

## **Session Program**

**26-31 May 2024**



**Canadian Association  
of Physicists**

**Association canadienne  
des physiciens et physiciennes**

## **2024 CAP Congress / Congrès de l'ACP 2024**

***DPMB Poster Session & Student Poster  
Competition (28) | Session d'affiches DPMB et  
concours d'affiches étudiantes (28)***

Western University

## Tuesday 28 May

17:45

### DPMB Poster Session & Student Poster Competition (28) | Session d'affiches DPMB et concours d'affiches étudiantes (28)

**Session** | **Location:** Western University, PAB Hallways

17:45-17:47

**(G) (POS-33) Quantifying Consciousness and Inhibitory Control: An Integrated Information Theory Approach to Neural Dynamics in Go/NoGo Tasks**

**Speaker**

Dilanjan Diyabalanage

17:47-17:49

**(UG\*) (POS-36) Noisy Nonlinear Dynamics of Otoacoustic Emissions**

**Speaker**

Elizabeth Allison

17:49-17:51

**(G) (POS-39) Development of a Cutaneous Facial Electrical Stimulation Device for the Production of Phosphenes**

**Speaker**

Veronica Kurkjian

17:51-17:53

**(UG\*) (POS-21) Physical Mechanisms of Tissue Boundary Formation and Tissue Internalization**

**Speaker**

Merdeka Miles

17:53-17:55

**(G\*) (POS-40) First principles study of ligand-protein interaction: A DFT and MD pathway to bioactivity estimation of molecular chemicals**

**Speaker**

Dr Bong-Oh Kwon

17:55-17:57

**(G) (POS-38) Inferring biochemical reaction rates from stochastic fluctuations in growing and dividing cells**

**Speaker**

Linan Shi

17:57-17:59

**(G\*) (POS-37) Influence of Arterial Occlusion at Various Cuff Pressures on Skin Colour Measured by rPPG**

**Speaker**

Leah DeVos

17:59-18:01

**(POS-35) Modeling the cooperative compaction of bacterial chromosomes by biomolecular crowding and the cross-linking protein H-NS**

**Speaker**

Bae-Yeun Ha

18:01-18:03

**(G) (POS-34) A Computational Study on the Structural Dependence of Cell Penetrating Peptide Pathways****Speaker**

Michael Thompson

18:03-18:05

**(G\*) (POS-32) The effect of area distribution of benign tissues on metastasis****Speaker**

Yasamin Modabber

18:05-18:07

**(G) (POS-31) A Physics inspired probabilistic model of neuroimaging data analysis and modelling.****Speaker**

Dilanjan Diyabalanage

18:07-18:09

**(G) (POS-28) A wireless resonator layer for high-resolution TMJ MRI at 1.5 T****Speakers**

Mr Bocheng Xu, Yujie Ren

18:09-18:11

**(G) (POS-27) Detunable Wireless Litzcage Coil for Human Head MRI at 1.5T****Speaker**

Mr Bocheng Xu

18:11-18:13

**(G\*) (POS-26) Towards a Unifying Model for Droplet Spreading Using an Exponential Law: A Molecular Dynamics Study****Speaker**

Farshad Esmaeilian

18:13-18:15

**(G\*) (POS-25) The importance of instrument effects on light polarization when imaging retinal biomarkers of brain diseases****Speaker**

Yurii Potsiluienko

18:15-18:17

**(UG) (POS-24) Toward the development of a rapid diagnostic test for bacterial meningitis using laser-induced breakdown spectroscopy****Speakers**

Ms Caroline Alionte, Isabella Arthur, Rachel Chevalier

18:17-18:19

**(UG\*) (POS-23) Diagnosing Bacterial Urinary Tract Infections Using Laser-Induced Breakdown Spectroscopy****Speaker**

Hadia Malik

18:19-18:21

**(UG\*) (POS-22) Detection of Bacterial Pathogens in Blood Using Laser-Induced Breakdown Spectroscopy****Speaker**

Jasmine Saad

18:21-18:23

**(G) (POS-29) Optical Investigations of Endothelial Dysfunction: Exploring Pressures for Induced Ischemia****Speaker**

Vanja Dvekar

18:23-18:25

**(UG) (POS-30) Multi-Modal Neuroimaging based Mutual Information Decomposition for Alzheimer's Disease Diagnosis****Speaker**

Ms Yujie Ren

18:25-18:27

**(G\*) (POS-41) Bringing light to force-driven events of single molecules****Speaker**

Luis Ramirez

18:27-18:29

**(UG) (POS-42) Effects of epidermal pigmentation on the accuracy of cerebral oximeters****Speaker**

Sophie Niculescu

18:29-18:31

**(G\*) (POS-44) Metamaterial-Assisted Wireless Electric Field Application for Studying Breast Cancer Cell Migration****Speaker**

Mr Nicholas Palmerley

18:31-18:33

**(POS-43) Molecular Dynamics Simulation of Lung Surfactant Protein SP-B fragments in model bilayers****Speaker**

Michael Morrow

18:33-18:35

**(G\*) (POS-45) Applying the Hybrid PET/MRI Technique PMROx in Healthy Humans to Measure Cerebral Metabolic Rate of Oxygen****Speaker**

Graham Deller

18:35-18:37

**(G\*) (POS-47) Navigating Radioguided Cancer Surgery Using Principles of Gamma Photon Interactions****Speaker**

Sydney Wilson

18:37-18:39

**(G\*) (POS-48) Using Machine Learning to Identify Motion Patterns from Acceleration and Angular Velocity Readings****Speaker**

Kyle Wilson

18:39-18:41

**(UG\*) (POS-46) Development of a Surface Enhanced Raman Spectroscopy Sensor for the Detection of Trace Concentrations of Small Molecules****Speaker**

Ann Drakes

19:15