



Candidate for Student Representative



Nicholas Remillard (PhD student)

University of Tennessee

I wish to serve as the SEACSM Student Representative to give back to the organization that has helped kickstart my academic research career and to represent the interests of my fellow peers.

Since enrolling at the University of Tennessee Knoxville in Fall 2023, I have been actively involved with the Southeast chapter of ACSM, giving an oral presentation at the 2024 conference and being selected as a finalist for the doctoral student award at the upcoming 2025 conference. For the 2024 conference, I helped organize the logistics for transportation to the 2024 SEACSM conference: ensuring all students that wanted could attend, printing posters, and driving the university van to transport our students. Although I only have a short history with the Southeast chapter, I believe my involvement at the conference meetings and leadership within my department illustrate my prioritization of chapter membership and conference attendance. Before my time in Knoxville, I was heavily involved in the Northeast chapter of ACSM during my undergraduate and master's degrees beginning in 2018: presenting, attending conference events, and receiving awards and scholarships.

The ACSM organization has recognized and awarded me for my research efforts, allowed me to present my research, and to network with other researchers in my field. These opportunities have bolstered my research experiences at academic institutions and given me the confidence to become the emerging researcher I am today. I hope to contribute to the great work SEACSM has done in making its organization and events accessible, relevant, productive, and fun to students such as myself. I believe I am uniquely qualified to serve as a student representative for the Southeast chapter due to my early involvement in ACSM, giving me perspectives from the undergraduate, masters, and now doctoral lens, and for the recognition I have received from the organization.

Nicholas Remillard

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EDUCATION

- PhD.** Kinesiology, University of Tennessee Knoxville, Knoxville TN Expected graduation: May 2027
College of Education, Health, and Human Sciences
GPA: 4.0/4.0
Supervisor: Scott E. Crouter, PhD.
- M.S.** Kinesiology, University of Massachusetts Amherst, Amherst MA September 2022
School of Public Health and Health Sciences
Thesis: Incorporating excess post-exercise oxygen consumption into accelerometer energy expenditure estimation algorithms
GPA: 4.0/4.0
Supervisor: John R. Sirard, PhD.
- B.S.** Kinesiology and Departmental **Honors**, University of Massachusetts Amherst, Amherst MA May 2019
School of Public Health and Health Sciences and Commonwealth Honors College
Thesis: Energy expenditure discrepancies between a criterion measure and accelerometer prediction algorithms during rest intervals of an interval exercise session
GPA: 3.97/4.0

RESEARCH EXPERIENCE

Software proficiency

- ◇ Microsoft Office Suite (Word, Excel, Powerpoint, Teams, Endnote)
- ◇ OneDrive, Sharepoint, Google Drive
- ◇ R and R Studio
- ◇ REDCap (Research Electronic Data Capture)
- ◇ Qualtrics
- ◇ Noldus Observer XT

Software familiarity

- ◇ Python and Jupyter Notebook
- ◇ MATLAB

Equipment proficiency

- ◇ Metabolic cart indirect calorimetry systems (Oxycon Mobile, Cosmed K5, Parvo TrueOne 2400)
- ◇ ActiGraph activity trackers
- ◇ Biodex dynamometer

University of Tennessee Knoxville Physical Activity Measurement Lab

Knoxville, TN

Graduate Research Assistant

August 2023-current

Project: Use of accelerometer and gyroscope data to improve precision of estimates of physical activity type and energy expenditure in free-living adults. PI: Scott E. Crouter, PhD.

Dana Farber Cancer Institute

Boston, MA

Clinical Research Consent Writer

September 2022-July 2023

- ◇ Drafted and facilitated editing of informed consent forms between pharmaceutical companies, Dana-Farber principal investigators, research nursing staff, and the DFCI IRB for several clinical trials in the Immune Effector Cell Therapy and Hematopoietic Stem Cell Transplant Clinical Oncology teams
- ◇ Assisted clinical regulatory coordinators with submissions to the FDA and clinical trial new project applications and study amendments to the IRB

University of Massachusetts Amherst Kinesiology Physical Activity and Health Lab

Amherst, MA

Graduate Research Assistant

August 2020-August 2022

Projects:

- 1) Measurement of Children and Adolescents (MOCA) Study. PI: John R. Sirard, PhD.
- 2) Mechanical Disruption of Force Transmission by Adipose Tissue in Skeletal Muscle. PI: Jane Kent, PhD.

