**Kristen A. Pickett**

**EDUCATION**

Doctorate of Philosophy, Kinesiology July 2010

University of Minnesota – Twin Cities

 Emphasis: Biomechanics and Neural Control

 Advisors: Jürgen Konczak, PhD

 Teresa Jacobson Kimberley, PhD, PT

 Master of Arts, Kinesiology January 2007

University of Minnesota – Twin Cities

 Advisor: Jürgen Konczak, PhD

 Bachelor of Science, Biology May 2002

 University of Wisconsin - Platteville

**POSTDOCTORAL TRAINING** July 2010 – July 2014

 Washington University School of Medicine, St Louis, MO

 Program in Physical Therapy and

 Department of Neurology – Movement Disorders Section

 Mentors: Gammon Earhart, PT, PhD

 Joel Perlmutter, MD, PhD

**ACADEMIC APPOINTMENTS**

 **Assistant Professor** Fall 2014 - Current

 Occupational Therapy Program

 Department of Kinesiology

 University of Wisconsin – Madison

 Affiliate Faculty Spring 2016 - Current

 Department of Biomedical Engineering

 University of Wisconsin – Madison

**Adjunct Instructor** Fall 2009/Spring 2010Department of Health and Human Performance,

*University of Wisconsin – River Falls*

 **Instructor** Spring 2009

Kinesiology Department, *University of Minnesota*

**Teaching Assistant** 2002 – 2006

 Kinesiology Department, *University of Minnesota*

**Research Assistant** 2009 – 2010

 Brain Plasticity Lab, *University of Minnesota*

 **Research Assistant** 2002 - 2009

Human Sensorimotor Control Lab, *University of Minnesota*

**Physical Activity Program Course Instructor** 2002 – 2005

 *University of Minnesota*

**INDUSTRY APPOINTMENTS**

 **Human Factors Engineer** 2004 - 2008

 3M Company, Saint Paul, MN

**PEER REVIEWED PUBLICATIONS**

Bellinger GC, Pickett KA & Mason AH (Submitted). Interlimb coordination during a combined gait and prehension task: Contributions of lower limb support preferences and footedness

Surgent O, Dadalko O, Pickett KA & Travers BG (Revisions Submitted) Balance and the Brain: A Review of Structural Brain Correlates of Postural Balance and Balance Training in Humans.

Rawson KS, McNeely ME, Duncan RP, Pickett KA, Perlmutter JS, & Earhart GM (2019). Exercise and Parkinson Disease: Comparing Tango, Treadmill, and Stretching. *Journal of Neurologic Physical Therapy*, *43*(1), 26-32.

Thorp JE, Adamczyk PG, Ploeg HL, & Pickett KA (2018). Monitoring Motor Symptoms During Activities of Daily Living in Individuals With Parkinson's Disease. *Frontiers in neurology*, *9*.

Myers PS, McNeely ME, Pickett KA, Duncan RP & Earhart GM (2018) Effects of exercise on gait and motor imagery in people with Parkinson disease and freezing of gait. Parkinsonism and Related Disorders. 53: 89-95

Trigsted SM, Cook DB, Pickett KA, Cadmus-Bertram, Dunn WR, Bell DR (2018) Greater Fear of Reinjury is Related to Stiffened Jump-Landing Biomechanics and Muscle Activation in Women after ACL Reconstruction. Submitted to Knee Surgery, Sports Traumatology, Arthroscopy.

Li KY, Chu PY, Pickett KA (2017) The Effect of Dopaminergic Medication on Joint Kinematics during Haptic Movements in Individuals with Parkinson’s Disease. Behavioural neurology.

Stiffler MR, Bell DR, Sanfilippo JL, Hetzel SJ, Pickett KA, Heiderscheit BC (2017) Star Excursion Balance Test Anterior Asymmetry Is Associated With Injury Status in Division I Collegiate Athletes. journal of orthopaedic & sports physical therapy.47(5):339-46.

Cameron DJ, Pickett KA, Earhart GM, Grahn JA (2016) The effect of dopaminergic medication on beat-based auditory timing in Parkinson’s disease. Frontiers in neurology.

Pilgram LM, Earhart GM, Pickett KA (2016) Impact of limiting visual input on gait: Individuals with Parkinson disease, age-matched controls, and healthy young participants. Somatosensory & motor research. 33(1):29-34.

Earhart GM, Duncan RP, Huang JL, Perlmutter JS, Pickett KA (2015) Comparing interventions and exploring neural mechanisms of exercise in Parkinson disease: a study protocol for a randomized controlled trial. BMC neurology. 15(1):9.

Li KY, Su WJ, Fu HW, Pickett KA (2015) Kinesthetic deficit in children with developmental coordination disorder. Research in developmental disabilities 38:125-33.

Peterson DS, Pickett KA, Duncan R, Perlmutter JS, Earhart GM (2014) Gait-related brain activity in people with Parkinson disease with freezing of gait. *PLoS One*. 9(3): p. e90634.

