

Keith Robert Lohse, PhD, PStat®
2026-06-28

Contact Information

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Present Position

07/2021 – <i>present</i>	Associate professor; Program in Physical Therapy and Department of Neurology; Washington University School of Medicine, Saint Louis, MO; USA
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Education

Undergraduate

08/2003-05/2007	Bachelor of Science (BS) Idaho State University, Pocatello, ID, (Psychology)
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Graduate

08/2007-05/2009	Master of Arts (MA) University of Colorado, Boulder, CO (Cognitive Psychology)
08/2009-05/2012	Doctor of Philosophy (PhD) University of Colorado, Boulder, CO (Cognitive Neuroscience). Title: “The Role of Attention in Motor Control” (Advisors: Alice Healy, PhD, and Dave Sherwood, PhD)

Post-graduate training

08/2012-06/2014	Post-Doctoral Research Associate University of British Columbia, Vancouver, BC, Canada (Mentor: Nicola Hodges, PhD)
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Additional education

03/2019 – <i>present</i>	Accredited as a Professional Statistician (PStat®) <i>American Statistical Association, Alexandria, VA</i>
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Academic and Promotion History:

2007 – 2012	Teaching assistant for the Department of Psychology and Neuroscience; College of Arts and Sciences. University of Colorado, Boulder, CO; USA
2011	Instructor for the Department of Psychology and Neuroscience; College of Arts and Sciences. University of Colorado, Boulder, CO; USA

2012 – 2014	Postdoctoral Research Associate ; Motor Skills Laboratory; School of Kinesiology. University of British Columbia, Vancouver, BC; CAN
2014 – 2017	Assistant professor ; School of Kinesiology; College of Education. Auburn University, Auburn, AL; USA
2017 – 2021	Assistant professor ; Department of Health and Kinesiology; College of Health. University of Utah, Salt Lake City, UT; USA
2017 – 2021	Adjunct assistant professor ; Department of Physical Therapy and Athletic Training; College of Health. University of Utah, Salt Lake City, UT; USA
2021 – <i>present</i>	Associate professor ; Program in Physical Therapy and Department of Neurology; Washington University School of Medicine, Saint Louis, MO; USA
2021 – <i>present</i>	Affiliate faculty (courtesy appointment) , Institute for Informatics, Data Science, and Biostatistics (I ² DB); Washington University School of Medicine, Saint Louis, MO; USA

Honors and Awards

2011	Co-recipient of the Dozier Award for academic excellence among doctoral students from the Department of Psychology and Neuroscience at the University of Colorado, Boulder.
2017	Recipient of the Early Career Distinguished Scholar Award from the <i>North American Society for the Psychology of Sport and Physical Activity</i> (NASPPSA).
2019	Elected to Board of Directors for the <i>American Society for Neurorehabilitation</i> .

Editorial and Review Responsibilities

Editorial Positions

2015 – 2023	Editorial board member , <i>Journal of Motor Learning and Development</i> .
2018 – 2021	Associate Editor (measurement and evaluation), <i>Research Quarterly for Exercise and Sport</i> .
2021 – 2023	Editorial board member (statistical consultant), <i>Research Quarterly for Exercise and Sport</i> .
2022 – <i>present</i>	Editorial board member (statistical consultant), <i>Journal of Neurologic Physical Therapy</i> .
2023 – <i>present</i>	Associate Editor (data management, reporting, and transparency), <i>Journal of Motor Learning and Development</i>
2025 – <i>present</i>	Associate Editor , <i>Communications in Kinesiology</i>

Guest Editor

2018 – 2019	Guest editor for a special issue of the <i>Journal of Motor Learning and Development</i> entitled, “Methodological Advances in Motor Learning and Development”.
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Ad Hoc Manuscript Reviews

- *American Journal of Preventive Medicine*;
- *Applied Clinical Informatics*;
- *Applied Cognitive Psychology*;
- *Applied Physiology, Nutrition and Metabolism*;
- *Archives of Physical Medicine and Rehabilitation*;
- *Brain*;
- *Brain Communications*;
- *Communications in Kinesiology*;
- *Developmental Neurorehabilitation*;
- *Disability and Rehabilitation*;
- *Games for Health Journal*;
- *Gerontology*;
- *Human Movement Science*.
- *International Journal of Sports Science and Coaching*;
- *Journal of the American Heart Association*;
- *Journal of Biomechanics*;
- *Journal of Experimental Psychology: General*;
- *Journal of Experimental Psychology: Human Perception and Performance*;
- *Journal of Mathematical Psychology*;
- *Journal of Motor Learning and Development*;
- *Journal of Neuroengineering and Rehabilitation*;
- *Journal of Neurologic Physical Therapy*;
- *Journal of Neurology, Neurosurgery & Psychiatry*;
- *Journal of Psychophysiology*;
- *Journal of Rehabilitation Research & Development*;
- *Journal of Sport & Exercise Psychology*;
- *Journal of Sport Science*;
- *Motor Control*;
- *Measurement in Physical Education & Exercise Science*;
- *Medicine & Science in Sports & Exercise*;
- *Nature Communications*;
- *NeuroImage*;
- *NeuroImage Clinical*;
- *Neurology*;
- *Neurorehabilitation & Neural Repair*;
- *Neuroscience and Biobehavioral Reviews*;
- *Physical Therapy*;
- *PLOS ONE*;
- *Psychological Bulletin*;
- *Psychology of Sport and Exercise*;
- *Psychonomic Bulletin & Review*;
- *Scandinavian Journal of Medicine & Science in Sports*;
- *Scientific Reports*;

- *Stroke*;
- *Transactions on Neural Systems & Rehabilitation Engineering*

I also serve as a “recommender” for a Peer Community In (PCI) Health and Movement Sciences. The PCI provides publicly available reviews of pre-prints (<https://healthmovsci.peercommunityin.org/>).

Extramural Grant Review

2019	Reviewer , Canadian Partnership for Stroke Recovery “Catalyst Grants” program
2022	Reviewer , Perception Action & Cognition Program, National Science Foundation (NSF).
2023	Reviewer , Small Business Innovation Research, Small Business Technology Transfer, National Science Foundation (NSF)
2024	Reviewer , Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO)/Dutch Research Council, Applied and Engineering Sciences (AES) section.
2024	Reviewer , Small Business Innovation Research, Small Business Technology Transfer, National Science Foundation (NSF)
2026	Scientific Merit Reviewer , U.S. Department of Veterans Affairs (VA) Health Systems Research Women’s Health and Healthcare Organization and Delivery (HSR5)

Abstract Review for National and International Meetings

2018	Member , programming committee for the motor control and learning section of NASPSPA
2019	Member , NASPSPA student research/travel awards committee
2019	Member , programming committee for the motor control and learning section of NASPSPA
2020	Member , NASPSPA student research/travel awards committee
2021 – 2022	Member , NASPSPA motor learning, development, and control research seminar series committee
2022	Abstract Reviewer for the American Heart Association’s 2023 International Stroke Conference.
2023	Abstract Reviewer for the American Heart Association’s 2024 International Stroke Conference.
2024	Abstract Reviewer for the American Heart Association’s 2025 International Stroke Conference.
2025	Abstract Reviewer for the American Heart Association’s 2026 International Stroke Conference.

Other Peer Review Activities

None.

Community Service Contributions

Washington University in St Louis School of Medicine Committee and Administrative Service:

2022 – 2023	Search committee member , exercise science/physiology faculty search, PT program, WUSOM.
2024	Search committee member , investigator track faculty search, PT program, WUSOM.

2025 – <i>present</i>	Member of the Washington University School of Medicine Internal Review Board (IRB).
2025 – <i>present</i>	Facilitator/Lecturer for content on rigor and reproducibility for Clinical Research Training Center (CRTC), working with KL2 Career Development Awardees and fellows in the Mentored Training Program in Clinical Investigation (MTPCI).
2025 – <i>present</i>	Faculty Liaison to the Institute for Clinical and Translational Science (ICTS) representing Physical Therapy.

Washington University in St Louis Committee and Administrative Service:

None.

Other University Committee and Administrative Service:

2015	Search committee member , motor development search. School of Kinesiology; Auburn University.
2017	Member , graduate curriculum committee (evaluating research-core classes). HKR; University of Utah.
2017	Search committee chair , applied biomechanics search. HKR; University of Utah.
2017 – 2018	Search committee chair , motor behavior/cognitive neuroscience search. HKR; University of Utah.
2017 – 2020	Theme leader , Cognitive and Motor Neuroscience (CMN) research theme. HKR; University of Utah.
2018 – 2019	Search committee chair , motor behavior/cognitive neuroscience search. HKR; University of Utah.
2020 – 2021	Member , Chair’s Advisory Council, representative for pre-tenure faculty. HKR; University of Utah.

Service to Other Universities

2024	External Reviewer for faculty promotion, University of Delaware.
2026	External Reviewer for faculty promotion, University of Utah

Community Outreach & Volunteer Service:

2021 – 2026	Volunteer and committee member , Benton Park Dog Park. Assisted with membership records, emails, and park maintenance. Saint Louis, MO.
2021 – <i>present</i>	Volunteer , “New Beginnings” (Lafayette Park United Methodist Church). Repaired, delivered, and installed furniture to people recently re-housed and rebuilding their lives. Saint Louis, MO.