University of Massachusetts Amherst Kinesiology Muscle Physiology Lab

Amherst, MA

Project Coordinator

August 2019-August 2020

Project: Mechanical Disruption of Force Transmission by Adipose Tissue in Skeletal Muscle. PI: Jane Kent, PhD.

Columbia University Applied Exercise Physiology Lab

New York, NY

Visiting Research Associate

November 2018-August 2019

Program Coordinator: Carol Garber, PhD.

- ◇ Developed pilot study measuring affect and enjoyment of varying HIIT protocols in inactive healthy population

University of Massachusetts Amherst Kinesiology Physical Activity and Health Lab

Amherst, MA

Undergraduate Research Assistant

January 2017-May 2019

Projects:

- 1) Measurement of Children and Adolescents (MOCA) Study. PI: John R. Sirard, PhD.
- 2) Identifying Mechanisms of Peer Influence on Youth Weight-Related Behaviors. PI: John R. Sirard, PhD.
- 3) Sensitivity of the Misfit Shine to detect changes in laboratory-based and free-living activity. PI: Greg Petrucci.

PEER-REVIEWED MANUSCRIPTS

Remillard, Nicholas M., Hoogkamer, Wouter, Layec, Gwenael, & Sirard, John. (2024). Validation of Exercise and Postexercise Energy Expenditure Estimates Using Hip and Wrist Accelerometer Algorithms. *Journal for the Measurement of Physical Behaviour*. Advance online publication. <https://doi.org/10.1123/jmpb.2024-0015>.

Remillard, N., Mulvey, M., Petrucci, G., Sirard, J. (2022) Accelerometer-based estimation of energy expenditure during non-steady state exercise. *American Journal of Undergraduate Research*, 19(1), 31-39. <https://doi.org/10.33697/ajur.2022.057>

ORAL PRESENTATIONS

ICAMPAM Oral Presentation Session

ICAMPAM Rennes, France, June 2024

Responsiveness of accelerometer-based physical activity estimates in youth.

SEACSM Fitness Assessment and Training Oral Presentation Session

SEACSM Greenville, SC, February 2024

Validation of exercise and post-exercise energy expenditure estimates using hip and wrist accelerometer algorithms.

Measurement Methods Thematic Poster Session

ACSM San Diego, CA, June 2022

Evaluation of wrist accelerometer intensity classifications during activities of daily living in a whole-room calorimeter.

Masters Student Investigator Free Communications Session

NEACSM Providence, RI, October 2021

Wrist-based accelerometer intensity classification: validation during activities of daily living in a room calorimeter.

Physical Activity Methods, Applications, and Design Inter-institutional Journal Club

March 2021

Accelerometer-based estimation of energy expenditure during non-steady state exercise.

Using Accelerometers to Estimate Energy Expenditure during High Intensity Intervals Training.

University of Massachusetts Amherst Undergraduate Research Convention

April 2019

Energy expenditure discrepancies between a criterion measure and accelerometer prediction algorithms during a high intensity interval exercise session.

POSTER PRESENTATIONS

Remillard, N., Hoogkamer, W., Layec, G., Sirard, J. Validation of Exercise and Post-exercise Energy Expenditure Estimates Using Hip and Wrist Accelerometer Algorithms. ACSM Abstract. 2024

Sirard JR, Marcotte RT, Amalbert-Birriel MA, Chase JD, Cox MF, **Remillard NM**, Freedson PS, Staudenmayer JW. *Validating Youth Accelerometer Methods using Direct Observation in Free-Living Settings*. International Conference on Ambulatory Monitoring and Physical Activity Measurement. Keystone, CO. June 2022.

Remillard, N., Marcotte, R., Hayden, C., Sirard, J., Kent, J, Busa, M. Evaluation of wrist-based accelerometer intensity classifications during activities of daily living in a whole-room calorimeter. *Medicine and Science in Sports and Exercise*. June 2022 ACSM San Diego, CA. Published abstract (Poster).

Gordon J.A. III, **Remillard, N. M.**, Arieta, L.R., Nagarajan, R., Damon, B.M., Kent, J.A. *Muscle Fat & Architecture Assessment by Diffusion Tensor Imaging on in vivo Muscle Function*. ISMRM, (Poster).

Gordon J.A. III, **Remillard, N. M.**, Woods, P.C., Arieta, L.R., Momb, B.A., Chipkin, S.R., Nagarajan, R., Damon, B.M., Miller, M.S., Kent, J.A. *Evidence for a Molecular Basis for Lower Human Skeletal Muscle Specific Torque in Females than Males During Dynamic Contractions*. *Medicine and Science in Sports and Exercise*, (Poster).

