

Curriculum Vitae
Julie Rekant, DPT, PhD
Postdoctoral Fellow, Department of Physical Therapy and Rehabilitation Science
University of Maryland

Date March 29, 2024

Contact Information

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Foreign Languages: Spanish (working knowledge)

Education

2010 - 2014 B.S., Mechanical & Biomedical Engineering, Carnegie Mellon University
(Honors)
2016 - 2018 D.P.T., University of Pittsburgh
2016 - 2023 Ph.D., Bioengineering, University of Pittsburgh, Thesis Advisor – April
Chambers, Ph.D
“The Relationship Between Physical Activity Level and Movement
Quality in Aging Adults with Obesity”

Post Graduate Education and Training

2023 - Present Fellowship, Geriatric Research Education and Clinical Center, Veterans Health
Administration

Certifications

2022 Achievement in Pedagogy (University of Pittsburgh)
2022 Associate in Evidence-Based STEM Teaching (University of Pittsburgh)

Physical Therapy Licensures

2019 Active, Pennsylvania
2023 Active, Maryland

Employment History

2014-2016 Intramural Research Training Awardee, National Institutes of Health

Academic Appointments

2018-2023 Graduate Student Researcher, Bioengineering, University of Pittsburgh
2021-2023 Post-Doctoral Fellow, Clinical and Translational Science, University of Pittsburgh
2023-present Advanced Postdoctoral Fellow, GRECC, Veterans Health Administration

Professional Society Membership

2016-present General Member, American Physical Therapy Association
2020-present General Member, American Society of Biomechanics
2021-2022 Junior Scholar, University of Pittsburgh Claude D. Pepper Center
2021-present General Member, Association for Clinical and Translational Science

Honors And Awards

2012 All-Academic Honoree, University Athletic Association, awarded for distinguished academic performance among collegiate athletes
2013 All-Academic Honoree, University Athletic Association, awarded for distinguished academic performance among collegiate athletes
2016 Alice Chagnot Oulette Endowment Award, University of Pittsburgh, awarded for distinguished academic performance as Physical Therapy student
2018 Bevier Award, University of Pittsburgh, awarded for distinguished academic performance as a Bioengineering student
2020 Student Travel Award, University of Pittsburgh, awarded for graduate engineering students with established need and commitment to scientific dissemination
2023 Dr. Lisa S. Krivickas Clinician Scholar Travel Award, American College of Sports Medicine, awarded to an outstanding woman clinician scientist

Clinical Activities

Clinical Expertise

Direct access licensure in Pennsylvania

Clinical and research focus are in the area of physical activity promotion and mobility disability prevention

Scope of Clinical Practice:

2019-2023 Pittsburgh Veterans Affairs Medical Center (outpatient, inpatient acute/ortho)
~100 patients per year
5% FTE
2019-2023 UPMC St. Margaret's Hospital (inpatient acute/ortho, inpatient rehab)
~ 180 patients per year
10% FTE
2023-present Baltimore Veterans Affairs Medical Center (outpatient balance)

~50 patients per year
0% FTE (In Kind)

Development of any Clinical Programs:

2019 Assisted Dr. April Chambers with development of Movement Science course for Master of Science in Clinical Exercise Physiology program at University of Pittsburgh

Local and National Service
International Service

2018, 2019 Physical Therapy Service Trip, Hearts in Motion, Inc., Zacapa, Guatemala

National Service

2023 Abstract Reviewer, American Society of Biomechanics

2023 Postdoctoral Fellowship Application Reviewer, Center for Translational Science Institute

2023-present Physical Therapy and Rehabilitation Co-Section Editor, Current Geriatrics Reports

2024 Manuscript Reviewer, Current Geriatrics Reports

2024 Abstract Reviewer, Gerontological Society of America Annual Meeting

2024 Annual Scientific Meeting Working Group member, Gerontological Society of America Emerging Scholar and Professional Organization

