# Phillip C. Desrochers, Ph.D.

15 Bixby Street
North Andover, MA 01845
603-553-2308 (cell)

pdesroch@bu.edu
linkedin.com/phillipdesrochers
github.com/philcd89

## EDUCATION

**Michigan State University** — East Lansing, MI
*Ph.D., Kinesiology | Cognitive and Motor Neuroscience* — October 2019

**University of Massachusetts Amherst** — Amherst, MA
*B.S., Psychology* — December 2012

## RESEARCH AND WORK EXPERIENCE

**Boston University | Motor Development Laboratory** — Boston, MA
*Postdoctoral Fellow* — Sep 2019 – Present

- Coordinates research protocols in motor neuroscience, movement disorders and atypical populations (Parkinson's disease, obesity), and gait control
- Uses array of technologies including inertial measurement units, pressure sensitive walkways, and split belt treadmills; uses data analytics and computer coding tools to assess human movement
- Mentors graduate students and undergraduate researchers

**Michigan State University | Motor Neuroscience Laboratory** — East Lansing, MI
*Graduate Teaching Assistant* — Aug 2015 – Oct 2019

- Designed and executed neuromotor control research experiments using robotics, motion capture, force plates, and cognitive-motor tasks in healthy and movement disorders populations (dystonia)
- Performed statistical analyses and human biomechanical modeling
- Taught undergraduate lecture courses in Biomechanics, Principles of Human Movement, and Measurement in Kinesiology for the Michigan State Dept. of Kinesiology

**University of Massachusetts Amherst | Cognition and Action Laboratory** — Amherst, MA
*Lab Manager* — Sep 2013 – Aug 2015

- Coordinated research protocols funded by National Institutes of Health and managed finances and scheduling
- Designed and executed experiments examining effects of sleep on neurocognition

## SELECT PUBLICATIONS

**Desrochers, P.C.,** Brunfeldt, A.T., Kagerer, F.A. (2020). Neurophysiological correlates of adaptation and interference during asymmetrical bimanual movements. *Neuroscience*, 432, 30-43.

**Desrochers, P.C.,** Sidiropoulos, C., Brunfeldt, A.T., Kagerer, F.A. (2019). Sensorimotor control in dystonia. *Brain Sciences*, 9(4), 79-97.

**Desrochers, P.C.,** Kim, D., Keegan, L., Gill, S.V. (2021). Association between the Functional Gait Assessment and spatiotemporal gait parameters in individuals with obesity compared to normal weight controls. *Journal of Musculoskeletal and Neuronal Interactions*.

**Desrochers, P.C.,** Gill, S.V. (under review). Temporal accuracy of gait across multiple levels of practice. *Human Movement Science*.

## TECHNICAL SKILLS

**Movement quantification**: Motion Capture (Motion Analysis Corp), Robotics (Kinarm), Inertial Measurement Units (MotionNode), Force Plates, Dynamometer (Biodex), Pressure walkway (Protokinetics), Neurophysiology (electroencephalography and electromyography)
**Biomechanical Modeling:** OpenSim
**Languages:** R/RStudio, Python, MATLAB, Stateflow, Simulink
**Data Analytics:** SPSS, SAS
**Misc. Software:** MS-Office, Tracker, Git
**Methodologies:** Multivariate Analysis, Time-Frequency Analysis, Signal Processing, Automated Reporting, Optimization, Validation

## INTERESTS AND HOBBIES

-Drummer for 25 years -Avid Outdoorsman -Amateur homebrewer