

# SANGHOON (ANDREW) YOON

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## EDUCATION

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**MSc Biomechanics and Neuroscience**, McGill University Jan 2020 – Aug 2021

- Expected graduation: October 2021
- Thesis: Sex-specific muscle activation and oxygenation kinetics during a repetitive forward pointing task
- Supervisor: Dr. Julie Côté
- cGPA: 4.00/4.00

**BSc Kinesiology (Honours)**, McGill University Sept 2015 - Apr 2019

- Thesis: Sex differences in fatigability, neuromuscular activity, and muscle swelling in response to repetitive motion induced fatigue
- cGPA: 3.86/4.00

**Education abroad**, The University of Queensland, Australia July - Nov 2018

## HONORS AND AWARDS

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**R. E. Wilkinson Award (\$800)** Nov 2020

- Awarded to the best candidate whom best combines academic merit and exceptional professional leadership

**Canada Graduate Scholarship - Master's program (\$17,500)** Apr 2020

- Awarded to top 3 candidates in the department by federal government agency (NSERC) based on high academic excellence and research potential
- Provided financial support for the Master's degree

**Graduate Excellence Award (\$2,000)** Jan 2020

- Awarded to top incoming postgraduate students by McGill University

**Undergraduate Student Research Award (\$4,500 + 1,125)** Apr 2019

- Awarded to top 3 candidates in the department by federal government agency (NSERC) for high academic achievements
- Provided financial support for summer research internship (4 months)

**Adriano Tassone Internship Award (\$4,000)** May 2017

- Awarded to top 4 candidates by the McGill University for high academic achievements
- Provided financial support for summer research internship (3 months)

## RESEARCH EXPERIENCE

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**Biomechanics of Occupation and Sport Laboratory**, McGill University Nov 2016 - Present  
**Lab director:** Dr. Julie Côté

- Research Assistant (Employed; May 2021 – Present)
- MSc Student (Jan 2020 - Present)
- Research Assistant (Employed; Sept 2019 - Dec 2019)
- Undergraduate Volunteer (Nov 2016 - Aug 2019)
- Research focus: Biomechanics, Ergonomics, Exercise physiology, Muscle fatigue, Musculoskeletal disorder, Sex differences

**Institut National du Sport du Québec**, Montreal, QC

Feb 2020 - Present

**Supervisor:** Dr. Nicolas Berryman

- Testing validity and reliability of Judo fitness test
- Investigating upper-body repeated sprint ability
- Collaboration with Judo Canada
- Research focus: Applied sport science, Exercise performance, Exercise physiology

**Motor Control and Pain Laboratory**, The University of Queensland

July - Nov 2018

**Lab director:** Dr. Kylie Tucker

- Biomedical Science Research Skills (SCIE3220) course
- Performed data acquisition/analysis, poster presentation, and research manuscript
- Research focus: Knee biomechanics, motor control, and patellofemoral pain

## PUBLICATIONS

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**Yoon, S.,** Lefrançois-Daignault, T., Côté, J. N. (2021). The effect of cycling while typing on patterns of upper body muscle activation. *Human Factors*, Doi: 10.1177/00187208211022147

**Yoon, S.,** Bailey, C. A., Cohen, N. R., Côté, J. N. (2021). Changes in muscle activation, oxygenation, and morphology following a fatiguing repetitive forward reaching task in young adult males and females. *Journal of Electromyography and Kinesiology*, 59, 102564. Doi: 10.1016/j.jelekin.2021.102564

Bailey, C.A., **Yoon, S.,** Côté, J. N. (2021). Relative variability in muscle activation amplitude, muscle oxygenation, and muscle thickness: Changes with dynamic low-load elbow flexion fatigue and relationships in young and older females. *Journal of Electromyography and Kinesiology*, 59, 102553. Doi: 10.1016/j.jelekin.2021.102553

**Yoon, S.,** Lefrançois-Daignault, T., Côté, J. N. (2019). Effects of cycling while typing on upper limb and performance characteristics. *Applied Ergonomics*, 80, 161-167. Doi: 10.1016/j.apergo.2019.05.015