Membership in Professional Societies

Current Professional Societies and Organizations

2014 – <i>present</i>	Member of the American Society of Neurorehabilitation (ASNR)
2018 – <i>present</i>	Member of the Society for Transparency, Openness, and Replication in Kinesiology (STORK)
2019 – <i>present</i>	Member of the American Statistical Association (ASA)

Other Prior/Intermittent Professional Memberships

- Association for Psychological Science; American Congress for Rehabilitation Medicine; North

American Society for the Psychology of Sport and Physical Activity (NASPSPA); American Physical Therapy Association (as “non-member affiliate”)

National Panels, Committees, Boards

2019 – 2024	Member , Board of Directors for <i>American Society of Neurorehabilitation</i>
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National Conference Symposium Chair (Proposal Development & Chair of Session):

None.

International Committee and Administrative Service:

2019 – 2026	Member , <i>American Society of Neurorehabilitation</i> , Education Committee
2022 – 2024	Chair , <i>American Society of Neurorehabilitation</i> , Education committee
2025 – present	Member , <i>American Statistical Association</i> , Scientific and Public Affairs Advisory Committee

National Conference Symposium Chair (Proposal Development & Chair of Session):

None.

Consulting Relationships and Board Memberships

None.

Teaching

Major External Invited Presentations, including Professorships and Lectures

04/2013	“Applied motor learning: Recent developments in motor learning and skill acquisition.” National Strength and Conditioning Association Provincial Clinic, Richmond, BC.
05/2015	“Longitudinal data analysis for the clinical sciences.” This was a workshop on mixed-effect linear models that I developed and led at the Washington University of St. Louis School of Medicine, St. Louis, MO
05/2015	“Predicting change during outpatient stroke rehabilitation: A retrospective regression analysis.” Presentation at the Washington University School of Medicine, St. Louis, MO.
04/2017	“Streamlining clinical science with structured data archives: Data-driven insights from the stroke rehabilitation literature.” Invited presentation as part of the School of Biological and Health Systems Engineering seminar series at Arizona State University, Tempe, AZ.
11/2017	“Cognitive and affective determinants of motor skill learning: An applied neuroscientific model.” Invited keynote presentation at the Second Scientific Conference on Motor Skill Acquisition, Kisakallio Sports Institute, Jyväskylä, Finland.
06/2019	“Exploring measurement and methodology in motor behavior.” Invited talk for the early career award I received from the North American Society for the Psychology of Sport and Physical Activity.

11/2019	“Expanding your toolkit: How can you use data science to streamline your research and tackle bigger questions?” Invited participant for a roundtable discussion on data science in neurorehabilitation at the American Society for Neurorehabilitation annual meeting. San Diego, CA.
05/2020	“Meta-Analysis for Complex Interventions.” Presented as part of the webinar “Research in the Time of COVID” hosted by the American Society for Neurorehabilitation.
11/2020	With Drs. Ste-Marie, Carter, and Miller: “The Logic and Process and Power Analysis: Assumptions, Guesses, and Estimates.” Presented as part of a webinar for the North American Society for the Psychology of Sport and Physical Activity.
11/2022	With Dr. Kristin Sainani: “Statistical best practices in exercise science: From design to analysis”. Invited symposium at the Canadian Society for Exercise Physiology Conference.
01/2023	January 2023, invited to moderate the session “Predictive Modelling of Stroke Recovery Outcomes” with Dr. Myzoon Ali, Dr. Marcus Saikaley, and Dr. Anna Bonkhoff at the inaugural meeting of Advances in Stroke Recovery.
12/2024	December 2024, invited talk entitled, “Approaching Significance: Statistical guidance for authors and reviewers on p-values, confidence intervals, and Bayesian statistics” at the Department of Psychology and Neuroscience, University of Colorado, Boulder, CO, USA.
02/2025	February 2025, invited talk entitled, “Approaching Significance: Statistical guidance for authors and reviewers on p-values, confidence intervals, and Bayesian statistics” at Teachers College, Columbia University, New York City, NY, USA.

Washington University Presentations & Lectures

Year	Term	Course	Role	Description
2021	Summer	DPT	Designer, Instructor	Developed synchronous and asynchronous lectures, and assessments for the Evidence thread of the DPT curriculum
2021	Fall	DPT	Designer, Instructor	Developed synchronous and asynchronous lectures and assessments for the Evidence thread of the DPT curriculum
2021	Fall	MSP PhD	Instructor	Provided lectures on data management and data visualization to movement science program students, post-docs, and faculty
2022	Spring	DPT	Designer, Instructor	Developed synchronous and asynchronous lectures and assessments for the Evidence thread of the DPT curriculum
2022	Spring	MSP PhD	Lecturer	Provided lectures and facilitated discussion of career pathways
2022	Fall	DPT	Designer, Instructor	Developed and led synchronous and asynchronous lectures and assessments for the Evidence thread of the DPT curriculum (1 st and 2 nd years).
2022	Fall	DPT	Designer	Researching and outlining a series of asynchronous modules entitled “Measurement in Society” focused on understanding socially constructed variables (e.g., race, gender) in biomedicine.
2022	Fall	MSP PhD	Designer	Working with Dr. Jacob McPherson, creating a syllabus for the “Instrumentation” course for our MSP PhD students.
2023	Spring	DPT	Designer, Instructor	Developed and led synchronous and asynchronous lectures and assessments for the Evidence thread of the DPT curriculum (1 st and 2 nd years). Also contributed to DEA III in the legacy curriculum for 3 rd year students.

2023	Spring	MSP PhD	Designer	Having completed a rough syllabus for the Instrumentation course, we started developing weekly assignments and lectures.
2023	Spring	MSP PhD	Facilitator	Led reading group on machine learning methods with K-awardees, post-doctoral and pre-doctoral trainees.
2023	Spring	DPT	Designer	Created, received feedback, and revised a series of asynchronous modules entitled “Measurement in Society” focused on understanding socially constructed variables (e.g., race, gender) in biomedicine.
2023	Fall	DPT	Designer, Instructor	Developed and led synchronous and asynchronous lectures and assessments for the Evidence thread of the DPT curriculum (1 st , 2 nd , and 3 rd years).
2023	Fall	DPT	Designer	Solicited peer-review, revised, and scripted “Measurement in Society” modules.
2023	Fall	MSP PhD	Instructor	Co-taught instrumentation in movement science course with Dr. Jacob McPherson.
2024	Spring	DPT	Designer	Solicited peer-review, revised, and scripted “Measurement in Society” modules.
2024	Spring	DPT	Designer, Instructor	Developed and led synchronous and asynchronous lectures and assessments for the Evidence thread of the DPT curriculum (1 st , 2 nd , and 3 rd years).
2024	Spring	MSP PhD	Facilitator	Led reading group on Statistical Parametric Mapping in biomechanics with faculty, post-doctoral, and pre-doctoral trainees.
2024	Summer	DPT	Designer	Recorded “Measurement in Society” modules for DPT students, teaching about the role of social constructs in biomedicine.
2024	Fall	DPT	Designer, Instructor	Developed and led synchronous and asynchronous lectures and assessments for the Evidence thread of the DPT curriculum (1 st , 2 nd , and 3 rd years).
2024	Fall	MSP PhD	Facilitator	Led reading group on Latent Variable Modeling with faculty, post-doctoral, and pre-doctoral trainees.
2025	Spring	DPT	Designer, Instructor	Developed and led synchronous and asynchronous lectures and assessments for the Evidence thread of the DPT curriculum (1 st , 2 nd , and 3 rd years).
2025	Spring	MSP PhD	Facilitator	Led reading group on Machine Learning with faculty, post-doctoral, and pre-doctoral trainees.
2025	Fall	MSP PhD	Instructor	Co-taught instrumentation in movement science course with Dr. Jacob McPherson.
2026	Spring	DPT	Designer, Instructor	Developed and led synchronous and asynchronous lectures and assessments for the Evidence thread of the DPT curriculum (1 st , 2 nd , and 3 rd years).
2026	Spring	MSP PhD	Facilitator	Led reading group on Statistical Parametric Mapping with faculty, post-doctoral, and pre-doctoral trainees.