Peterson DS, Pickett KA, Duncan R, Perlmutter JS, Earhart GM (2013) Brain activity during complex imagined gait tasks in Parkinson disease. *Clin Neurophysiol*. 125(5):995-1005.

Williams AJ, Peterson DS, Ionno M, Pickett KA, Earhart GM (2013) Upper extremity freezing and dyscoordination in Parkinson's disease: effects of amplitude and cadence manipulations. *Parkinson’s Disease*. 2013:595378

Pickett KA, Duncan RP, Hoekel, J, Permutt MA, MarshallB, Hershey T, Earhart GM (2012) Early presentation of gait impairment in Wolfram syndrome. *Orphanet Journal of Rare Diseases*. **7**:92.

Hirsiger S, Pickett KA, Konczak J (*2012*). The integration of size and weight cues for perception and action: Evidence for a weight-size illusion. *Experimental Brain Research*, 223(1): 137-47.

Pickett KA, Duncan RP, Paciorkowski A, Permutt A, MarshallB, Hershey T, Earhart GM (2012). Balance impairment in individuals with Wolfram syndrome. *Gait and Posture*, 36(3): 619-624.

\*PetersonDS, \*Pickett KA, Earhart GE (2012) Effects of Levodopa on Vividness of Motor Imagery in Parkinson Disease. *Journal of Parkinson's Disease*, 2(2): 127-133.

Hershey T, LugarHM, Shimony J, Rutlin J, Koller JM, Perantie DC, Paciorkowski AR, Eisenstein SA, Permutt, MA and the Washington University Wolfram Study Group (2012) Early brain vulnerability in Wolfram syndrome. *Plos One*, *7(7):* e40604.

\*Pickett KA, \*PetersonDS, Earhart GE (2012) Motor imagery of gait tasks in individuals with Parkinson disease. *Journal of Parkinson's Disease*, 2(1): 19-22.

Kimberley TJ & Pickett KA (2012) Differential activation in the primary motor cortex during individual digit movement in focal hand dystonia vs. healthy. *Restorative Neurology and Neuroscience*, 30(3): 247-254.

Olman CA, Pickett KA, Schallmo M, Kimberley TJ (2011) Selective BOLD responses to individual finger movement measured with fMRI at 3T. *Human Brain Mapping*, 33(7): 1594-1606.

Li K, PickettKA, NestrasilI, TuiteP, Konczak K(2010) The effect of dopamine replacement therapy on haptic sensitivity in Parkinson's disease. *Journal of Neurology,* 257(12): 1992-1998.

Pickett KA & Konczak J(2009) Measuring kinaesthetic sensitivity in children. *Developmental Medicine & Child Neurology*. Sep; 51(9):711-6.

Maschke M, Gomez CM, Tuite PJ, Pickett K, Konczak J (2006). Depth perception in cerebellar and basal ganglia disease. *Experimental Brain Research*, Oct; 175(1): 165-176

Maschke M, Tuite PJ, Krawczewski K, Pickett K, Konczak J (2006). Perception of heaviness in parkinson's disease. *Movement Disorders***.** Jul; 21(7): 1013-1018.

Maschke M, Tuite PJ, Pickett K, Wachter T, Konczak J (2005). The effect of subthalamic nucleus stimulation on kinaesthesia in parkinson's disease. *Journal of Neurology, Neurosurgery, and Psychiatry, 76*(4): 569-571.

**TRADE PUBLICATIONS**

Lathrop KJ, Malsch AL, Massart RN, Goloff SE, Bebeau DJ, Pickett KA (2016) Dancing the

Tango: Promoting Exercise as Meaningful Activity for Adults with Parkinson disease. OT Practice, 21(21), 17-19.

**INVITED PRESENTATIONS**

Novel exercise interventions and outcome assessments for individuals with Parkinson disease, The American College of Sports Medicine, Denver, CO May 2017

Meaningful physical activity for individuals with Parkinson disease, The American Society for Neural Therapy and Repair, Clearwater Beach, FL. April 2017

Research Progress Report: Neurophysiologic adaptations to tango dancing in individuals with PD, Parkinson Study Group 25th Annual Meeting, Montreal, Canada. September 2013.

A Moving Story: A Kinesiolgist’s Approach to Movement Disorders Research, Invited Research Presentation, Department of Kinesiology, Iowa State University, Ames, IA. January 2013.

Differential brain activation following rotating treadmill training, Movement Science Research Seminar, Program in Physical Therapy, Washington University School of Medicine, St. Louis, MO. January 2012.

Blood Oxygen Level Dependent (BOLD) Signal Changes Following Rotating Treadmill Training. Alzheimer’s Disease Research Center colloquium. May 2011.

Kinaesthetic deficits in basal ganglia disease. Center for Clinical Movement Science colloquium series, University of Minnesota – Twin Cities, Minneapolis, MN. March 2010.

Kinaesthetic deficits in basal ganglia disorders: Psychophysical sensitivity thresholds and brain imaging data. Movement Science Research Seminar, Program in Physical Therapy, Washington University School of Medicine, St. Louis, MO. January 2010.

