

HITBASS 2019 - SCHEDULE

Technology for Health & Well Being

Welcome to the second annual Science and Environmental Studies sponsored symposium. We have an exciting and varied schedule, with a visit from “Pepper” - a robot that can help dementia patients, drugs that target lung cancers, and smarter fridges! We hope you will enjoy this mix of oral presentations, posters and facilitated discussions exploring technology for health and well-being.

Saturday, October 26, 2019 Faculty Lounge	
DIGITAL HEALTH TECHNOLOGY (Chair – Dr. Jinan Fiaidhi)	
8:30 – 9:00	<i>Registration and Coffee</i>
8:45 – 9:00	<i>Welcome Address by Dr. Todd Randall, Dean, Faculty of SES</i>
9:00 – 10:00	PUBLIC KEYNOTE: DR. ARSHIA KHAN , Associate Professor, Swenson College of Science and Engineering at the University of Minnesota, Duluth <i>Robotics in Dementia Care</i>
10:00 – 10:30	Dr. Sabah Mohammed , Professor, Computer Science, Lakehead University <i>Trends in Smart Health</i>
10:30 – 10:45	<i>Coffee Break</i>
10:45 – 11:15	Dr. Arnold Kim , TBRHSC <i>Aurora Constellations: The case for modeling and design tools in the collaborative construction of complex patient care planning</i>
11:15 – 11:30	Lisa Ewen , MSc Computer Science, Lakehead University <i>The Use of Data Fusion in Medical Planning: A Survey</i>
11:30 – 11:45	Bhartiben Sindhi , MSc Computer Science, Lakehead University <i>Data Security in Biomedical Applications</i>
11:45 – 12:00	Joseph Tassone , MSc Computer Science, Lakehead University <i>Utilizing Twitter Data Analysis and Deep Learning to Identify Drug Use</i>
12:00 – 12:15	Kelechi A. Iwuorie , MSc Computer Science, Lakehead University <i>Information Extraction for Adverse Drug Reaction Using Machine Learning</i>
12:15 – 12:30	Ananta Bhatt, Aadhya Bhatt , MSc Computer Science, Lakehead University <i>Next Generation Smart Fridge System Using IoT</i>
12:30 – 1:00	<i>Lunch</i>

Saturday, October 26, 2019
Faculty Lounge

CLINICAL & HEALTH RESEARCH (Chair – Dr. Jinan Faidhi)

1:00 – 2:00	KEYNOTE - DR VALERIE GRDISA , EVP Research, Quality and Academics/Chief Nursing Executive, TBRHRC <i>From Bench to Bedside: Research and Innovation at the Hospital and Institute</i>
2:00 – 2:30	Dr. Taryn Klarner , Assistant Professor, Kinesiology, Lakehead University <i>Patient oriented research in Northern Ontario</i>
2:30 – 2:45	<i>Coffeebreak</i>
2:45 – 3:15	Dr. Ingeborg Zehbe , Lakehead University-TBRHRI Research Chair Dr. Guillem Dayer , PDF, TBRHRI <i>Development of single-domain antibodies targeting the human papillomavirus 16 E6 protein</i>
3:15 – 3:30	Sepideh Dadgar , Biotechnology PhD candidate, Lakehead University <i>Design and Evaluation of two Novel Fluorescent Molecular Probes Targeting Cathepsin B</i>
3:30 – 3:45	Kimberly Christopher , Chemistry, Lakehead University <i>Population genetics and structural analysis of taste receptor proteins responsible for the detection of sweet and umami taste in humans</i>
3:45 – 4:00	Dr. Eryk Przysucha , Associate Professor, School of Kinesiology, Lakehead University <i>Impact of Attentional Loading and Different Task Constraints on Postural Control of Older Adults</i>
4:00 – 4:15	Navdeep Singh, Pankti Joshi , MSc Computer Science, Lakehead University <i>A non-invasive glucometer using IoT and cloud</i>
4:15 – 4:30	Gaurav Rao , Saint Mary's University, Nova Scotia, Canada <i>Responder network system during out of hospital cardiac arrest</i>
4:30 – 4:45	Dale Dowling , MSc Computer Science, University of Minnesota, Duluth TBD

Sunday, October 27, 2019 – Morning Sessions
Faculty Lounge

BIOMECHANICS (Chair – Dr. Carlos Zerpa)

8:30 – 9:00	<i>Registration and Coffee</i>
9:00 – 10:00	KEYNOTE – DR. MORRIS LEVY , Associate Professor of Biomechanics, Department of Applied Human Sciences, University of Minnesota Duluth <i>Biomechanical Investigations in Piano Performance</i>
10:00 – 10:30	Dr. Carlos Zerpa , Associate Professor, Kinesiology, Lakehead University <i>Energy measures across hockey helmet impact locations</i>
10:30 – 10:45	<i>Coffee Break</i>
10:45 – 11:00	Zhe Bin Teo , MSc Kinesiology, Lakehead University <i>Kinematic Analysis of Sabre Fencing Head Impacts via Simulations</i>
11:00 – 11:15	Tyson Rybak , MSc Kinesiology, Lakehead University <i>The Relationship Between Impact Velocity and Linear Acceleration for Different Headgear Across Different Impact Locations</i>