Internal Presentations & Lectures at University [e.g. previous places of employment]:

Year	Term	Course	Role	Description
2007-2012	Fall/Spring	PSYC 3101	Teaching Assistant	Introduction to Statistics Labs, University of Colorado
2011	Summer	PSYC 2145	Instructor	Cognitive Psychology, University of Colorado
2014	Spring	KIN 371	Instructor	Statistics for Kinesiology, University of British Columbia
2014	Fall	KINE 3650	Instructor	Motor Learning and Performance, Auburn University
2015	Spring	KINE 7730	Instructor	Neuromotor Control, Auburn University
2015	Spring	KINE 3650	Instructor	Motor Learning and Performance, Auburn University
2015	Summer	KINE 7650	Instructor	Advanced Motor Learning, Auburn University
2015	Fall	KINE 3650	Instructor	Motor Learning and Performance, Auburn University
2016	Spring	KINE 7730	Instructor	Neuromotor Control, Auburn University
2016	Spring	KINE 3650	Instructor	Motor Learning and Performance, Auburn University

2016	Summer	KINE 7650	Instructor	Advanced Motor Learning, Auburn University
2016	Fall	KINE 8970	Instructor	Biostatistics I, Auburn University
2017	Spring	KINE 8970	Instructor	Biostatistics II, Auburn University
2017	Summer	KINE 7650	Instructor	Advanced Motor Learning, Auburn University
2018	Spring	KINES 3551	Instructor	Application of Human Motor Development, University of Utah
2018	Fall	KINES 3550	Instructor	Motor Behavior, University of Utah
2019	Spring	KINES 7103	Instructor	Design and Analysis I, University of Utah
2019	Fall	KINES 6770	Instructor	Instrumentation and Measurement in Movement Science, University of Utah
2020	Spring	KINES 7103	Instructor	Design and Analysis I, University of Utah
2020	Fall	KINES 6885	Instructor	Advanced Motor Learning, University of Utah
2021	Spring	KINES 7103	Instructor	Design and Analysis I, University of Utah

Mentorship & Sponsorship Record

Served as **faculty research mentor and/or sponsor** for:

a) Undergraduate Students

2019	Cammy Stukel	Undergraduate Research Opportunities Program Grant recipient (1200 USD; summer semester).
2019	Sarah Taylor	Undergraduate Research Opportunities Program Grant recipient (1200 USD; summer semester).
2019	Sarah Taylor	HKR Distinguished Undergraduate Student Award winner.
2019	Cammy Stukel	Undergraduate Research Opportunities Program Grant recipient (1200 USD; fall semester).
2020	Ashlee McBride	Undergraduate Research Opportunities Program Grant recipient (1200 USD; spring semester).
2020	Sarah Taylor	Undergraduate Research Opportunities Program Grant recipient (1200 USD; spring semester).
2020	Ellen Williams	Undergraduate Research Opportunities Program Grant recipient (1200 USD; spring semester).
2020	Ellen Williams	HKR Distinguished Undergraduate Student Award winner.

b) Medical Students

None.

c) Residents

None.

d) Fellows

None.

e) Graduate Students

Doctoral Trainees (Direct Supervisor)

2014 – 2017	Amber Leiker	(faculty at LaGrange College)
2016 – 2021	Anupriya Pathania	(graduated 2021, now author and chef)

2018 – 2023	Mindie Clark	(faculty at University of Minnesota – Twin Cities)
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Masters Trainees (Direct Supervisor)

2019 – 2021	Jason Dude	(PhD student at University of Utah)
2020 – 2022	Sarah Taylor	(clinical research coordinator at University of Utah)

Doctoral Student Committees

Student	Advisor	University	Quals	Proposal	Defense
Adam Jagodinsky	W. Weimar	Auburn University	2014	2015	2016
Taylor Holt	G. Oliver	Auburn University	2014	2015	2015
Lisa Henning	G. Oliver	Auburn University	2015	2016	2016
Kirk Grand	M. Miller	Auburn University	2015	2016	2016
Maurice Godwin	M. Miller	Auburn University	2015	2016	na
Andrew Thompson	M. Miller	Auburn University	2015	2016	2016
Adam Benz	J. Porter	Edith Cowan	na	na	2016
Leslie Niedert	H. Kluess	Auburn University	2015	2016	2017
Jacqueline Irwin	M. Pangelinan	Auburn University	2016	2016	2017
Christopher Wilburn	W. Weimar	Auburn University	2016	2017	2017
Lorraine Smallwood	W. Weimar	Auburn University	2016	2017	2018
Jeremy McAdam	J. Sefton	Auburn University	2016	2016	2018
Justin Moody	M. Pangelinan	Auburn University	2016	na	na
Marcos Daou	M. Miller	Auburn University	2016	2016	2018
Brendan Ostlund	E. Conradt	University of Utah	na	2018	2019
Masahiro Yamada	L. Raisbeck	UNCG	2019	2020	2020
Joseph Thomas	A. M. Williams	University of Utah	2019	2020	2021
Rhiannon Cowan	A. M. Williams	University of Utah	2019	2020	2021
Melinda Schreiber	A. Merryweather	University of Utah	na	2019	2021
Peiyuan Wang	S. Schaefer	ASU	2019	2020	2021
Mariane Bacelar	M. Miller	Auburn University	2020	2021	2022
Laura St. Germain	M. Carter	McMaster University	2019	2020	2023
Brady DeCouto	A. M. Williams	University of Utah	2020	2021	2022
Angela Weston	L. Dibble	University of Utah	2020	2021	2023
Danica Dummer	R. Marcus	University of Utah	2020	2021	2022
Sara Lotemphio	D. Strayer	University of Utah	na	2021	2022
Juliana Parma	M. Miller	Auburn University	2021	2023	2023
Jessica Barth	C. Lang	WashU	na	2021	2022
Jeffrey Konrad	C. Lang	WashU	na	2021	2024
Cielita Lopez-Lennon	L. Dibble	University of Utah	2022	2024	--
Lauren Tueth	G. Earhart	WashU	na	2022	2024
Kayla Krueger	L. Van Dillen	WashU	na	2023	2026
Mohammad Tollabi	S. T. Boroujeni	University of Tehran	na	na	2024
Samah Gassass	B. Phillip	WashU	2024	2025	2026
Jiaqiao (Jack) Tang	M. Carter	McMaster University	2025	--	--
Madison Wissman	M. Harris	WashU	na	2025	--
Christina Bourantas	M. Harris	WashU	na	2025	--

Note: “--” denotes a committee not transpired. “na” denotes a position I did not fill or otherwise not applicable.

f) Postdoctoral fellows

2017 – 2020	Bradley Fawver, PhD	(scientist at US Army Medical Research Directorate-West)
2018 – 2021	Tiphannie Raffegeau, PhD	(faculty at George Mason University)

2022 – <i>present</i>	Allison Miller, PhD, DPT	(currently at WashU)
2024 – <i>present</i>	Chelsea MacPherson, PhD, DPT	(currently at WashU)

g) Other learners

2025 – <i>present</i>	Hyo-Jung Jeong, PT, MS, PhD	Provided supervision for multivariable regression, multivariate statistics, and structural equation models (K99 mentor)
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h) Junior faculty

2022 – 2024	Laura McPherson, PhD	Provided supervision for multivariate statistics, unsupervised learning algorithms, and dimension reduction techniques. (KL2 mentor)
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Served as **career development mentor and/or sponsor** for:

a) Undergraduate Students

None.

b) Medical Students

None.

c) Residents

None.

d) Fellows

None.

e) Graduate Students

None.

f) Postdoctoral fellows

None.

g) Other learners

None.

h) Junior faculty

None.

Research

Present Extramural Grants:

1P50HD118603		Liew (PI)		2025-2030
NIH/NICHD-NCMRR P50				
Title: Data Science and Analytics for Precision Rehabilitation (DAPR)				
Amount: 6,685,622 USD (293,898 USD subaward to WASHU)				
Role: Director - Resource Core, Co-Investigator (3.0 calendar months/year)				

R01MH123723		Lang, Limperopoulos, Marrus (Co-PIs)		2021-2026
NIH/NIMH R01				
Title: Variation in early motor function in autism, cerebellar injury, and normal twins.				
Amount: 857,745 USD				
Role: Collaborator (1.2 calendar months/year)				

R25HD105583		Liew & Kennedy (Co-PIs)		2022-2027
NIH/NICHD-NCMRR R25				
Title: Building a data science workforce to improve the reproducibility of rehabilitation research.				
Amount: 811,744 USD				
Role: Other (Educational Leadership Team Member)				

2R37HD068290		Lang (PI)		2022-2027
NIH/NICHD R37				
Title: Translation of In-Clinic Gains to Gains in Daily Life.				
Amount: 2,125,229 USD				
Role: Co-Investigator (1.8 calendar months per year)				

R01AR081881		Harris (PI)		2023-2028
NIH/NIAMS R01				
Title: Longitudinal biomechanics and patient-reported outcomes after periacetabular osteotomy for developmental dysplasia of the hip.				
Amount: 2,250,000 USD				
Role: Co-Investigator (1.2 calendar months per year over 5 years)				

R01HD108240		Van Dillen (PI)		2023-2028
NIH/NICHD				
Title: Significance of Spinal Movement Impairments in Acute Low Back Pain.				
Amount: 630,312 USD				
Role: Co-investigator (0.8-1.8 calendar months/year)				

GRANT13993531		McPherson (PI)		2024-2026
Department of Defense - U.S. Army Medical Research and Development Command				
Title: Subclinical Pathophysiology of Motor Processing in People with Multiple Sclerosis.				
Amount: 250,000 USD				
Role: Co-investigator (0.6 calendar months/year)				

1R21AG091159-01A1		Meyer, GA (PI)		2026-2027
NIH/NIA R01				
Title: Targeting Intramuscular Adipose Quality in Aging.				
Amount: 427,625 USD				
Role: Co-investigator (0.6 calendar months in Year 2)				

Present Intramural Grants:

None.