University of MN, 7th Bi-annual Minnesota Workshop on High Field
Imaging, Spectroscopy, and MR Imaging of Brain Function – October 2009

Kimberley TJ, Pickett KA

Haptic Perception in Parkinson’s Disease. Motor Control and Proprioception in Parkinson’s Disease, University of Minnesota – Twin Cities, Minneapolis, MN. September 2008.

University of MN, 6th Bi-annual Minnesota Workshop on High Field
Imaging, Spectroscopy, and MR Imaging of Brain Function – October 2007

Kimberley TJ, Pickett KA

**INVITED LECTURE SERIES**

*University of Minnesota, Program in PT* Continuing Education Program, Neuroanatomy Review with Clinical Correlation - *2009*

*University of Minnesota Curiosity Camp* , Biomechanics: An introduction to the Math and Physics of the Human body - 2008

**PLATFORM PRESENTATIONS**

Gannon S, Hartsel N, Pickett KA (2018). Glassblowing as an occupationally meaningful activity for individuals with Parkinson disease. Wisconsin Occupational Therapy Association Annual Meeting. October 2018

Jones CA, Ciucci MR, Swanson C, Pickett KA, McCulloch TM (2018) Swallowing pressure and limb motor variability in early-stage Parkinson disease. Dysphagia Research Society Annual Meeting. Baltimore, Maryland. March 2018

Doyle Greene KL, PickettKA, Lazarus, JC (2015). Exercise Modality Differentially Improves Bradykinesia & Hypokinesia in Parkinson Disease: RCT Comparing Pilates to General Exercise. Nanosymposium, Society for Neuroscience. Chicago, IL. October 2015.

Peterson DS, Pickett KA, Earhart GM. Supra-spinal Control of Locomotion in Freezers and Non-freezers with Parkinson Disease. International Society for Posture and Gait Research. Akita, Japan 2013.

Peterson, DS, Pickett KA, Earhart, GM Cortical and subcortical brain activity during imagined gait tasks across age. [International Society for Posture and Gait Research](http://www.ispgr.org/), Trondheim, Norway. June 2012.

Pickett KA, Duncan RP, Permutt A, MarshallB, Hershey T, Earhart GM Quantifying Motor Pathology in Wolfram Syndrome. Washington University School of Medicine, Neuroscience Retreat. Sept 2011.

Pickett KA, Li K, NestrasilI, TuiteP, Konczak K.The effects of levodopa medication on the haptic sense in PD. North American Society for the Psychology of Sport and Physical Activity. June 2009.

Pickett KA, Kimberley TJ, Konczak K. Kinaesthetic deficits in basal ganglia disorders: Psychophysical sensitivity thresholds and brain imaging data. Congress of the International Society of Electrophysiology and Kinesiology, June 2008.

Golner SA, Pickett KA, Hughes JM, Wetzsteon RJ, Petit MA. Bone Adaptation to Mechanical Loads from Physical Activity in Overweight and Healthy-weight Children. North American Society for Pediatric Exercise Medicine. September 2006.

**POSTER PRESENTATIONS**

Curtis S, Leppla L, Dietrich S, Hovde G, Al-Heizan M, Pickett KA (2018) Instrumental activities of daily living changes of deaf and hard of hearing individuals following an 8-week yoga intervention. Annual American Occupational Therapy Association Meeting. Salt Lake City, UT

Lynne JE, Mrazsko H, Pickett KA, Adamczyk PG (2017) Foot-mounted Inertial Sensors to Detect

Abnormal Gait in Parkinson disease Annual Meeting of the American Society of Biomechanics, Boulder, CO

Achterhof S, Hicks B, Little K, Spiewak C, Pickett KA (2017) Effectiveness of Yoga Interventions on Fall-Related Measures in Older Adults: A Systematic Review. Annual American Occupational Therapy Association Meeting. Philadelphia, PA

Bellinger GC, Pickett KP, Mason AH (2016) Lower Limb Support Preference When Initiating Reach to

Grasp Movements During Locomotion. Society for Neuroscience, San Diego, CA.

Lynne JE, Adamczyk PG, Ploeg H-L, Bebeau DJ, Pickett KA (2016) Detecting Freezing of Gait in Parkinson Disease Using On Shoe Inertial Sensors Meeting of the American Society of Biomechanics. Raleigh, North Carolina 2016.

Goloff SE, Lathrop KJ, Pickett KA (2016) Occupation-Based Exercise Interventions for Parkinson Disease: A Systematic Review. Annual American Occupational Therapy Association Meeting. Chicago, IL. April 2016.

Lathrop KJ, Goloff SE, Pickett KA (2016) Effectiveness Of Group Exercise vs. Individual Exercise In Fall Prevention For Individuals With Parkinson Disease. Annual American Occupational Therapy Association Meeting. Chicago, IL. April 2016.

Goloff SE, Lathrop KJ, Malsch AL, Massart RN, Pickett KA (2015) Activity based interventions for individuals with Parkinson disease: An occupationally focused systematic review.

Society for Neuroscience. Chicago, IL.