BIOTECHNOLOGY, BIOINFORMATICS & IMAGING (Chair – Dr. Mike Campbell)

11:15 – 11:30	Dr. Wely Floriano , Professor, Chemistry, Lakehead University <i>Introduction to Bioinformatics</i>
11:30 – 11:45	Dr. Jinqiang Hou , Lakehead University-TBRHRI Research Chair <i>Development of Small Molecule PET tracers Targeting GHS-R1a</i>
11:45 – 12:00	Jessica Allingham , CHMS PhD candidate, Lakehead University <i>Design, Synthesis and Characterization of a PET Diagnostic Agent for Neuronal Trauma</i>
12:00 – 12:15	Alejandro Ortigas-Vásquez , Bioinformatics, Lakehead University <i>Human Papillomavirus Type 16 Sub-Lineages and their Host Genome Integration Capability: The Development of Bioinformatics Tools</i>
12:15 – 12:30	Meijia Zhang , Biotechnology PhD candidate, Lakehead University <i>Effects of Nutrient Loading Rate And N/P Ratio on the Performance of a Novel Microalgal-Bacterial Membrane Photobioreactor</i>
12:30 -1:30	<i>Lunch</i>

Sunday, October 27, 2019 – Afternoon Public Sessions
Saunders Fieldhouse, Lakehead University

HITBASS SHOWCASE

Public Open House in the **Saunders Fieldhouse** 2 – 4 pm

Bring your friends to the free open house where you can meet the robot “Pepper”, test out your “gait” check out the cool Smart Health Fablab and learn some basic coding skills with the ozo-bots and makey-makeys!

2:00 – 4:00	<p>SB1028</p> <ul style="list-style-type: none">• Meet and Greet with ‘Pepper’ the robot• Smart Health Fablab• Gait Analysis Demo• Concussion Impactor demo <p>SB 1027</p> <ul style="list-style-type: none">• Learn to code with Ozo-bots and Makey-Makeys from Superior Science <p>SB 1025</p> <ul style="list-style-type: none">• Electromyography (EMG) <p>Saunders Fieldhouse Hallway</p> <ul style="list-style-type: none">• POSTERS
4:00 – 6:00	<p><i>AWARDS BANQUET (Faculty Lounge)</i> <i>Awards presented by Dr. Jinan Faiidhi</i></p>

Sunday, October 27, 2019
Saunders Fieldhouse, Lakehead University

POSTERS

Poster presentations judges: Dr Eryk Przysucha and Dr. Amarjit Chahal

Dr. Ryan Tonkens , Centre for Health Care Ethics, Lakehead University, Northern Ontario School of Medicine <i>Carebots, Dementia Care & Respect for Cultural Diversity</i>	Digital Health Technologies
Chandrasekhar Parisa , MSc Computer Science, Lakehead University <i>Drone as Personal Assistant in Ambient Assisted Living Systems for the Elderly</i>	Digital Health Technologies
Chandrasekhar Parisa , MSc Computer Science, Lakehead University <i>Human Sentiment Extraction Using Cnn Model</i>	Clinical & Health Research
Alysha Duivesteyn , MSc Kinesiology, Lakehead University <i>An Investigation of Various Stretching Techniques on Hamstring Flexibility in Healthcare Students</i>	Clinical & Health Research
Lucas Hudson , MSc Kinesiology, Lakehead University <i>Simulating the Effectiveness of Football Collars at Reducing Head Displacement and Linear Acceleration Following Direct Head Impact</i>	Biomechanics
Malikah Haq , MSc Chemistry, Lakehead University <i>Synthesis and Evaluation of Protease-activated Receptor 2 Antagonist AZ3451</i>	Biotechnology, Bioinformatics and Imaging
Xiaodong Zhang , College of Chemistry Biology and Environment, Yuxi Normal University, Yunnan, China <i>Transcription Factor GrbHLH1 Regulates Gentiopicroside Biosynthesis in Gentiana rigescens</i>	Biotechnology, Bioinformatics and Imaging
Jonas Olsen , Lakehead University, Thunder Bay Regional Health Research Institute <i>Development of LPA1 Targeting Small Molecules for PET Imaging of Prostate Cancer</i>	Biotechnology, Bioinformatics and Imaging
Pooja Singh , Chemistry and Materials Science PhD candidate, Lakehead University <i>Synthesis of Novel Des Muramyl Peptide Analogues as Potential Immunomodulators</i>	Biotechnology, Bioinformatics and Imaging
Kyle D. G. McGillivray , School of Kinesiology, Lakehead University <i>The Effect of Innovated TPU Hockey Helmet Padding Prototypes on the Mitigation of Linear Impact Acceleration</i>	Biomechanics