Submitted Applications:

submitted		Liew & Kennedy (Co-PIs)		2025
NIH/NICHHD-NCMRR R25				
Title: Building a data science workforce to improve the reproducibility of rehabilitation research.				
Amount: 811,744 USD				
Role: Other (Educational Leadership Team Member)				

submitted		Zellers (PI)		2026
NIH/NICHHD-NCMRR R25				
Title: The impact of Achilles tendon tissue features on patient presentation and post-operative trajectory in insertional Achilles tendinopathy.				
Amount: ###, ### USD				
Role: Co-Investigator (1.2 calendar months/year)				

Past Extramural Funding:

FAA 16-C-TTHP-AU		Sefton (PI)		2016-2018
Federal Aviation Administration – Center for Excellence for Technical Training and Human Performance				
Title: Exploring the use of gamification for training.				
Amount: 238,000 USD				
Role: Co-Investigator (0 calendar months).				

R01-NCE		Van Dillen (PI)		2019
NIH/NICHHD/NCMRR 5 R01 HD047709				
Title: Spinal control during functional activities to improve low back pain outcomes.				
Role: Consultant				

CIHR PTJ 153330		Boyd (PI)		2017-2022
Canadian Institutes of Health Research/Instituts de recherche en santé du Canada				
Title: Characterizing Arm Recovery in People with Severe Stroke (CARPSS).				
Amount: 665,000 CAD				
Role: Co-Investigator (0 calendar months/year)				

HSF/CPSR		Eng (PI)		09/2021-2/2022
Heart and Stroke Foundation/Canadian Partnership for Stroke Recovery Operating Grant				
Title: Determining Optimal post-Stroke Exercise (DOSE).				
Role: Consultant				

R21 AT012088-01		Schaefer (PI)		2023
NIH/NICCIH R21 (sub-award to WASHU)				
Title: Measuring expectancy effects of transcranial direct current stimulation on motor learning.				
Amount: 200,000 USD (19,268 USD to WASHU)				
Role: Co-Investigator (0.6 calendar months per year)				
This grant was awarded but I had to withdraw as a co-investigator due to my involvement in other projects.				

NCCIH R34 AT011015		Earhart & Rawson (PIs)		2021-2023
NIH/NCCIH				
Title: Moving Mindfully: A MBSR-Centered Approach to Freezing in Parkinson Disease.				
Amount: 708,750 USD				
Role: Co-Investigator (1.2 calendar months/year)				

1UF1NS125512-01		Lee, JM (PI)		2023-2024
NIH/NIA U01				
Title: Washington University/University of Texas Southwestern VCID Consortium Site.				
Amount: 2,535,125 USD				
Role: Collaborator (1.2 calendar months per year)				

1RF1AG079503-01		Goyal, Bauer, Song, & Lee, JM (Co-PIs)		2022-2025
NIH/NIA R01				
Title: Imaging and Reversibility of Cellular and Network Metabolic Dysfunction in Alzheimer's Disease.				
Amount: 2,244,795 USD				
Role: Collaborator (1.2 calendar months per year)				

Past Intramural Funding:

IGP Project # 170138		Lohse (Co-PI)		2017-2018
Auburn University Internal Grants Program				
Title: Improving the acquisition of manual-wheelchair skills: An EEG study using motor learning principles.				
Amount: 20,000 USD				
Role: Co-Principal Investigator (with Matt Miller; 0 calendar months).				

CoH Seed Grant		Fino (PI)		2019
University of Utah; College of Health Pilot Grant Program				
Title: Neural activity of balance recovery following concussion.				
Amount: 17,500 USD				
Role: Co-Investigator (0 calendar months/year)				

University of Utah		Lohse & Weatherwax (Co-PI)		2020-2021
University of Utah Graduate Teaching Assistantship				
Title: The Development and Implementation of an Online Laboratory for an Undergraduate Hybrid Biomechanics Course.				
Role: Co-Mentor (0 calendar months/year)				

ICTS/WASHU		McPherson (PI)		2022-2023
KL2 Career Development Award				
Title: Neural mechanisms of motor heterogeneity in multiple sclerosis				
Amount: 246,976 USD				
Role: Supplemental Mentor (0 calendar months)				

#UL1TR002345		Lohse (PI)		2022
WASHU ICTS “Just in Time” Grant				
Title: Improving information architecture in neurology: Creating an open-access database of harmonized stroke trials.				
Amount: 4,950 USD				
Role: Principal Investigator (0 calendar months per year)				

#202207003		Lang (PI)		2023
WASHU ICTS “Just in Time” Grant				
Title: Integrating wearable sensor data into the rehabilitation clinical environment.				
Amount: 5,000 USD				
Role: Co-Investigator (0 calendar months per year)				

ICTS/WASHU		McPherson (PI)		2024
WASHU ICTS – Clinical and Translational Research Funding Program				
Title: Subclinical Pathophysiology of Voluntary Motor Processing in People with Multiple Sclerosis.				
Amount: 50,000 USD				
Role: Co-investigator (0.6 calendar months/year)				

Grant and Research Applications Not Funded:

1. Not Funded		Lohse (PI)		2014
NIH / NINDS R03				
Title: Centralized open-access research (COAR): A database for stroke rehabilitation.				
Role: Principal Investigator				

2. Not Funded		Lohse (PI)		2015
NIH / NINDS R03				
Title: Centralized open-access research (COAR): A database for stroke rehabilitation.				
Role: Principal Investigator				

3. Not Funded		Lohse (PI)		2018
Center on Aging, University of Utah, pilot grant program				
Title: Cortical Noise as a Biomarker for Age-Related Declines in Cognitive and Motor Function.				

Role: Principal Investigator with Kevin Duff (0 calendar months).
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4. Not Funded		<i>Dorval (Co-PI)</i>		2018
NIH / NINDS R01				
Title: The Parkinsonian Relationship between Beta-Activity and Movement Kinetics.				
Role: Co-Principal Investigator (2 calendar months/year for 5 years).				

5. Not Funded		<i>Lohse (PI)</i>		2018
NIH KL2				
Title: Getting More Out of Data: Personalized Medicine through Advanced Statistical Modelling in Rehabilitation.				
Role: Principal Investigator (6.72 calendar months/year for 2 years).				
Mentors: Jacob Kean and Tom Greene.				

6. Not Funded		<i>Lohse (PI)</i>		2018
National Science Foundation: Science of Learning Initiative				
Title: Measuring and Modeling Age-Related Changes in Reinforcement Learning.				
Role: Principal Investigator (2 calendar months/year for 3 years).				
(Sub-awards to Matt Miller and Matt Jones as co-investigators).				

7. Not Funded		<i>Lohse (PI)</i>		2018
University of Utah; College of Health Pilot Grant Program				
Title: Sensorimotor integration and cognitive compensation in walking and turning for older adults.				
Role: Principal Investigator (0 calendar months/year)				

8. Not Funded		<i>Williams (PI)</i>		2019
The PAC-12 Student-Athlete Health and Well-Being Grant Program				
Title: Modeling injury and mental health risk in a sample of collegiate athletes.				
Amount: 675,000 USD				
Role: Co-Investigator (1 calendar month/year for 2 years)				

9. Not Funded		<i>Williams (PI)</i>		2018
NIH / NCI R01				
Title: Developing effective training programs for enhancing perceptual-cognitive expertise in radiographic imaging.				
Role: Co-Investigator (1.2 calendar months/year for 5 years)				

10. Not Funded		<i>Williams (PI)</i>		2018
NIH/ NIA R01				
Title: Multi-sensory processing for real-world spatial navigation in older adults: the influence of mobility-related anxiety.				
Role: Co-Investigator (1.2 calendar months/year for 5 years)				

11. Not Funded		<i>Euler, Lohse, & Davis (Co-PIs)</i>		2018
University of Utah Neuroscience Initiative Pilot Seed Grant				
Title: EEG Biomarkers of Mental Exertion: Validation and Implications for Personalized Medicine.				
Role: Co-Principle Investigator (0 calendar months/year)				

12. Not Funded		<i>Lohse (PI)</i>		2019
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University of Utah, Center on Aging Pilot Grants Program				
Title: Cortical Noise as a Biomarker for Age-Related Declines in Cognitive and Motor Function.				
Amount: 15,914 USD				
Role: Principal Investigator (0 calendar months/year)				

13. Not Funded		<i>Lohse (PI)</i>		2019
University of Utah, Center on Aging Innovations Grants Program				
Title: The role of mobility-related anxiety in anticipatory and reactive balance control in older adults.				
Amount: 39,951 USD				
Role: Principal Investigator (0 calendar months/year)				

14. Not Funded		<i>Williams (PI)</i>		2019
The PAC-12 Student-Athlete Health and Well-Being Grant Program				
Title: Modeling injury and mental health risk in a sample of collegiate athletes.				
Amount: 300,000 USD				
Role: Co-Investigator (1 calendar month/year for 2 years)				