**Yoon, S.,** Bailey, C.A., Côté, J.N. (2021). Sex-specific muscle activation and oxygenation kinetics during a repetitive forward pointing task. **Manuscript submitted for publication.**

## ORAL PRESENTATION

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**Yoon, S.,** Cederbaum, L. A., Côté, J. N. (2021, Oct). Does adjusting for mechanical work affect sex differences in peripheral and central fatigue during repeated sprints? **Accepted** at Canadian Society for Exercise Physiology (CSEP) 2021: Zooming into the future, exercise science in the virtual age

Bailey, C. A., **Yoon, S.**, Côté, J. N. (2021, May). Effect of dynamic elbow flexion fatigue on muscle activation, oxygenation, and thickness in young adult males and females. 21<sup>st</sup> Biennial Meeting of the Canadian Society of Biomechanics, Montreal, QC, Canada

## POSTER PRESENTATION

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**Yoon, S.**, Bailey, C. A., Cohen, N. R., Côté, J. N. (2021, June). Changes in muscle activation, morphology, and oxygenation following a fatiguing forward repetitive pointing task in young adult males and females. “Catalyst for Tomorrow’s Rehabilitation Innovation” Scientific Congress, Montreal, QC, Canada

**Yoon, S.**, Bailey, C. A., Cohen, N. R., Côté, J. N. (2021, May). Changes in muscle activation, morphology, and oxygenation following a fatiguing forward repetitive pointing task in young adult males and females. 21<sup>st</sup> Biennial Meeting of the Canadian Society of Biomechanics, Montreal, QC, Canada

Bailey, C. A., **Yoon, S.**, Côté, J. N. (2021, May). Are changes in muscle activation variability related to muscle deoxygenation and swelling during elbow flexion fatigue in young adult males and females? 21<sup>st</sup> Biennial Meeting of the Canadian Society of Biomechanics, Montreal, QC, Canada

**Yoon, S.**, Dick, T., Tucker, K. (2018, October). In vivo neuromotor and biomechanical variability of vastus lateralis and vastus medialis obliquus with submaximal contraction in people with no knee pain. Biomedical Science Research Skills & Research Project oral and poster presentation, St. Lucia, QLD, Australia

**Yoon, S.**, Lefrançois-Daignault, T., Côté, J. N. (2017, October). Sex-specific effects of leg cycle ergometry on shoulder blood flow and sensitivity during computer work. 13<sup>th</sup> annual Faculty of Science Undergraduate Research Conference, Montreal, QC, Canada

## COMMUNITY SERVICE

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**Olympiques Spéciaux Québec**, Montreal, QC Dec 2018 - Present

- Program Coordinator (Dec 2018 – Present); Recruited and coordinated over 50 McGill student volunteers for the Unified Sport, Training Support Projects, establishing the organization’s first partnership with McGill University. Recruit and coordinate over 25 students for the SOQ Zoom workouts to adapt to the COVID-19 restrictions.
- Unified Sport Coach (Feb 2020 – Mar 2020); Created and led adapted physical activity programs to people with and without intellectual disability at local primary/secondary schools
- Acted as a liaison between McGill University and Special Olympics Quebec

**McGill MMA and BJJ Club**, Montreal, QC Sept 2016 - Apr 2018

- President (Sept 2017 - Apr 2018); Coordinated activities of the collective committee and represented the interests of over 60 student members on university governance bodies
- VP Finance (Sept 2016 - Apr 2017); Managed club finances ensuring adequate budgets and financial control
- Led Jiu-Jitsu and self-defense seminars

**5 Days for the Homeless, Montreal, QC**

Sept 2016 - Apr 2018

- Head Director of Events; Coordinated a team of 10 to plan and lead various events to raise awareness and organize fundraisers to aid the homeless community of Montreal

## **RELEVANT SKILLS**

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**Proficient with following research equipment:** Arm crank and cycle ergometer, constant current stimulator, electromyography, laser doppler flowmeter, multi-joint dynamometer, near infrared spectrometer, treadmill, ultrasound

**Proficient with following software:** CON-TREX, Delsys, Matlab, Microsoft Office, Lode and Monark Testing, RStudio, SPSS Statistics, Statistica, Vicon