

Shirley Rietdyk
Department of Health and Kinesiology
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EDUCATION:

1994-1999 Ph.D. Kinesiology, University of Waterloo, Waterloo, Ontario
1992-1994 M.Sc. in Kinesiology, University of Waterloo, Waterloo, Ontario
1986-1992 B.Sc. in Kinesiology, University of Waterloo, Waterloo, Ontario

PROFESSIONAL EXPERIENCE:

2015 – present **Professor of Kinesiology**, Purdue University, West Lafayette, Indiana
- Director of the Biomechanics Laboratory
- Research focuses on neural and mechanical systems in posture, balance and mobility

2015 – present **Courtesy Appointment, Professor of Mechanical Engineering**, Purdue University

2015 – present **Courtesy Appointment, Professor of Speech Language and Hearing Sciences**, Purdue University

2014 – 2015 **Courtesy Appointment, Associate Professor of Mechanical Engineering**, Purdue University

2014 – 2015 **Courtesy Appointment, Associate Professor of Speech Language and Hearing Sciences**, Purdue University

2007 – 2015 **Associate Professor of Kinesiology**, Purdue University, West Lafayette, Indiana

2000 – 2007 **Assistant Professor of Kinesiology**, Purdue University, West Lafayette, Indiana

1997 **Lecturer**, Tashkent State Economics University, Tashkent, Uzbekistan

1993 **Visiting Scholar**, Center for Locomotion Studies, Pennsylvania State University, Pennsylvania

1991 - 1993 **Research Co-ordinator**, Neural Control Laboratory, University of Waterloo, Ontario, Canada

ACADEMIC AWARDS AND DISTINCTIONS

Fellow, Entrepreneurial Leadership Academy	Purdue University	2012-13
Outstanding Undergraduate Faculty Member	Health and Kinesiology Dept, Purdue	2012-2013
Exceptional Engagement Award	Center for Aging & the Life Course, Purdue	2012
New Investigator Award	Canadian Society of Biomechanics	1998
NSERC* Postgraduate Scholarship	University of Waterloo	1994-96
UW Graduate Scholarship	University of Waterloo	1995-96
UW PhD Entrance Scholarship	University of Waterloo	1994-95
Board of Governor's Achievement Award	University of Waterloo	1994
NSERC* Postgraduate Scholarship	University of Waterloo	1992-94
UW Graduate Scholarship	University of Waterloo	1993-94
UW Graduate Scholarship	University of Waterloo	1992-93
Dean's Honours List, B.Sc.	University of Waterloo	1989-92
UW Undergraduate Scholarship	University of Waterloo	1986-87

*NSERC: Natural Science and Engineering Research Council of Canada; UW: University of Waterloo, Canada

JOURNAL PUBLICATIONS (*italics denotes graduate students, underline denotes undergraduate students*)