Gordon J.A. III, **Remillard, N. M.**, Straight, C.R., Nagarajan, R., Miller, M.S., Damon, B.M., Chipkin, S.R., Miller, M.S., Kent, J.A. *Age-Related Changes in Molecular and While Muscle Function: Role of Fat Content?* Gerontological Society of America National Meeting, Online Platform, 2020 (Poster).

Straight C.R., Gordon J.A. III, Foster A.D., **Remillard N.M.**, Nagarajan R., Damon B.M., Chipkin S.R., Kent J.A., Miller M.S. Sex-dependent effects of quadriceps fat content on single muscle fiber size and cross-bridge kinetics in older adults. Gerontological Society of America, 2020. Online Poster.

Remillard, N., Petrucci, G., Sirard, J. Estimating energy expenditure using accelerometers during high intensity interval training. *Medicine and Science in Sports and Exercise*, 52(7S), July 2020. ACSM, Online Platform (Poster).

GRANTS AND SCHOLARSHIPS

Connecting Disciplines: Applying Computer Vision to Physical Activity Measurement Methods.

Requested funds: \$105,172

External grant. *Submitted 12/09/2024* at the National Institutes of Health under PA-23-272.

Graduate Student Senate Travel Award, May 2024

\$500

J. Wallace and Katie Dean Graduate Fellowship, University of Tennessee Knoxville, Aug 2023

\$10,000

Kinesiology Graduate School Travel Grant, University of Massachusetts Amherst, December 2021

\$500

Mark Connolly Masters Scholarship, NEACSM October 2021

\$750

University of Massachusetts Amherst Commonwealth Honors College Research Grant, Spring 2018

\$941

RECOGNITION AWARDS

Graduate Student Colloquium Top Poster, University of Tennessee Knoxville (\$300)

April 2024

Responsiveness of accelerometer-based physical activity estimates in youth.

SPHHS Research Day- 2nd place poster presentation, University of Massachusetts Amherst April 2022
Wrist-based accelerometer intensity classification: validation during activities of daily living in a room calorimeter.

Masters Student Investigator Free Communications Finalist, NEACSM Providence, RI October 2021

Undergraduate Student Investigator Award, NEACSM (\$500) October 2019
Using Accelerometers to Estimate Energy Expenditure during High Intensity Intervals Training.

Kin 355 Leads by Example Award, University of Massachusetts Amherst December 2018

Dean's Award for academic merit (6/6 semesters), University of Massachusetts Amherst 2016-2019

TEACHING EXPERIENCE

University of Massachusetts Amherst Kinesiology Department Amherst, MA
◇ Graduate Teaching Assistant, **Kin 394AI Exercise Testing and Prescription** August 2021-May 2022
◇ Graduate Teaching Assistant, **Kin 272 Anatomy and Physiology II** August 2020-May 2021
◇ Undergraduate Teaching Assistant, **Kin 355 Research Writing** September 2018-May 2019

SERVICE

Search Committee Member for tenure-track Assistant Professor in University of Tennessee Knoxville KRSS Fall 2024

Ad-hoc peer-reviewer for Journal for the Measurement of Physical Behaviour Summer 2024

LEADERSHIP EXPERIENCE

University of Massachusetts Amherst Club Sports Council Amherst, MA
Wrestling Club Vice President and Safety Officer September 2018-May 2019

University of Massachusetts Amherst Daily Collegian Amherst, MA
Arts and Living Head Editor, Editor of Health and Fitness August 2017-December 2018

Department of Conservation and Recreation- Cochituate State Park Natick, MA
Head Lifeguard May 2016-August 2016

◇ Awarded **Governor's Citation in Service Recognition** in January 2017

OTHER WORK EXPERIENCE

English Language Tutor Northampton, MA
Northampton Public Schools February 2022-August 2022

Thrive Physical Therapy New York, NY
Physical Therapy Aide June 2019-August 2019

University of Massachusetts Amherst Recreation Center Amherst, MA
Personal Trainer January 2019-May 2019

Stone's Public House Ashland, MA
Server May 2017-January 2019

Become Fitness Westborough, MA
Personal Trainer June 2018-August 2018

Hardy Physical Therapy
Physical Therapy Aide

Hudson, MA
May 2017-January 2018

Department of Conservation and Recreation- Cochituate State Park
Lifeguard

Natick, MA
May 2014-August 2015

CERTIFICATIONS AND SKILLS

Current Certifications:

Adult First Aid/CPR/AED

September 2023

Eagle Scout, Boy Scouts of America

January 2016

Other skills: **Conversational fluency in Spanish**