15. Not Funded		<i>Podlog (PI)</i>		2019
AHRQ R03				
Title: Enhancing Adherence to Physical Therapy for Chronic Low Back Pain: The Role of Tripartite Efficacy Beliefs.				
Amount: 99,486 USD				
Role: Co-Investigator (0.15 calendar months/year)				

16. Not Funded		<i>Lohse (PI)</i>		2019
NIH/NIA R21 PAR-19-053				
Title: The neural and cognitive consequences of anxiety in shaping fall risk for older adults.				
Amount: 275,000 USD				
Role: Principal Investigator (2.4 calendar months/year for 2 years)				

17. Not Funded		<i>Boyd (PI)</i>		2019
Canadian Institutes of Health Research/Instituts de recherche en santé du Canada				
Title: Individualized pathways to recovery after stroke.				
Amount: 940,000 CAD				
Role: Co-Investigator (0.5 calendar months/year)				

18. Not Funded		<i>Lohse (PI)</i>		2019
University of Utah, Center for Clinical and Translational Science Pilot Program				
Title: Neural, affective, and cognitive features of fall risk for older adults.				
Amount: 30,000 USD				
Role: Principal Investigator (0 calendar month/year for 1 year)				

19. Not Funded		<i>French (PI)</i>		2020
Utah CCTS S.T.A.R.S. TL1 Program				
Title: Leveraging the electronic medical record to understand the relationship between functional mobility recovery and health service outcomes after stroke.				
Role: Mentor (0 calendar months/year)				

20. Not Funded		<i>Rimer (PI)</i>		2020
The PAC-12 Student-Athlete Health and Well-Being Grant Program				
Title: An Applied Epidemiological Approach to Reducing the Incidence of Injury in Collegiate Athletics.				
Amount: 150,000 USD				
Role: Co-Investigator (1 calendar month/year for 2 years)				

21. Not Funded		<i>Lohse/Williams (Co-PI)</i>		2020-2022
Armament Research, Development and Engineering Center (ARDEC)				
Title: The influence of stress on perception and decision-making in combat.				
Amount: 302,002 USD				
Role: Co-Principal Investigator (1 calendar month/year)				

22. Not Funded		<i>Fritz (PI)</i>		2020
NIH/NCCIH U01 (Clinical Trial Required)				
Title: SMT Therapeutic Alliance.				
Amount: 3,812,500.00 USD				
Role: Co-Investigator (1 calendar months/year)				

23. Not Funded		<i>Kittleson (PI)</i>		2020
AHRQ R21 (sub-award to University of Utah)				
Title: Development of personal prognostic profiles for dynamic and static balance.				
Amount: 250,000 USD (61,000.00 USD)				
Role: Co-Investigator (1 calendar months/year)				

24. Not Funded		<i>Williams (PI)</i>		2020
AHRQ R01				
Title: Testing evidence-based learning principles in radiology training.				
Amount: 1,906,250 USD				
Role: Co-Investigator (1 calendar months/year)				

25. Not Funded		<i>Hayes (PI)</i>		2020
University of Utah CCTS Pilot Grant				
Title: Cycling intervention with biofeedback of power symmetry for patients with stroke in an inpatient rehabilitation facility: pilot randomized controlled trial.				
Amount: 20,000 USD				
Role: Co-Investigator (0 calendar months per year)				

26. Not Funded		<i>Schaefer & Peterson (co-PIs)</i>		2020
NIH/NIA R01 (sub-award to University of Utah)				
Title: Using cognition to predict individual differences in motor learning for older adults with and without Parkinson disease.				
Amount: 298,649 USD (93,485 USD to Utah)				
Role: Co-Investigator (1.2 calendar months per year)				

27. Not Funded		<i>Liew (PI)</i>		2020
NIH/NICHD-NCMRR R25				
Title: Building a data science workforce to improve the reproducibility of rehabilitation research.				
Amount: 811,744 USD				

Role: Consultant				
28. Not Funded		<i>Harris (PI)</i>		2021
NIH/NIAMSD R01				
Title: Multi-Domain Biomechanics after Periacetabular Osteotomy for Developmental Dysplasia of the Hip.				
Amount: ###,### USD				
Role: Co-Investigator (0 to 1.2 calendar months per year over 5 years)				
29. Not Funded		<i>McPherson (PI)</i>		2021
KL2 at WASHU				
Title: Characterizing excitatory, inhibitory, and neuromodulatory components of the voluntary motor command in people with multiple sclerosis.				
Amount: ###,### USD				
Role: Co-Investigator (0 calendar months)				
30. Not Funded		<i>McPherson (PI)</i>		2021
NIH/NCMRR R03				
Title: Characterizing excitatory, inhibitory, and neuromodulatory components of the voluntary motor command in people with multiple sclerosis.				
Amount: 100,000 USD				
Role: Co-Investigator (0.6 calendar months)				
31. Not Funded		<i>Kittleson (PI)</i>		2021
AHRQ R21 (sub-award to WASHU)				
Title: Development of personal prognostic profiles for dynamic and static balance.				
Amount: 250,000 USD (61,000 USD to WASHU)				
Role: Co-Investigator (1 calendar months/year)				
32. Not Funded		<i>Schaefer & Peterson (co-PIs)</i>		2021
NIH/NIA R01 (sub-award to WASHU)				
Title: Using cognition to predict individual differences in motor learning for older adults with and without Parkinson disease.				
Amount: 298,649 USD (93,485 USD to WASHU)				
Role: Co-Investigator (1.2 calendar months per year)				
33. Not Funded		<i>Schaefer (PI)</i>		2021
NIH/NICCIH R21 (sub-award to WASHU)				
Title: Measuring expectancy effects of transcranial direct current stimulation on motor learning.				
Amount: 200,000 USD (19,268 USD to WASHU)				
Role: Co-Investigator (0.6 calendar months per year)				
34. Not Funded		<i>Zellers (PI)</i>		2022
NIH/NIAMSD K01				
Title: Human Achilles tendon structural biomarkers in diabetic and non-diabetic tendinopathy.				
Amount: 630,747 USD				
Role: Collaborator (0.0 calendar months per year)				

35. Not Funded		McPherson (PI)		2021
NIH/NCMRR K01				
Title: Characterizing excitatory, inhibitory, and neuromodulatory components of the voluntary motor command in people with multiple sclerosis.				
Amount: 475,000 USD				
Role: Co-Mentor (0.0 calendar months per year)				
36. Not Funded		Peterson (PI)		2022
VA Merit Award (sub-award to WASHU)				
Title: Using cognition to predict individual differences in motor learning for older adults with Parkinson's disease.				
Amount: 1,194,387 USD (100,000 USD to WASHU)				
Role: Collaborator (2 calendar months per year)				
37. Not Funded		Lohse (PI)		2023
NIH/NINDS R61/R33				
Title: Improving information architecture in neurology: Making stroke trial data FAIR.				
Amount: 1,164,261 USD				
Role: Principal Investigator				
38. Not Funded		Zellers (PI)		2023
NIH/NIAMSD R21				
Title: Applying photoacoustic imaging to quantify human tendon vasculature.				
Amount: 274,999 USD				
Role: Collaborator (2.4 calendar months in year 1, 1.2 in year 2)				
39. Not Funded		Schaefer (PI)		2023
NIH R03 (sub-award to WASHU)				
Title: Visuospatial training for boosting functional upper-extremity motor training in older adults.				
Amount: ##### USD (##### USD to WASHU)				
Role: Co-Investigator (0.3 calendar months per year)				
40. Not Funded		Peterson (PI)		2023
VA Merit Award (sub-award to WASHU)				
Title: Using cognition to predict individual differences in motor learning for older adults with Parkinson's disease.				
Amount: 1,194,387 USD (100,000 USD to WASHU)				
Role: Collaborator (2 calendar months per year)				
41. Not Funded		Harris (PI)		2024
DoD				
Title: The Predictors of Surgical Success in Women with Developmental Dysplasia of the Hip.				
Amount: 3,877,575 USD				
Role: Co-Investigator (2.0 calendar months/year)				

42. <i>Not Funded</i>		<i>Earhart (PI)</i>		2024
NIH/NINDS R01				
Title: A gutsy move? Mapping the relationships between gut health and movement in PD and aging.				
Amount: 3,877,575 USD				
Role: Co-Investigator (2.0 calendar months/year)				

43. <i>Not Funded</i>		<i>Albertson (PI)</i>		2025
NIH/NINDS R01				
Title: Moderating effects of aging on behavioral recovery and underlying neuroplastic mechanisms in mice.				
Amount: ### USD				
Role: Co-investigator (1.2 calendar months/year)				

Entrepreneurship:

None.

Bibliography

* indicates a paper on which I was a senior author providing mentorship and/or oversight.