Goloff SE, Lathrop KJ, Malsch AL, Massart RN, Lee H, Pickett KA (2016) Functional Range of Motion of the Upper Body While Glassblowing: A Feasibility Study.

Doyle Greene KL, Hicks BC, Lazarus, JC, Pickett KA (2015) Exercise Modality Differentially

Improves Bradykinesia and Hypokinesia in Parkinson disease: RCT Comparing Pilates to

General Exercise.

UW-Madison Annual Alzheimer's and Parkinson disease Day, Madison, WI

Lathrop KJ & Pickett KA (2015) Effectiveness of group exercise vs. individual exercise in fall prevention for individuals with Parkinson disease.

UW-Madison Annual Alzheimer's and Parkinson disease Day, Madison, WI

Malsch AL & Pickett KA (2015) The Social Effects of Exercise on Quality of Life in Adults with Parkinson Disease.

UW-Madison Annual Alzheimer's and Parkinson disease Day, Madison, WI

Goloff SE & Pickett KA (2015) Occupation-Based Exercise Interventions for PD: A Systematic Review.

UW-Madison Annual Alzheimer's and Parkinson disease Day, Madison, WI

Massart RN, Gallagher A, Pickett KA (2015) Psychosocial Versus Pharmacological Interventions for Depression in Adults with Parkinson Disease: A Systematic Review.

UW-Madison Annual Alzheimer's and Parkinson disease Day, Madison, WI

Massart RN, Collins V, Pickett KA (2015) Understanding the Movement Disorder Society-Unified Parkinson Disease Rating Scale (MDS-UPDRS).

UW-Madison Annual Alzheimer's and Parkinson disease Day, Madison, WI

Duncan RP, PickettKA, Earhart GM, Weiss R, Campell MC (2015) Do Measures of Balance, Motor Severity, or Executive Function Accurately Identify Fall History in Parkinson Disease?
APTA Combined Sections Meeting, Indianapolis, IN

Duncan RP, PickettKA, Earhart GM (2014) The Effect of Levodopa on Accurately Identifying
Fall Risk in Parkinson Disease.

28th Annual PSG Symposium on the Etiology, Pathogenesis, and Treatment of Parkinson Disease and Other Movement Disorders, St. Louis, MO

Peterson DS, Pickett KA, Duncan RP, Earhart GM (2013) Neural activity during imagined walking in people with Parkinson disease.

APTA Combined Sections Meeting, Las Vegas, NV

Pickett KA, Peterson DS, Koller J, Campbell MC, Snyder AZ, Perlmutter JS, Earhart GM (2013) Resting state functional connectivity in the motor network in individuals with Parkinson disease.

International Society for Posture and Gait Research. Akita, Japan

Pickett KA, Duncan RP; Hershey T, Earhart GE (2012) Gait and balance impairment in Wolfram Syndrome.
[International Society for Posture and Gait Research](http://www.ispgr.org/). Trondheim, Norway

ChuP-Y, LiK-Y, PickettKA (2011) The relationship between joint configuration and haptic sensitivity in patients with Parkinson's disease.

XIX World Congress on Parkinson’s Disease and Related Disorders. Shanghai, China

Bondurant A, Pickett KA, Nguyen C, Grafeman S, LugarH, Paciorkowski A, Marshall B, White N, Wasson J, Earhart G, Permutt A, Hershey T. (2011) Neuropsychological and Motor Function in Wolfram Syndrome.

Diabetes Day, Washington University School of Medicine. St. Louis, MO

Pickett, KA, Peterson, D.S., Perlmutter, J.S., Earhart, G.M. (2011) Combining fMRI methods to investigate brain function during gait.

7th Annual Washington University Postdoc Scientific Symposium. Washington University School of Medicine, St. Louis, MO

Pickett, KA, Peterson, D.S., Perlmutter, J.S., Snyder, A.Z., Earhart, G.M. (2011) BOLD Signal Changes Following Rotating Treadmill Training.

Society for Neuroscience. Washington DC.

Peterson, D.S., Pickett KA, Earhart, G.M. (2011) Cortical and Subcortical Brain Activity During Different Imagined Gait Tasks.

Society for Neuroscience. Washington DC.

Aman J, Lu C, Pickett KA, and Konczak J. (2009) Visual-haptic integration for discriminating object size during grasping.

North American Society for the Psychology of Sport and Physical Activity. Austin, TX

Li K-Y, Pickett KA, Nestrasil I, Tuite P, Konczak J.(2009) The effect of levodopa therapy on the haptic perception of object curvature in Parkinson’s disease.

Society for Neuroscience. Chicago, IL

Pickett KA, Olman C, Kimberley TJ. (2009) Cortical mapping during individuated finger movements.

Society for Neuroscience. Chicago, IL

Lu C, Aman J, Pickett KA, and Konczak J. (2009) Integrating visual-haptic cues: Is it better to first see or feel an object when determining its size?

Society for Neuroscience. Chicago, IL

SorensenMD, HerrmannA, Pickett KA, LiK-Y, Konczak J. (2009) Just noticeable difference thresholds for kinesthetic sensitivity at the elbow.

