UNDERGRADUATE RESEARCH OPPORTUNITIES

Sandra Wan
Program Coordinator, Workplace Learning

CENTRE FOR STUDENT INVOLVEMENT AND CAREERS
UNDERGRADUATE RESEARCH OPPORTUNITIES

• NSERC Undergraduate Student Research Awards
  • Website: students.ubc.ca/nserc

• Work Learn International Undergraduate Research Awards
  • Website: students.ubc.ca/wliura
WHAT YOU NEED TO KNOW

- 4 to 8 months of part-time paid work experience on campus
- 10 to 20 hours per week
- Average salary is $16 per hour
- Open to all UBC-Vancouver students

TWO SESSIONS PER YEAR

Summer
- May 1 to August 31
- Up to 20 hours per week
- Apply in late March

Winter
- September 1 to April 30
- Up to 10 hours per week
- Apply late August to early September

WHY A WORK LEARN JOB?

- Earn money while attending classes.
- Find a balance between work and your studies.
- Gain professional experience and develop workplace skills.
- Apply your knowledge in a practical setting.
- Expand your network of connections at UBC.
- Make the connection between your academics and future career.
- Give back to the campus community.

students.ubc.ca/worklearn
MULTIDISCIPLINARY UNDERGRADUATE RESEARCH CONFERENCE (MURC)

• MURC is a conference for UBC undergraduate students to showcase their research in front of their fellow UBC students, family, and friends. Researchers may choose one of two formats to showcase their research: presentation or poster.

• Saturday, March 21, 2020
  • Applications to present at MURC open on November 18, 2019!

• Website: students.ubc.ca/murc
CONTACT INFORMATION

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Indigenous Studies in Kinesiology

School of Kinesiology, Faculty of Education, UBC
Territorial Acknowledgement

We are honoured to be learning and sharing knowledge on the unceded and ancestral territory of the Musqueam people.

“Spirit of the Twin Eagles”
Introduction

Dr. Rosalin Miles, EdD, MHK, CSCS
Member of Lytton First Nation
Indigenous Studies in Kinesiology
The University of British Columbia
October 29th, 2019
Acknowledgements

Many of our community work is in partnership with the Indigenous Physical Activity & Cultural Circle (IPACC), Lytton First Nation, and The Health & Fitness Society of BC. We would also like express our appreciation of the following for their support for a variety of our research projects.
Lytton First Nation

- Lytton is located within the interior of British Columbia in the Fraser Canyon and is situated at the confluence of the Fraser and Thompson River
- Lytton First Nation (LFN) is located on 14,161 acres of land which is divided into 56 reserves
- Within the Fraser Canyon, there is over 10,000 First Nation community members
Wholistic Health and Wellness
Indigenous Wholistic Health and Wellness

• Physical Activity component and ties to Kinesiology
• Truth & Reconciliation
• Strength-based research that is diverse, community driven, and community-based
• 4R’s
• Memorandum of Affiliations, and OCAP®

(Kirkness & Barnhardt, 1991)
THANK YOU!

Any Questions or Feedback?
PSYCHOLOGY OF EXERCISE, HEALTH & PHYSICAL ACTIVITY LAB

Dr. Mark Beauchamp
WHAT’S HAPPENING AT THE POP-PA LAB?

MADELAINE GIERC, MPH, PHD
POSTDOCTORAL FELLOW @ THE POP-PA LAB
... RESEARCH
... WINNING DAY OF THE LONGBOAT
... FOOD
... HARRY POTTER REFERENCES
... AND MORE!
Me: Don't come across weird

Inner Me: Ask them which Hogwarts House they belong to.
RESEARCH? RESEARCH.

- What factors cause (or prevent) physical activity, physical inactivity, and sedentary behaviour?
- How does participating in physical activity influence mental health?
- How are effective population-level physical activity initiatives designed, delivered, and disseminated for public health?
CURRENT PROJECTS:

- Run to Quit – Smoking cessation
- UPnGO – Workplace physical activity
- Neurostimulation – Depression
- Physical Activity Toolkit – Depression
- CSEP Certification – Mental health
- Mind Fit – Mental health
- Substance abuse - Adults
- Independent Mobility – Grade school
- Health Surveillance – Grade school, post-secondary
CSEP CERTIFICATION

The Problem: Lifetime prevalence of a mood disorder ≈ ??
Physical activity is ???
… but, ???