Manuscripts Under Peer-Review

1. Palmer, J.A., Lohse, K.R., & Fino, P. Cortical activity during preparation and execution of balance recovery behavior in people after mild traumatic brain injury: A preliminary investigation. (under review). *Journal of Neurologic Physical Therapy*.
2. *McPherson, L.M., **Lohse, K.R.**, Simon, S.M., Beauchamp, J.A., Negro, F., Naismith, R.T., & Cross, A. (under review). Pathophysiology of voluntary motor commands at the level of the spinal motoneuron in patients with multiple sclerosis. *eLife*.
3. *Vehar, J.V., Euler, M.J., **Lohse, K.R.**, Guevara, J., Geiger, A., & Duff, K. (under review). Effects of measurement conditions on the EEG aperiodic exponent in the Alzheimer's disease continuum. *Clinical Neurophysiology*.

Original, peer reviewed articles in refereed journals

1. **Lohse, K.R.**, Sherwood, D.E., & Healy, A.F. (2010). How changing the focus of attention affects performance, kinematics, and electromyography in dart throwing. *Human Movement Science*, 29, 542-555. doi:10.1016/j.humov.2010.05.001.
2. **Lohse, K.R.**, Healy, A.F., & Sherwood, D.E. (2010). Mental practice in the intermanual transfer of motor skills. *Journal of Imagery Research in Sport and Physical Activity*, 5, A1. doi: 10.2202/1932-0191.1052.
3. **Lohse, K.R.**, Sherwood, D.E., & Healy, A.F. (2011). Neuromuscular effects of shifting the focus of attention in a simple force production task. *Journal of Motor Behavior*, 43, 174-184. doi: 10.1080/00222895.2011.555436.
4. **Lohse, K.R.** & Sherwood, D.E. (2011). Defining the focus of attention: Effects of attention on perceived exertion and fatigue. *Frontiers in Psychology*, 2, 332. doi: 10.3389/fpsyg.2011.00332.
5. **Lohse, K.R.** (2012). The influence of attention on learning and performance: Pre-movement time and accuracy in an isometric force production task. *Human Movement Science*, 31, 12-25. doi:10.1016/j.humov.2011.06.001.
6. **Lohse, K.R.**, & Healy, A. F. (2012). Exploring the contributions of procedural and declarative training to performance: A test of the procedural reinstatement principle. *Journal of Applied Research in Memory and Cognition*. 1, 65-72. doi:10.1016/j.jarmac.2012.02.002
7. **Lohse, K.R.**, & Sherwood, D.E. (2012). Thinking about muscles: The neuromuscular effects of internally focused attention in accuracy and fatigue. *Acta Psychologica*, 140, 236-245. doi:10.1016/j.actpsy.2012.05.009
8. Carpenter, S.K., **Lohse, K.R.**, Healy, A.F., Bourne, L.E., & Clegg, B. (2013). External focus of attention improves retention and transfer in a speeded aiming task. *Journal of Applied Research in Memory and Cognition*, 2, 14-19. doi:10.1016/j.jarmac.2012.11.002
9. **Lohse, K.R.**, Shirzad, N., Verster, A., Hodges, N.J., & Van der Loos, H.F.M. (2013). Video games and rehabilitation: Using design principles to enhance patient engagement. *Journal of Neurologic Physical Therapy*, 37, 166-175.
10. **Lohse, K.R.**, Sherwood, D.E., & Healy, A.F. (2014). On the advantage of an external focus of attention: A benefit to learning or performance? *Human Movement Science*, 33, 120-134. doi: 10.1016/j.humov.2013.07.022
11. **Lohse, K.R.**, Hilderman, C.G.E., Cheung, K.L., Tatla, S., & Van der Loos, H.F.M. (2014). Virtual reality therapy for adults post-stroke: A systematic review and meta-analysis exploring virtual environments and commercial video games in therapy. *PLOS ONE*, 9(3), e93318. doi: 10.1371/journal.pone.0093318

12. **Lohse, K.R.**, Jones, M.C., Healy, A.F. & Sherwood, D.E. (2014). The role of attention in motor control. *Journal of Experimental Psychology: General*, 143, 930-948. doi: 10.1037/a0032817
13. **Lohse, K.R.**, Wadden, K., Boyd, L.A. & Hodges, N.J. (2014). Motor skill acquisition across short and long timescales: A meta-analysis of neuroimaging data. *Neuropsychologia*, 59, 130-141.
14. Ong, N. T., Chua, R., **Lohse, K. R.**, Sinnett, S., & Hodges, N. J. (2014). A test of motor skill-specific action embodiment in ice hockey players. *Acta Psychologica*, 150, 61-68.
15. ***Lohse, K.R.**, Lang, C.E., & Boyd, L.A. (2014). Is more better? Using meta-data to explore dose-response relationships in stroke rehabilitation. *Stroke*, 45, 2053-2058.
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17. Sherwood, D.E., **Lohse, K.R.**, & Healy, A.F. (2014). Judging joint angles and movement outcome: Shifting the focus of attention in dart-throwing. *Journal of Experimental Psychology: Human Perception and Performance*, 40, 1903-1914.
18. Lam, M.Y., Tatla, S.K., **Lohse, K.R.**, Hoens, A.M., Miller, K.J., Holsti, L., Virji-Babul, N., & Van der Loos, H.F.M. (2015). Perceptions of technology and its use for therapeutic application for individuals with hemiparesis: Findings from adult and paediatric focus groups. *Journal of Medical Internet Research: Rehabilitation and Assistive Technologies*, 2, e1.
19. Tatla, S.K., Shirzad, N., **Lohse, K.R.**, Virji-Babul, N., Hoens, A., Holsti, L., Li, L.C., Miller, K.M., & Van der Loos, H.F.M. (2015). Therapists' perceptions of social media and video game technologies in upper limb rehabilitation. *Journal of Medical Internet Research: Serious Games*, 3, e2.
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21. MacInnis, M., Nugent, S. MacLeod, K., & **Lohse, K.R.** (2015). Methods to estimate VO2max upon acute hypoxia exposure. *Medicine & Science in Sports & Exercise*, 47, 1869-1876.
 - a. Note that there was a rounding error in Eq. 3 of this manuscript. (The correct formula was presented in the appendix.) A corrigendum rectifying this error was published in MSSE in December, 2018.
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24. Karlinsky, A., **Lohse, K.R.**, & Hodges, N.J. (2015). The nature of the cognitive advantage: A quarter of a century later. *International Journal of Sport and Exercise Psychology*, 6, 486.
25. Lang, C.E., **Lohse, K.R.**, & Birkenmeier, R.L. (2015). Dose and timing in neurorehabilitation: Prescribing motor therapy after stroke. *Current Opinion in Neurology*, 28, 549-555.
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28. Mulligan, D., **Lohse, K.R.**, & Hodges, N.J. (2016). An action incongruent secondary task modulates prediction accuracy in skilled performers: Evidence for motor simulation. *Psychological Research*, 80, 1-14.
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142. *Macpherson, CE, Bland, MD, Gordon, C, Miller, AE, Newman, C, Holleran, CL, Dy, CJ, Peterson, L, **Lohse, KR**, & Lang, CE (2025). Replication of sensor-based categorization of upper-limb performance in daily life of people with stroke and its generalizability to other populations. *Sensors*, 25(15) 4618. <https://doi.org/10.3390/s25154618>
143. *Albertson, A.J., Landsness, E.C., Eisfelder, M., Young, B.M., Judge, B., Brier, M.R., Euler, M.J., Cramer, S.C., Lee, J-M., & **Lohse, K.R.** (2025). Stroke is associated with regional and age-specific changes in periodic and aperiodic cortical activity. *Experimental Physiology*. <https://doi.org/10.1113/EP093171>
144. *Vehar, J., Euler, M.J., Pathania, A., Clark, M, Duff, K., & **Lohse, K.R.** (2025). Examining the clinical potential of the concurrent EEG aperiodic exponent in cognitive testing. *Journal of Clinical and Experimental Neuropsychology*. 47(5):405-421. doi: 10.1080/13803395.2025.2555602
145. Harris, M.D., Behrman, E.C., **Lohse, K.R.**, Shepherd, M.C., MacWilliams, B.A. & Mannen, E.M.