Society for Neuroscience. Chicago, IL

Novotny SA, Biltz G, Wetzsteon RJ, Witten G, Swanson KJ, Pickett KA, M Petit MA. (2009) Age Related Gait Variability in Children: A Preliminary Analysis by Sample Entropy Method. North American Society for Pediatric Exercise Medicine

Konczak J, Vander Velden H, Jaeger L, Pickett KA. (2008) How children learn to play violin: Motor learning by freezing the right degrees of freedom.

North American Society for the Psychology of Sport and Physical Activity

Li K, Pickett KA, Konczak J. (2008) Just noticeable difference thresholds of passive limb motion in healthy adults.

North American Society for the Psychology of Sport and Physical Activity

Novotny SA, Wetzsteon RJ, Pickett KA, Hughes JM, Cousins J, Petit MA. (2008) Bone Strength In Overweight Children Is Adapted to Mechanical Loads From Walking, But Is Low For Higher Loading Activities.

American Society for Bone and Mineral Research

Pickett KA, Gomez CM, Tuite PJ, Maschke M, Konczak J. (2004) Dysfunction of the basal ganglia, but not of the cerebellum, impairs passive movement and joint position sense.

University of Minnesota

Pickett KA, Konczak J. (2007) Passive motion sensitivity in late childhood and adolescence.

Society for Neuroscience

Pickett KA, Konczak J. (2007) The development of passive motion sensitive in late childhood and early adolescence.

North American Society for the Psychology of Sport and Physical Activity

Wetzsteon RJ, Swanson KS, Pickett KA, Golner S, Stovitz SD, Petit MA. (2006) Energy expenditure and ground reaction forces of an active video game, Dance Dance Revolution, in healthy weight and overweight children.

American College of Sports Medicine Annual Meeting

**TEACHING**

**Primary Instructor**

*University of Wisconsin – Madison, Kinesiology*

 OT 881-003 – Capstone Project in Occupational Therapy Spring 2019

OT 782 - Using Information to Optimize Practice Spring 2018

OT 640 – Applied Neuroanatomy for Allied Health Professionals Fall 2017 - ongoing

OT 674 – Scientific Inquiry Spring 2015- ongoing

KINES 508 – Functional Neuroanatomy Fall 2015-16

OT 621 - Assessment of Occupational Participation Spring 2015-17

KINES 618 - Biomechanics Fall 2014

*University of Wisconsin – River Falls, Health and Human Performance*

 Courses: Human Motor Development (3 credit hours) Fall 2009

 Introduction to Biomechanics (3 credit hours) Spring 2010

 *University of Minnesota-Kinesiology Department*

 Course: Introduction to Biomechanics (4 credit hours) Spring 2009

**Course Designer**

*University of Wisconsin – Madison, Kinesiology*

OT 872 - Using Information to Optimize Practice Summer 2016

OT 873 - Advanced Outcome Measurement in Occupational Therapy Summer 2017

**Selected Lectures**

 *University of Wisconsin – Madison, Kinesiology*

OT 623 – Balance Assessment *Fall 2017*

OT 624 – Basal Ganglia Clinical Presentation *Spring 2015 - ongoing*

 *KINES 119 – SMIL Research Lab Fall 2015 - ongoing*

*Washington University School of Medicine, Program in PT Fall* 2012 Course: Movement Science III – Biocontrol Mechanisms

 Lectures: Basal Ganglia

 Brain Imaging

*Washington University School of Medicine, Program in PT Spring* 2012 Course: Development, Control, and Analysis of Human Movement

 Lectures: Sensory Receptors & Sensory Pathways

 Development of Motor Control

*Washington University in St. Louis Fall* 2011

 Course: Problem Based Learning in Biology

 Lecture: The Amygdala and Flashbulb Memory

*University of Minnesota, Program in PT* 2007 – 2010

Course: Scientific Foundations II, Neuromotor Control

 Lecture: Basal Ganglia

*University of Minnesota, Kinesiology Department* 2007 – 2010

Course: Introduction to Kinesiology

 Lecture: Biomechanics

**Teaching assistant**

*University of Minnesota, Kinesiology Department* 2004 – 2007

 Course: Introduction to Biomechanics

 **Mentoring Experience**

*Sensory Motor Integration Lab, UW – Madison*

Peter Brown, MSOT graduate student 2018 – Current

Maria Mertzenich, MSOT graduate student 2018 – Current

Heidi Wagner, MSOT graduate student 2018 – Current

Emily Noldin, MSOT graduate student 2018 – Current

Monica Daleccio, MSOT graduate student 2017 – Current

Samantha Gannon, MSOT graduate student 2017 – Current

Nina Hartsel, MSOT graduate student 2017 – Current

Conner Marshall, MSOT graduate student 2017 – Current

Kayleigh Macgregor, Bio 152/ undergraduate research assistant 2017 – Current

Michelle Constante, SERP summer mentee Summer 2017

Julia Addis, Bio 152/undergraduate research assistant 2017 – Current

Grace Hovde, MSOT graduate student 2016 – 2018

Lisa Leppla, MSOT graduate student 2016 – 2018

Sarah Dietrich, MSOT graduate student 2016 – 2018

Sarah Therese Curtis, MSOT graduate student 2016 – 2018

Jessica Schmidt, undergraduate research assistant 2016 – Current

Mungyo Song, BME undergraduate directed study 2016 – 2017

Anastasia Bormann, undergrad RA & MSOT graduate student 2015 – Current

Kecia Doyle-Green, Kinesiology PhD student 2015 – Current

Kenneth Kemp, Kinesiology MS Student 2015 – Current

Christina Spiewak, MSOT graduate student 2015 – 2017

Sarah Steffen, MSOT graduate student 2015 – 2017

Katie Little, MSOT graduate student 2015 – 2017
Sophie Goloff, MSOT graduate student 2014 – 2016

