
1:00-1:10	Opening Remarks
1:10-1:50	**Oral Presentations – Section 1** (Moderator: Nathan Orlando)
	1:10-1:20 – **Optimizing diffusion kurtosis imaging** by Akash Chopra
	1:20-1:30 – **CT gel dosimetry analysis with 1D convolution for small-cell lung cancer** by Lucy Lu Xu
	1:30-1:40 – **In silico investigation into the effectiveness of continuous wave versus time-resolved near-infrared spectroscopy** by David J. Cohen
1:50-3:00	**Poster Session and Break**
	2:00-2:30 – Session A (odd number posters)
	2:30-3:00 – Session B (even number posters)
3:00-3:40	**Oral Presentations – Section 2** (Moderator: Simran Sethi)
	3:00-3:10 – **Evaluation of novel highly-sensitive luciferases for in vivo bioluminescence imaging of two cell populations** by Shirley Liu
	3:10-3:20 – **Anaerobic metabolism increases in fetuses with intrauterine growth restriction** by Xingyi Wang
	3:20-3:30 – **A carotid artery image-derived input function for preclinical simultaneous PET/MRI** by Michael Van Ginkel
3:40-4:00	Break
4:00-4:10	Awards (Presented by: Dr. Jefferson Frisbee)
4:10-4:20	Concluding Remarks

Poster Presentations:

Number	Student Name and Abstract Title
1	**Ahmed Abdalle** Comparing various partial volume effect correction approaches of post-reconstructed PET/MRI data in epilepsy and dementia patients
2	**Akash Chopra** Optimizing diffusion kurtosis imaging
3	**Ashifa Hudani** Measurement of maternal blood flow during pregnancy using 4D Flow MRI
4	**Baran Serajelahi** A computer modeling study of abnormal arteriovenous shunting in a regulating microvascular network
5	**Bryan Meglei** Finite element models of the implanted human cochlea
6	**Daniel Cao** Automatic localization of anatomical fiducials using 3D intensity features and machine learning
7	**David J. Cohen** In silico investigation into the effectiveness of continuous wave versus time-resolved near-infrared spectroscopy
8	**Dayton Miranda** Experiment-based mathematical modelling of blood flow and red blood cell distribution in large arteriolar networks
9	**Hannah Bazinet** Delivery verification of respiratory-gated volumetric-modulated arc therapy for liver cancer using during treatment kv imaging
10	**Hassan Abdallah** Automated analysis of calcium signalling within endothelial cells
11	**Jake Valsamis** Short diffusion time microscopic anisotropy to detect neurite pathology in grey matter
12	**Jaryd Christie** An investigation of artifacts in optical cone-beam computed tomography and its performance for measuring the geometric accuracy of radiotherapy systems
13	**Jialin Wen** Application of CT perfusion on DSA images in acute ischemic stroke patients
14	**Kesavi Kanagasabai** Effect of x-ray detector type on image quality and radiation dose for radiostereometric analysis
15	**Lu Lucy Xu** CT gel dosimetry analysis with 1D Convolution for small-cell lung cancer

Number	Student Name and Abstract Title
16	**Michael Van Ginkel** A carotid artery image-derived input function for pre-clinical simultaneous PET/MRI
17	**Naomi Abayomi** Recovering optical parameters of an infant brain using an in silico broadband near infrared spectroscopy model
18	**Nicholas Wagter** Hand held photo acoustic sensor for use in breast cancer surgery
19	**Noor Bakir** The resection of brain tissue with quantitative diffusion-weighted MRI abnormalities in temporal lobe epilepsy and surgical outcomes
20	**Raashi Vijay** Contrast enhanced imaging of infarcted tissue and microvascular obstruction during a constant infusion
21	**Sam Papernick** Validating 3D ultrasound measurements for the diagnosis of knee arthritis
22	**Sarah Scott** Voxel-based analysis of white matter interruptions in frontotemporal dementia
23	**Shaheer Amjad** Contrast agent injection profiles under health and disease
24	**Shirley Liu** Evaluation of novel highly-sensitive luciferases for in vivo bioluminescence imaging of two cell populations
25	**Sunny Fang** Comparison of tumour pH environment and glycolysis measurements in a C6 rat model of glioma
26	**Timothy Hunter** Investigating the prognostic value of epicardial adipose tissue and atrial adipose tissue volumes in cardiovascular diseases
27	**Ting Yu** Characterization of ghrelin and growth hormone secretagogue receptor following myocardial infarction in canine model
28	**Viveka Sainani** Developing needle localization for clinical applications using deep learning
29	**Xingyi Wang** Anaerobic metabolism increases in fetuses with intrauterine growth restriction
30	**Yang Rui Ying** Microvascular dysfunction in a FIP rodent model of sepsis
31	**Zongyi Liu** Endothelial-to-mesenchymal transition (EndoMT)