Local Service

2016-2019 Class Vice President, University of Pittsburgh Doctor of Physical Therapy Program

2020-2021 Coding with Music in the Community, University of Pittsburgh Community Engagement Center

2020-2023 *Ingenium* Student Publication Editor, University of Pittsburgh

2021 Founding member, American Society of Biomechanics, University of Pittsburgh Chapter

2022 STEAM Day Presenter, New Brighton Elementary School

- 2022 “See a Bioengineering Lab” Field Trip, Fox Chapel Middle School
- 2023-2024 Responsible Conduct in Research small group discussion facilitator, University of Maryland, Baltimore

Teaching Service

Undergraduate Student Teaching

- 2018 Teaching Assistant, Statistics for Bioengineering, University of Pittsburgh
30 undergraduate bioengineering students, 2 hours/week
- 2019 Guest Lecturer & Teaching Assistant, Biomechanics 1: Principles of Biological Systems, University of Pittsburgh
60 undergraduate bioengineering students, 2 hours/week
- 2019 Mentor, Pitt Industrial Engineering Intramural Internship Program
1 undergraduate, daily oversight for the summer
- 2019-2024 Guest Lecturer & Teaching Assistant, Biomechanics, University of Pittsburgh
40 undergraduate health and physical activity students, 3 hours/week
- 2019-2023 Mentor, Pitt Bioengineering Intramural Internship Program
2 undergraduates each semester, 20 hours/week oversight
- 2019-2023 Mentor, Pitt Health and Physical Activity Research Internship Program
4 undergraduates each semester, 10 hour/week oversight
- 2021 Mentor, Pitt EXCEL Diversity Program Summer Research Internship
1 undergraduate from an underrepresented minority in STEM, daily oversight for summer
- 2021 Guest Lecturer, Introduction to Biomechanics, Carnegie Mellon University
75 undergraduate engineering students, 2 hours

Masters Student Teaching

- 2019-2021 Guest Lecturer & Teaching Assistant, Movement Science In Health and Physical Activity, University of Pittsburgh
40 graduate Masters in Clinical Exercise Physiology students, 2 hours/week
- 2020-2021 Mentor, Masters in Clinical Exercise Physiology Research Internship
1 graduate student, 10 hours/week oversight

Doctorate Student Teaching

2023 Guest Lecturer, Biomedical Sciences II
University of Maryland, Baltimore
40 graduate Doctor of Physical Therapy students, 3 hours of course content

Grant Support

Completed Grants:

- 01/01/20 – 06/30/20 (Researcher: 100%) PI: R. Cooper
“Understanding biomechanical and clinical measures of mobility in adults with obesity at risk for developing long-term mobility disability”
National Science Foundation, Integrative Graduate Education and Research Traineeship (IGERT)
Total Direct Costs: \$18,500
- 04/01/20 – 04/01/21 (Co-Inv 10%) PI: A. Chambers
“Describing Biomechanics and Clinical Presentation of Movement in Adults with Different Levels of Physical Activity Engagement”
University of Pittsburgh Health Lifestyle Institute Pilot & Feasibility Grant
Total Direct Costs: \$20, 000
Researcher in charge of recruitment, data collection, and analysis.
- 05/31/21 - 05/30/23 (Postdoctoral Scholar: 100%) PI: K. Kraemer
“Markers of Disability Development in Adults with Obesity: The Impact of Physical Activity”
National Institute for Advancing Translational Science, TL1 TR001858
Annual Direct Costs: \$54, 460
Total Direct Costs: \$108, 920

Publications

Peer-reviewed journal articles

1. **Rekant J**, Rothenberger S, Chambers A. (2024) Obesity-specific considerations for assessing gait with inertial measurement unit-based vs optokinetic motion capture. *Sensors* (Basel). DOI: 10.3390/s24041232.
2. **Rekant J**, Chambers A, Suri A, Hergenroeder A, Sejdic E, Brach J. (2023) Associations of weekly minutes of moderate to vigorous physical activity with indicators of movement quality in overweight and obese older adults. *Aging Clinical and Experimental Research*. DOI: 10.1007/s40520-023-02584-8.