Karina Lathrop, MSOT graduate student 2014 – 2016

Rachel Massart, MSOT graduate student 2014 – 2016

Amy Malsch, MSOT graduate student 2014 – 2016

Brandon Hicks, MSOT graduate student 2014 – 2017

 Annie Gallagher, undergraduate research assistant 2014 – 2016

Kristen Cassarini, Undergraduate Research Scholars Program 2014 – 2015

Vaughan Collins, Undergraduate Research Scholars Program 2014 – 2015

Hannah Saskowski, Bio 152/ undergraduate research assistant 2014 – 2017

*Locomotor Control Lab,* Washington University Program in Physical Therapy

Daniel Peterson, M.S., Doctoral Candidate 2010 – 2013

SamNemanich, Doctoral Candidate 2012 – 2015

 Laura Pilgram, undergraduate research assistant 2011 – 2014

 Ashley Ederle, undergraduate research assistant 2012 – 2014

Matthew Yavorsky, DPT student research assistant 2012 – 2014

 Sara Hochgesang, DPT student research assistant 2012 – 2014

*Human Sensorimotor Control Lab*, University of Minnesota

 Sarah **Hirsiger, B.S., MS Candidate (committee member)** 2006 – 2013

Matthew **Sorensen,** undergraduate research assistant 2006 – 2010

Amanda **Herrmann,** undergraduate research assistant 2006 – 2010

Jenna Traeger, undergraduate research assistant 2008 – 2009

Eric **Reis,** undergraduate research assistant 2008 – 2010

**Tara Ata,** undergraduate research assistant2009 - 2010

Cheuk-Man **Wong,** undergraduate research assistant 2004 - 2005

*Brain Plasticity Lab*, University of Minnesota

Emily Hogan, DPT student research assistant 2007 - 2009

Jared Glesne DPT student research assistant 2007 - 2009

Travis Kierstead, DPT student research assistant 2008 - 2010

 Liz Kaufenberg, DPT student research assistant 2008 - 2010

*University of Wisconsin – River Falls*

Jelisia Dixon, Ronald E. McNair Scholar, undergraduate 2009 - 2010

**ADDITIONAL EDUCATION AND TRAINING**

University of Wisconsin Madison – Madison Teaching and Learning Excellence 2017-2018

University of Wisconsin Madison – TeachOnline@UW 2016-2017

University of Wisconsin Madison – Blend@UW May 2016

University of Wisconsin Madison – Blended Learning Fellowship 2015-2016

 University of Wisconsin Madison – Teaching and Learning Summer Institute 2015
 NIH Regional Seminar – Indianapolis, IN 2012

**EDUCATIONAL SUPPORT**

**Pending Research Support**

none

**Ongoing Research Support**

none

**Completed Research Support**

Replicable Instructional Technology Infusion University of Wisconsin – Madison

 Picket (PI) 2014-2015

Project designed to enhance student learning through the use of student produced digital video, interactive multimedia and peer-to-peer learning with the ultimate goal of enhancing field work and future clinician/patient interactions

**RESEARCH SUPPORT**

**Ongoing Research Support**

**UL1TR002373 and KL2TR002374** 2018-2022

KL2 Award – Pickett (PI)

The long-term goal of this project is to improve outcomes for underserved populations of individuals with Parkinson disease (PD) by providing access to partnered in-home physical activity via a telehealth approach. The proposed study will utilize the RE-AIM framework (Reach, Effectiveness, Adoption, Implementation and Maintenance) to focus on the reach and effectiveness of a 6-month triweekly in-home cycling program and then pilot a health coach model to promote maintenance for the subsequent 3-month period.

NSF1815506 Mason (PI) 2018 – 2021

The overall goal of this research is to create normed and validated virtual reality fall-risk assessment scenarios capable of simulating everyday activities. The scenarios will be validated both on healthy older adults and on adults at risk of falling, to determine how to most effectively and efficiently characterize fall risk.

Role: Co-Investigator

Bader Philanthropies Pickett(PI) 2018 – 2019

“Yoga for Seniors”

This study is designed to test the effectiveness of a chair based yoga intervention on falls for community dwelling older adults in rural Wisconsin. As part of this study, certified yoga teachers in the rural communities will train to teach a yoga for falls program that is well defined and reproducible. Following the 12-week intervention, we will examine fall rate, balance, and activities of daily measures as compared to a normal care control group.