The Solution: ???

The Process: ???

The Product: ???
CONTACT US TO CHAT ABOUT GRADUATE STUDIES OR VOLUNTEERING!

pop_pa.lab@ubc.ca
WHAT IS STRESS?
TYPE OF PHYSICAL AND ENVIRONMENTAL STRESSORS

- Altitude
- Hypoxia
- Pollution
- Accident/trauma/injury
- Food
- Infection/virus
- Seasonal change/heat/climate
- Poison
- Surgery
- Temperature extremes
- Tobacco
- Toxin
- Alcohol in excess
- International travel
DAY-TO-DAY STRESSORS
MAJOR LIFE EVENTS
EARLY ADVERSITY
CHRONIC DIFFICULTIES
RISKY CONTEXTS/EMBEDDED EXPOSURES
PSYCHOLOGICAL STRESS

“Psychological stress occurs when an individual perceives that environmental demands tax or exceed his or her adaptive capacity”, Cohen, JAMA, 2008
22%
CURRENT STUDIES IN THE LAB SEEK TO UNTANGLE RELATIONSHIP BETWEEN STRESS AND EXERCISE

- FITT STUDY
- APEX STUDY
FITT (FREQUENCY, INTENSITY, TIME, TYPE) STUDY

Seeks to establish an online self-reported questionnaire, completed randomly throughout the day for a week, that is valid and reliable, to reduce expenses associated with wearables.

Use questionnaire for future study (summer 2020) to examine role of F.I.T. & T. on daily psychological states in people’s real daily life experiences.
WHAT WILL YOU DO?
Students will be involved in both applied research and administrative lab work, including:
• Recruitment and consenting participants
• Demonstrating how devices work and what is expected
• Data entry, processing, and analysis
• Other relevant research duties

TIME COMMITMENT:
8-10 hours/wk (December-April)
Seeks to understand how an acute psychological stressor impacts performance and perceptions during a bout of exercise

WHAT WILL YOU DO?
Students will be involved in both applied research and administrative lab work, including:
• Conducting exercise & stress tests
• Participant recruitment and scheduling
• Data entry, processing, and analysis
• Other relevant research duties

TIME COMMITMENT:
8-10 hours/wk (December-April)
INTERESTED?
Email: arpreet.singh@ubc.ca

PLEASE INCLUDE:
• Cover Letter & Resume
• Unofficial Transcript
Sensorimotor physiology laboratory

Principal investigator: Dr. Jean-Sébastien Blouin

Jiyu Wang
MSC student
Research area of interest

• Sensory control of standing balance
• Vestibular physiology and its contribution to balance control
• Whiplash injury and neck muscle physiology
Standing balance

• Modeling approach
  • Reinforcement learning (subcategory of machine learning)

Figure 3.1: The agent–environment interaction in a Markov decision process.
Standing balance

• Robotics approach
Standing balance

- Robotics approach

AP  ML – narrow  ML – parallel  ML – wide
Vestibular physiology

- Physical rotation
Vestibular physiology

- Physical rotation
Vestibular physiology

- Physical rotation
Vestibular physiology

- Electrical stimuli (Galvanic Vestibular Stimulation)
Current opportunities

- Participants for the research projects
- Volunteer in one of the current projects in the lab
- Summer research opportunities (NSERC or Work Learn research award for int’l students)
- Research course for credits (i.e. directed studies)
INTERESTED?

Jiyu Wang: jiyu.wang@ubc.ca

Dr. Jean-Sébastien Blouin: jsblouin@mail.ubc.ca
QUESTIONS FOR THE PANEL
PURPOSE OF RESEARCH

If I don't think research is going to be my career, how can I use the experience in your labs to benefit me in whatever field I choose?
RESEARCH OPPORTUNITIES & INVOLVEMENT

• What is the best way for someone who has little to no experience doing research to get involved in research in the field of kinesiology?

• Are there a lot of opportunities for students to get involved in kinesiology related research?

• Can first year students get involved in research or would you recommend waiting until 2nd year?
BACKGROUND IN RESEARCH

• What excites or motivates you about your field of research?

• How did the presenters first get started in research and what was their first opportunity of getting into the field of research?

• Did you ever doubt yourself when going into your field of research/career and if so, how were you able to overcome that doubt to be where you are today?