- (2025) Can Predictive and Functional Methods Locate the Dysplastic Hip Joint Center? *Gait & Posture*. <https://doi.org/10.1016/j.gaitpost.2025.109982>
146. Lang, CE, Iverson, JM, Konrad, JD, Lorence, A, Choudry, I, Bland, MD, Campbell, M, Pulvar White, S, **Lohse, KR**, & Marrus, N. Advancing wrist-worn accelerometry for measurement of infant motor behavior. (2025). *Developmental Psychobiology*, 5;67(6):e70098. doi:10.1002/dev.70098
 147. *Miller, A.E., **Lohse, K.R.**, Bland, M.D., Konrad, J.D., Hoyt, C.R., & Lang, C.E. (2025). A large, accessible, harmonized upper and lower limb accelerometry dataset. *Data in Brief*, 63, 112271. <https://doi.org/10.1016/j.dib.2025.112271>
 148. Lang, C.E., Miller, A.M., McPherson, C.E., Bland, M.D., Holleran, C.L., **Lohse, K.R.** (2026). Advancing neurorehabilitation and recovery through human movement quantification via wearable sensing. *Neurorehabilitation & Neural Repair*. <https://doi.org/10.1177/15459683251412310>
 149. **Lohse, KR**, Harris-Hayes, M, Moss, J., & Magee, J (2026). Understanding social construction is essential in the physical therapy profession: A focus on sex, gender, race and ethnicity. *Communications in Kinesiology*. DOI: 10.51224/cik.2026.7641
 150. Donkers, S, **Lohse, KR**, Ganeswara, M, Buragadda, S, Levin, M, Clift, F, Stefanelli, M, & Ploughman, M. (2026). Translingual neural stimulation to improve gait and balance in multiple sclerosis: A randomized controlled trial. *Archives of Physical Medicine and Rehabilitation*. <https://doi.org/10.1016/j.apmr.2026.03.025>
 151. Aldridge, C.M., Braun, R., Parodi, L., **Lohse, K.R.**, Edwardson, M., Cole, J., Lindgren, A.G., Hsu, F-C., Keene, K., Worrall, B.B., Rosand, J., Holman, E.A., & Cramer, S.C. (in press). Genomic Insights into Stroke Recovery: Cross-Phenotype Associations. *Brain Communications*.
 152. *Parma, JO, **Lohse, KR**, Bacelar, MFB, & Miller, MW (in press). It's Subjective! Effects of Perceptions of Success and Objective Outcomes on the Reward Positivity ERP Component in a Motor Learning Paradigm. *Biological Psychology*.

Case Reports

None.

Reviews, Book Chapters, and Editorials, including Invited Publications (Not Peer Reviewed)

1. **Lohse, K.R.**, & Bourne, L.E., Jr. (2012). Cognitive retraining following acquired brain injury. In A.F. Healy and L. E. Bourne, Jr. (Eds.), *Training cognition: Optimizing efficiency, durability, and generalizability* (pp. 307-325). London: Psychology Press.
2. **Lohse, K.R.** & Ketels, S.L. (2012). Implications of dual-process theories for optimizing motor learning and performance. In A. L. Magnusson & D. J. Lindberg (Eds). *Psychology of performance and defeat*. Hauppauge, NY: Nova Science Publishers.
3. **Lohse, K.R.**, Wulf, G., & Lewthwaite, R. (2012). Attentional focus affects movement efficiency. In N. J. Hodges and A. M. Williams (Eds.), *Skill acquisition in sport: Research, theory & practice*, 2nd Ed (pp. 40-58). New York, NY: Routledge.
4. Hodges, N.J., & **Lohse, K.R.** (2014). Motor control. In R. Eklund and G. Tenebaum (Eds.), *Encyclopedia of sport and exercise psychology*. New York, NY: Sage Publications.
5. **Lohse, K.R.** (2015). On attentional control: A dimensional framework for attention in expert performance. In D. Farrow and J. Baker (Eds.), *Routledge handbook of sports expertise*. New York, NY: Routledge.
6. **Lohse, K.R.**, & Hodges, N.J. (2015). Providing information for teaching skills in sport. M. Hughes and I. M. Franks (Eds.), *The Essentials of performance analysis: An introduction*, 2nd Ed. New York, NY: Routledge.

7. **Lohse, K.R.**, & Hodges, N.J. (2016). Developing motor skill in practice: Mastering 'heelflips'. *Applied sport & exercise psychology: Practitioner case-studies*. Hoboken, NJ: Wiley-Blackwell.
8. **Lohse, K.R.**, Miller, M.W., Bacelar, M., & Krigolson, O. (2020). Errors, rewards, and reinforcement in motor skill learning. In N. J. Hodges and A. M. Williams (Eds.), *Skill acquisition in sport: Research, theory & practice*, 3rd Ed. New York, NY: Routledge.

Archived Preprints (Not Peer Reviewed)

1. Caldwell, A. R., et al. (including **Lohse, K. R.**) (2019). Moving sport and exercise science forward: A call for the adoption of more transparent research practices. *SportRxiv*. doi: 10.31236/osf.io/fxe7a
2. **Lohse, K.R.**, Hawe, R.L., Dukelow, S.P., & Scott, S.H. (2020). Statistical considerations for drawing conclusions about recovery. *medRxiv*. doi: 10.1101/19013060
3. Liew, S-L. et al. (including **Lohse, K.R.**) (2020). The ENIGMA Stroke Recovery Working Group: Big data neuroimaging to study brain-behavior relationships after stroke. *PsyArXiv*. doi: 10.31234/osf.io/wu7mh
4. **Lohse, K.R.**, Taylor, J.A., Butson, M., Knight, E.J., Sainani, K.S., & Vickers, A.J. (2020). Systematic Review of the use of “Magnitude-Based Inference” in Sports Science and Medicine. *SportRxiv*. doi: 10.31236/osf.io/wugcr
5. Faw, T.D., Lakhani, B., Liu, H., Nguyen, H.T., Schmalbroack, P., Knopp, M.V., **Lohse, K.R.**, Kramer, J.L.K., McTigue, D.M., Boyd, L.A., & Basso, M. (2020). Eccentric-focused rehabilitation promotes myelin plasticity in individuals with chronic, incomplete spinal cord injury. *medRxiv*. doi: 10.1101/2020.04.27.20079970v1.
6. Lingo VanGilder, J., **Lohse, K.R.**, Duff, K., Wang, P., Schaefer, S.Y. (2020). Associations between Rey-Osterrieth Complex Figure test and motor skill learning in older adults. *bioRxiv*. doi: 10.1101/2020.09.27.315168
7. Pathania, A., Euler, M.J., Clark, M., Cowan, R., Duff, K., & **Lohse, K.R.** (2021). Resting EEG spectral slopes are associated with age-related differences in information processing speed. *medRxiv*.
8. Krishnagopal, S. **Lohse, K.R.**, Braun, Robynne (2021). Stroke recovery phenotyping through network trajectory approach and graph neural networks. *bioRxiv*.
9. *Taylor, S., Fawver, B., Thomas, J.L., Williams, A.M., & **Lohse, K.R.** (2022). Practice schedules affect how learners correct their errors: Secondary analysis from a contextual interference study. *SportRxiv*.
10. **Lohse, K.R.** (2022). No Estimation Without Inference: A Response to the International Society of Physiotherapy Journal Editors. *SportRxiv*.
11. **Lohse, K.R.**, Kozlowski, A., & Strube, M. (2022). Model specification in mixed-effects models: A focus on random effects. *arXiv*.
12. *Miller, A.E., Lang, C.E., Bland, M.B., Holleran, C.L., & **Lohse, K.R.** (2024). Quantifying the effects of sleep on sensor-derived variables of upper limb performance in daily life in people with and without upper limb impairment. *Research Square*. <https://doi.org/10.21203/rs.3.rs-3838376/v1>.
13. Konrad, J.D., Marrus, N., Lohse, K.R., Thuet, K.M., & Lang, C.E. (2024). Motor competence is related to acquisition of error-based but not reinforcement learning. *SSRN*. <https://dx.doi.org/10.2139/ssrn.4687606>
14. *Miller, A.E., **Lohse, K.R.**, Bland, M.D., Konrad, J.D., Hoyt, C.R., Lenze, E.J., Lang, C.E. (2024). A large harmonized upper and lower limb accelerometry dataset: A resource for rehabilitation scientists. *medRxiv*.
15. **Lohse, K.R.**, Miller, A.E., Bland, M.D., Lee, J-M., Lang, C.E. (2024). Validation of real-world actigraphy to capture post-stroke motor recovery. *medRxiv*. <https://doi.org/10.1101/2024.11.03.24316674>
16. *Alberston, A.J., Landsness, E.C., Eisfelder, M., Young, B.M., Judge, B., Brier, M.R., Euler, M.J., Cramer, S.C., Lee, J-M., & **Lohse, K.R.** (2024). Stroke is associated with regional and age-specific changes in periodic and aperiodic cortical activity. *bioRxiv*. <https://doi.org/10.1101/2024.11.07.622359>

17. Lanier, V., **Lohse, K.R.**, Hooker, Q., & Van Dillen, L. (2025). Exploring booster session attendance, prescription, and outcomes in adults with chronic low back pain: Secondary analysis of a randomized clinical trial. *medRxiv*. <https://doi.org/10.1101/2025.01.27.25321189>
18. Lohse, K.R., Harris-Hayes, M., Moss, J., & Magee, J. (2026). Reply to Caldwell and Rosa-Caldwell (2026). *SportRxiv*. <https://doi.org/10.51224/SportRxiv.891>

Other Scholarly Products (Not Peer Reviewed)

1. Miller AE, **Lohse KR**, Bland MD, Konrad JD, Hoyt CR, Lenze EJ, Lang CE. Harmonized Upper and Lower Limb Accelerometry_Part1. Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) Data and Specimen Hub (DASH) 2024. <https://doi.org/10.57982/fayx-p832>
2. Miller AE, **Lohse KR**, Bland MD, Konrad JD, Hoyt CR, Lenze EJ, Lang CE. Harmonized Upper and Lower Limb Accelerometry_Part2. Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) Data and Specimen Hub (DASH) 2024. <https://doi.org/10.57982/72z7-m179>

Educational Publications

None.