Grand Challenges Pickett & Lee (co-PIs) 2017 – 2019

“*Glassblowing for Individuals with Parkinson disease”*

The primary purpose of the study is to measure the clinical, kinematic, and movement based effects of an eight-week glassblowing intervention. Six individuals with PD will complete the 8-week training program with baseline and posttest assessment in the Sensory Motor Control Lab.

Fall Competition Pickett (PI) 2017-2019

“Examining the effects of social engagement on exercise outcomes: in-home cycling for individuals with Parkinson disease”

This study will reach out to individuals in the community and take the intervention to them. As part of the study we will travel to the homes of the enrolled individuals and install a custom fit, recumbent bike in a safe and secure location. Individuals in the social cycling group will cycle with a member of the research staff joining them via Skype. While the solo cycling group will adhere to an independent cycling program, also using a provided recumbent bike.

VA MERIT Gallagher (PI) 2017-2019

“Longitudinal MRI biomarkers in Parkinson’s disease (LMPD)”

Higher volume of FLAIR hyperintensities are related to lower executive function in both PD and control populations, but is specifically related to memory function in PD. In this renewal application, we plan to evaluate these candidate MRI biomarkers for white matter microstructural integrity in two new populations: Parsons with REM Sleep Behavior Disorder (RBD) subjects, who are at high risk for developing PD, as well as untreated PD patients.

Role: Co-investigator

**Completed Research Support**

F31 DC015709 NIH 2016-2019

Jones (PI)

“Multimodal clinical assessment of early cranial motor deficits in Parkinson’s disease”

This study will characterize the relationships between cranial and limb motor variability in patients with early-stage PD with comparison to healthy controls. Motor variability has promise as a behavioral biomarker, illuminating subclinical changes in communication and swallowing function. Understanding relationships between cranial and limb motor systems gives the power to increase the sensitivity of overall motor evaluations in PD.

Role: Consultant

Virginia Horne Henry Pickett (PI) 2016-2018
“Reaching out to underserved women in rural Wisconsin with physical activity and technology”

 This study will examine the effects of four months of tri-weekly in-home exercise on a small sample of rural Wisconsin women over the age of 65. This intervention will allow for the individuals enrolled to participate in regular exercise with the added benefits of socially motivated activity, which promotes cognitive engagement, socialization and introduces a level of meaningfulness to the exercise session that is not inherently present in the task alone.

Virginia Horne Henry Pickett (PI) 2015-2018
“Long-term effects of concussion on female athletes”

This proposal is aimed at addressing an area of physical activity research that has been largely ignored despite the recent uptick in concussion studies. Female athletes are at increased risk of concussion and exhibit symptoms that may persist for longer durations and impede daily functioning. This study will examine the effects of sport-related repeated mild traumatic brain injury on balance, gait and activities of daily living in a small group of women and compare them to a group of age and activity matched females.

Hilldale Undergraduate Research Program 2017-1018

“Targeting fall prevention for deaf adults: A community based yoga intervention”

Student iniated project - Bormann (Udergraduate researcher) Pickett (mentor)

The purpose of this study is to determine if 8-weeks of yoga systematically designed to target balance will improve gait and balance measures in deaf or hard of hearing individuals. Yoga has been shown to be an effective intervention for improving balance, but has not yet been studied among the deaf community. The results of this study will be used to determine if yoga is an efficacious balance intervention for this population.

UW Graduate School Interdisciplinary Research Competition 2015-2016

“Glassblowing for Individuals with Parkinson Disease Pickett & Lee (co-I)

The purpose of this proposal is to bridge the fields of glass art and movement science in order to better understand glassblowing as a movement-based practice. This project will allow us to establish our methodological approach for the larger, future endeavor of creating a glassblowing focused therapeutic intervention for individuals with movement disorders, such as Parkinson disease.

1R01NS077959-01A1 NIH/NINDS

Earhart (PI) 09/30/2012-07/31/2017 “Exercise and Parkinson's: Comparing interventions and exploring neural mechanisms”

This study will directly compare the effects of dance, treadmill training and stretching (control group) and will utilize neuroimaging techniques to explore the neurophysiologic effects of these interventions on brain function and connectivity. The results obtained will help us to better understand whether and how exercise influences function in PD and which brain regions are involved.
Role: Co-investigator

Hilldale Undergraduate Research Program 2015-1016

“Gender specific differences in the snatch maneuver”

Student led project - Gallagher (Udergraduate researcher) Pickett (mentor)

The purpose of this study is to describe the ground reaction forces and plantar pressure distribution characteristics during the first 5 phases of the snatch maneuver and identify gender specific differences therein.

American Parkinson Disease Association

Earhart (PI) 05/01/2011-06/30/2014

 “rs-fcMRI Neuroimaging Methods in Parkinson Disease”

The goal of this project is to develop and implement resting state functional connectivity methods including the use of field maps to allow for study of specific brainstem structures including the pedunculopontine nucleus.