3. **Rekant J**, Rothenberger S, Chambers A (2022) Inertial measurement unit-based motion capture to replace camera-based systems for assessing gait in healthy young adults: Proceed with caution, *Measurement: Sensors*, vol. 23 Article ID 100396, DOI: 10.1016/j.measen.2022.100396
4. **Rekant J**, Fisher LE, Boninger M, Gaunt RA, Collinger JL (2022) Amputee, clinician, and regulator perspectives on current and prospective upper extremity prosthetic technologies, *Assistive Technology*, DOI: 10.1080/10400435.2021.2020935
5. Shrader J, Sansare A, Shieh V, Woolstenhulme J, **Rekant J**, Jiménez-Silva R, Joe G, Kokkinis A, Fischbeck K, Grunseich C, Zampieri C (2021) Dynamic Balance in Spinal and Bulbar Muscular Atrophy: Relationship between Strength and Performance of Forward Lunge, Step Up and Over, and Step Quick Turn, *Rehabilitation Research and Practice*, vol. 2021, Article ID 2540324, 8 pages. DOI: 10.1155/2021/2540324
6. **Rekant JS**, Wiltman SA, Chambers AJ. (2019). A Novel Method of Analysis for Prolonged-Standing Data: Accounting for Joint and Muscle Discomfort. *IIE Transactions on Occupational Ergonomics and Human Factors*, 7:2, 142-152, DOI: 10.1080/24725838.2019.1640810
7. Witherspoon J, **Rekant J**, Wakim P, Vasavada R, Waite M, Chrismer I, Shelton M, Jain M, Meilleur K (2019) Use of Fatigue Index as a measure of Fatigability in Ryanodine Receptor Isoform-1-Related Disorders (*RYR1*-RD). *Frontiers in Neurology*, DOI: 10.3389/fneur.2019.01234
8. Croarkin E, Eisenfeld R, Zampieri C, **Rekant J** (2015) Total contact orthotics to mitigate effects of chemotherapy induced peripheral neuropathy. *Rehab Onc*; 33:3:43-50.

Submitted or In-Revision Peer-reviewed journal articles

9. **Rekant J**, Huppert T, Chambers A. (2023) The Role of Physical Activity Level in Muscle Oxygenation and Torque Production During a Fatiguing Task in Middle Aged Adults with Obesity. Available as preprint at SSRN: <https://ssrn.com/abstract=4619664> (Submitted)
10. **Rekant J**, Ortmeyer H, Giffuni J, Friedman B, Addison O. (2023) Variability in performance during the six-minute walk test is related to objective and subjective measures of health, especially for those with trouble on the four square step test. (Submitted)
11. Dondero K, Friedman B, Rekant J, Landers-Ramos R, Addison O. The effects of Myosteatosis on Skeletal Muscle Function in Older Adults. (In Revision)

Major Invited Speeches

Local

1. **Rekant J**, Giffuni J, Friedman B, Ortmeyer H, Addison O. Gait Quality Changes During an Instrumented Six Minute Walk Relate to Function But Not Activity Level, Mid-Atlantic Regional Chapter, ACSM Annual Meeting, Lancaster, PA, 2023
2. **Rekant, J**, Utilizing Wearable Near-Infrared Spectroscopy (NIRS) Sensors to Enhance the Understanding of Physical Activity and Lifestyle Behaviors on Muscle Health, Biomedical Engineering Society, University of Pittsburgh, 2019.
3. **Rekant, J**, Inertial Measurement Unit-Based Motion Capture for Assessing Gait in Adults with Obesity, Biomedical Engineering Society, University of Pittsburgh, 2023.