Books

None.

Audiovisual/Media

None.

Abstracts

(This is an abbreviated list showing what I consider my most substantive presentations.)

1. **Lohse, K. R.** (2014, November). How much is more? Meta-analytic approaches to studying dose in rehabilitation. *American Society for Neurorehabilitation*. Part of a symposium with Lara Boyd and Catherine Lang. Washington DC, US.
2. **Lohse, K.R.**, Boyd, L.A., & Hodges, N.J. (2015). Engaging environments enhance motor learning in a computer gaming task. *North American Society for the Psychology of Sport and Physical Activity*. Portland, OR.
3. **Lohse, K.R.**, Buchanan, T.L., & Miller, M.W. (2015). Under-powered and over-worked: Problems with data analysis in motor learning studies. *North American Society for the Psychology of Sport and Physical Activity*. Portland, OR.
4. **Lohse, K.R.**, Boyd, L.A., & Lang, C.E. (2015, October). Centralized Open-Access Research (COAR): A database for stroke rehabilitation. *American Society of Neurorehabilitation*. Chicago, IL.
5. Bland, M.D., **Lohse, K.R.**, & Lang, C.E. (2016, May). Quantifying change during outpatient stroke rehabilitation: A retrospective regression analysis. *9th World Congress for Neurorehabilitation*. Philadelphia, PA.
6. Hayward, K.S., Schmidt, J.Y., **Lohse, K.R.**, et al. (2016, May). Severe upper limb impairment after neurological injury: A systematic review of individual data or brain-derived biomarkers. *9th World Congress for Neurorehabilitation*. Philadelphia, PA.
7. Leiker, A., Bruzi, A., Nelson, M., Wegman, R., Miller, M.W., & **Lohse, K.R.** (2016, June). The effects of self-controlled difficulty progression on engagement and learning in a computer gaming task. *North*

American Society for the Psychology of Sport and Physical Activity. Montreal, QC.

8. **Lohse, K.R.** (2016, November). How do game mechanics in virtual environments impact motivation, engagement and motor learning in healthy young adults? In D. Levac (Chair), “Maximizing motivation and engagement during motor learning: insights from practice in a virtual environment” symposium at the 93rd *Annual Meeting of the American Congress of Rehabilitation Medicine*. Chicago, IL.
9. **Lohse, K.R.** (2016, November). Information architecture in rehabilitation trials: The Centralized Open-Access Rehabilitation Database for Stroke (SCOAR). In L. Sook-Liew and S. Cramer (Chairs), “‘Big Data’ for Rehabilitation: Promises, Pitfalls, and Future Potential” symposium at the *Annual Meeting of the American Society of Neurorehabilitation*. San Diego, CA.
10. **Lohse, K.R.**, Pathania, A., Wegman, R., Boyd, L.A., & Lang, C.E. (2017, June). Insufficient reporting of control therapies in stroke rehabilitation trials: A systematic review and meta-analysis. *North American Society for the Psychology of Sport and Physical Activity*, San Diego, CA.
11. Hayward, K.S., Ferris, J.K., **Lohse, K.R.**, Cramer, S.C., Borich, M.R., Stewart, J.C., Borstad, A., Dukelow, S., Cassidy, J., Findlater, S., Neva, J.L., Liew, S.L., & Boyd, L.A. (2017, November). Regional diffusion differences in people with severe upper limb impairment post-stroke: A preliminary neuroimaging mega-analysis. Poster presentation at the *Annual Meeting of the American Society of Neurorehabilitation*. Washington DC.
12. **Lohse, K.R.**, (2018, June). Longitudinal data-analysis techniques in motor learning and development: A focus on time-varying covariates. Symposium presentation at the annual meeting of the *North American Society for the Psychology of Sport and Physical Activity*. Denver, CO.
13. **Lohse, K.R.**, (2018, June). Exploring Measurement and Methodology in Motor Behavior. Presentation at the *North American Society for the Psychology of Sport and Physical Activity*. Denver, CO. (*I gave this talk upon receipt of my Early Career Distinguished Scholar Award from NASPSA.*)
14. **Lohse, K.R.**, Zheng, T., Greene, T., Kean, J., Presson, A., Shen, J.C. (2018, November). Inpatient Cognitive Rehabilitation following Traumatic Brain Injury: Main Effects and Patient by Therapy Interactions using Causal Inference Models. Poster presentation at the annual meeting of the *American Society for Neurorehabilitation*. San Diego, CA.
15. Hayward, K.S., Ferris, J.K., **Lohse, K.R.**, Borich, M.R., Cramer S.C., Borstad, A., Stewart, J.C., Cassidy, J., Neva, J.L., & Boyd, L.A. (2018, November). Severity of Impairment is Important when Exploring Biomarkers of Upper Limb Outcome Post-Stroke. Poster presentation at the annual meeting of the *American Society for Neurorehabilitation*. San Diego, CA. (*Won the 2018 Fletcher H. McDowell Award for the best clinical science abstract.*)
16. **Lohse, K.R.** (2019, October). Data visualization: From quality assurance to final publication. Part of “Reliability and Reproducibility in Neurorehabilitation Research” with Liew, S-L. and Finley, J.M. at the annual meeting of the *American Society for Neurorehabilitation*. Chicago, IL.
17. Pathania, A., Clark, M., Cowan, R., Williams, E., Raffegau, T.E., Euler, M., Duff, K. & **Lohse, K.R.** (2020, June). Explaining age-related declines in cognitive and motor function with EEG power spectra: A cross-sectional feasibility study. Oral presentation at the annual meeting of the *North American Society for the Psychology of Sport and Physical Activity*.
18. McPherson LM, Negro F, Thompson CK, **Lohse K**, Powers RK, Farina D, Heckman CJ, Dewald JP. (2021) Pathological inhibition limits motor unit rate modulation during voluntary contractions in a muscle-dependent manner post-stroke. At the annual meeting of the *American Society for Neurorehabilitation*. Virtual.
19. Taylor, S., Fawver, B., Thomas, J., Williams, A.M., & **Lohse, K.R.** (2022, June). Chaotic practice schedules create more orderly responses: A paradoxical secondary analysis. Oral presentation at the annual meeting of the *North American Society for the Psychology of Sport and Physical Activity*

20. **Lohse, K.R.**, Bacelar, M.F.B., Parma, J., Cabral, D., St. Germain, L., McKay, B., Carter, M.J., & Miller, M.W. (2022, June). Making Strong Predictions: Testing Causal Hypotheses in Motor Behavior Studies. Oral presentation at the annual meeting of the *North American Society for the Psychology of Sport and Physical Activity*.
21. Aldridge, C., Krishnagopal, S., **Lohse, K.R.**, Hsu, F-C., Keene, K., Worrall, B., & Braun, R. (February, 2023). Genome Wide Association Study Of Stroke Recovery Phenotypes Defined By Serial NIH Stroke Scale Scores. Oral presentation at the *AHA International Stroke Conference*.
22. de Havenon, A., Skolarus, L.E., Aldridge, C.M., Braun, R.G., Cole, J.W., Cramer, S.C., Lindgren, A.G., Sunmonu, N.A., Worrall, B.B., & **Lohse, K.R.** (February, 2023). Understanding patterns of missingness in acute ischemic stroke trials: A secondary analysis of pooled patient-level follow-up data. Oral presentation at the *AHA International Stroke Conference*.
23. Marrus, N., **Lohse, K.R.**, Konrad, J., Bland, M., Campbell, M., Davis, S., Mei, P., Hines-Wilson, M., Balser, D., Adebogun, R., Pileggi, M., Klin, A., Jones, W., Lieber, H., Iverson, J., White, S., Constantino, J., & Lang, C. (May, 2024). Heritability of accelerometry metrics in infancy and implications for early ASD screening. Oral presentation at the *International Society for Autism Research Annual Meeting*.
24. **Lohse, K.R.**, Fulk, G.D., Finley, J., Kliethermes, S., Boyne, P.E., Reisman, D.S., & Stewart, J.C. (March, 2024). Demystifying statistical inference: Hypothesis tests, confidence intervals, effect size, and writing a discussion. Symposium presentation at the *American Physical Therapy Association Combined Sections Meeting*.
25. Alberston, A.J., Landsness, E.C., Eisfelder, M., Young, B.M., Judge, B., Brier, M.R., Euler, M.J., Cramer, S.C., Lee, J-M., & **Lohse, K.R.** (September, 2024). Stroke is associated with regional and age-specific changes in periodic and aperiodic cortical activity. *American Neurology Association Annual Meeting*. (*This presentation was recognized as an “abstract of distinction” at the ANA annual meeting.*)
26. **Lohse, K.R.**, Miller, A.E., Bland, M.D., Lee, J-M., & Lang, C.E. (April, 2025). Validation of real-world actigraphy to capture post-stroke motor recovery. Poster presentation at the *American Society for Neurorehabilitation Annual Meeting* in Atlanta, GA.