Role: Co-investigator

## Parkinson Study Group/Parkinson Disease Foundation - Mentored Clinical Research AwardPickett (PI) 07/01/2012 – 06/30/2013“Neurophysiologic adaptations to tango dancing in individuals with Parkinson disease.”The primary purpose of the study is to gain a better understanding of the neurophysiologic adaptations which occur following short duration, intensive tango dance training in individuals with Parkinson Disease.

The Greater St. Louis Chapter of the American Parkinson's Disease Association

Earhart & Pickett (Co-PI) 07/01/2012 – 06/30/2013
The primary focus of this award is to compare clinical improvement as well as changes in brain function in people with PD who have completed different forms of exercise interventions, specifically tango dancing versus treadmill walking.

2 T32 HD007434-18   NCMRR/NICHHD/NIH

Mueller (PI)             05/01/2011-09/30/2012

Doctoral Training Program in Movement Science

The major goal of the Program in Movement Science is to train individuals in rehabilitation research, with a particular emphasis on relating impairments to functional limitation and disability, and identifying mechanisms underlying impairments.

Role: Postdoctoral Research Associate

Program in PT Research Pilot Funds, Washington University

Earhart (PI) 07/01/2011-06/30/2012

“BOLD Signal Changes Following Podokinetic Treadmill Training”

The goal of this project is to investigate blood oxygen level dependent signal changes following podokinetic stimulation in healthy young individuals.
Role: Co-investigator

Mallinckrodt Institute of Radiology Foundation Grant #12-001

Earhart (PI) 8/01/2011-06/30/2012

“Neurophysiologic benefits of tango dancing versus treadmill training in individuals with Parkinson disease “ The goal of this project is to directly compare the effects of tango and treadmill training for individuals with Parkinson Disease on locomotor function, clinical measures of disease severity and brain activation.
Role: Co-investigator

Program in PT Research Pilot Funds, Washington University

Earhart (PI) 07/29/2010-07/28/2011

“Resting State Functional Connectivity in Parkinson Disease”

The goal of this project is to determine how resting state functional connectivity of different brain regions differs in people with Parkinson’s disease with and without freezing of gait. These funds will enable us to pilot the study with 3-4 participants.
Role: Co-investigator

R01 HD056015 NIH/NCMRR

Earhart (PI) 08/15/2009-07/31/2011 “Oculomotor Control and Gait in Parkinson Disease”

The goal of this work is to determine how eye movement impairments may contribute to locomotor difficulties in individuals with PD.

Role: Postdoctoral Research Associate

Minnesota Medical Foundation Grant #3844-9203-08

Kimberley(PI) 04/15/2008-04/14/2010

“Cortical mapping of sensory and motor areas in healthy individuals and individuals with focal hand dystonia” The goal of this project was to develop methodology to quantify and localize regions of cortex selective for movement of individual digits; determine the selectivity in healthy subjects and subjects with focal hand dystonia.

Role: Co-investigator

**AWARDS AND HONORS**

National Institute of Health – Loan Repayment Program Recipient (2011-2016)

**SERVICE**

DiverseOT - co-Faculty Liaison 2016 – ongoing

Mentoring

* Bio152 2015 – ongoing
* Kines Practicum 2015 – ongoing

Committee Work

* Occupational Therapy Admissions Committee 2015 – ongoing
* Kinesiology Elections Committee 2018 – ongoing
* Space, Facilities, & Technology Committee 2015 – 2017
* Alumni Outreach and Fund Raising Committee 2015 – 2016
* Merit Committee 2014 – 2015

Volunteer Service

* Grandparents University, UW – Madison (2017)
* Saturday Science, UW – Madison (2015, 2016, 2017, 2018)
* ‘Healthy Aging Across the Lifespan’, UW – Madison (2015)
* Women in Science and Engineering Residential Program faculty guest (2015)
* Science Fair Judge, Academy of Science St. Louis, St. Louis, MO (2011)
* Kenwood Elementary, ‘Introduction to the Human Brain’, Minneapolis, MN (2009 -10,12)

Delta Program

* **Steering Committee member Fall 2017**– ongoing
* **Round Table Panelist October 22, 2014**
* **Project Mentor (Rachel Rodgers) Spring 2016**

Grant Review Committee Member

* Wisconsin Alzheimer's Disease Research Center's Pilot Funding Program 2016
* **Parkinson Study Group Mentoring Committee 2013 – 2015**

Adhoc Manuscript Reviewer

* Journal of Neurologic Physical Therapy
* OTJR: Occupation, Participation and Health
* PlosOne
* *Journal of Motor Behavior*
* ***Developmental Medicine & Child Neurology***
* *Movement Disorders*
* *Neurology*
* *Brain Imaging and Behavior*
* *Journal of Neuroscience Methods*
* *Experimental Brain Research*

**MEMBERSHIP IN PROFESSIONAL SOCIETIES**

American Occupational Therapy Association (2016 – present)

International Society for Posture and Gait Research (2010-present)

International Society of Electrophysiology and Kinesiology (2008-2010)

North American Society for Psychology of Sport and Physical Activity (2007-2011)

Society for Neuroscience (2007-present)