1. *Heijnen MJH, Rietdyk S.* (in press). Failures in adaptive locomotion: Trial-and-error exploration to determine adequate foot elevation over obstacles. *Experimental Brain Research*. Accepted Oct. 2017. Impact factor: 2.395.
2. *Gomez D, Dyke SJ, Rietdyk S.* (in press). Experimental verification of a substructure-based model to describe pedestrian-bridge interaction. *Journal of Bridge Engineering*. Accepted Sept., 2017. Impact factor: 1.39, peer reviewed.
3. *Cruise DR, Chagdes JR, Liddy JJ, Rietdyk S, Haddad JM, Zelaznik HN, Raman A.* (2017). An active balance board system with real-time control of stiffness and time-delay to assess mechanisms of postural stability. *Journal of Biomechanics*, 60: 48-56. Impact factor: 2.75, peer reviewed.
4. *Anand, M, Seipel, J, Rietdyk, S.* (2017). A modeling approach to the dynamics of gait initiation. *Journal of the Royal Society Interface*. 14(128), 20170043. Impact factor: 3.818, peer reviewed.
5. *Liddy JJ, Zelaznik HN, Huber JE, Rietdyk S, Claxton LJ, Samuel A, and Haddad JM.* (2017). The Efficacy of the Microsoft Kinect™ to Assess Human Bimanual Coordination. *Behavior Research Methods*. 1-18. Impact factor: 2.928, peer reviewed.
6. *Chagdes JR, Rietdyk S, Haddad JM, Zelaznik HN, Cinelli ME, Denomme L, Powers K, Raman A.* (2016). Limit cycle oscillations in standing human posture. *Journal of Biomechanics*, 49(7): 1170-1179. Impact factor: 2.75, peer reviewed.
7. *Chagdes JR, Huber JE, White MD, Rietdyk S, Zelaznik HN, Haddad JM.* (2016). The relationship between intermittent limit cycles and postural instability associated with Parkinson's disease. *Journal of Sport and Health Science*, 5(1):14-24. doi:10.1016/j.jshs.2016.01.005. Impact factor: 1.23, peer reviewed.
8. *Heijnen MJH, Rietdyk S.* (2016). Falls in young adults: perceived causes and environmental factors assessed with a daily online survey. *Human Movement Science*, 46: 86-95. doi: 10.1016/j.humov.2015.12.007. Impact factor: 2.03, peer reviewed.
9. *Kim A, Kim J, Rietdyk S, Ziaie B.* (2015). Concurrent Validity of a Wearable Smartphone-Enabled Camera-Based System for Gait Assessment. *Gait and Posture*, 42(2): 138-144. doi:10.1016/j.gaitpost.2015.05.001. Impact factor: 2.752, peer reviewed.
10. *Muir BC, Haddad JM, Heijnen, MJH, Rietdyk S.* (2015). Proactive gait strategies to mitigate risk of obstacle contact are more prevalent with advancing age. *Gait and Posture*, 41(1): 233-239. doi:10.1016/j.gaitpost.2014.10.005. Impact factor: 2.752, peer reviewed.
11. *Heijnen MJH, Romine NL, Stumpf DM, Rietdyk S.* (2014). Memory guided obstacle crossing: more failures were observed for the trail limb versus lead limb. *Experimental Brain Research*, 232(7): 2131-2142. doi: 10.1007/s00221-014-3903-3. Impact factor: 2.395, peer reviewed.
12. *Muir BC, Rietdyk S, Haddad JM.* (2014). Gait initiation: the first four steps in young adults, adults aged 65-79 years, and adults aged 80-91 years. *Gait and Posture*, 39(1): 490-494. doi:10.1016/j.gaitpost.2013.08.037. Impact factor: 2.752, peer reviewed.
13. *Chagdes JC, Rietdyk S, Haddad JM, Zelaznik HN, Raman A.* (2013). Nonlinear dynamics of human postural stability on balance boards. *Journal of Biomechanics*, 46(15): 2593-2602. doi:10.1016/j.jbiomech.2013.08.012. Impact factor: 2.75, peer reviewed.
14. *Haddad JM, Rietdyk S, Claxton LJ, Huber J.* (2013). Task-dependent postural control throughout the life-span. *Exercise and Sport Sciences Reviews*, 41(2):123-132. Doi: 10.1097/JES.0b013e3182877cc8. Impact factor: 4.259, peer reviewed.
15. *Heijnen MJH, Muir BC, Rietdyk S.* (2012). Factors leading to obstacle contact during adaptive locomotion. *Experimental Brain Research*, 223(2): 219-231. doi: 10.1007/s00221-012-3253-y. Impact factor: 2.395, peer reviewed.
16. *Haddad JM, Rietdyk S, Claxton LJ.* (2012). Exercise training to improve independence and quality of life in impaired individuals: A commentary on Li and Hondzinski's "Select exercise modalities may reverse

- movement dysfunction because of peripheral neuropathy” [Peer commentary by JM Haddad, S Rietdyk and LJ Claxton]. *Exercise and Sport Sciences Reviews*, 40(3): 117. doi: 10.1097/JES.0b013e31825572f4
17. *Heijnen M, Muir B, Rietdyk S.* (2012). Interpolation techniques to reduce error in measurement of toe clearance during obstacle avoidance. *Journal of Biomechanics*, 45(1): 196-198.
 18. *Rhea CK, Rietdyk S.* (2011). Influence of an unexpected perturbation on adaptive gait behavior. *Gait and Posture*, 34: 439-441. doi:10.1016/j.gaitpost.2011.06.011.
 19. *Haddad JM, Rietdyk S, Ryu JH, Seaman JM, Silver TA, Kalish JA, & Hughes C.* (2011). Postural asymmetries in response to holding evenly- and unevenly-distributed loads during self-selected stance. *Journal of Motor Behavior*, 43(4): 345-355.
 20. *Rietdyk S & Rhea CK.* (2011). The effect of the visual characteristics of obstacles on risk of tripping and gait parameters during locomotion. *Ophthalmic and Physiological Optics, Feature Issue on Vision in Everyday Life*. 31, 302–310. doi: 10.1111/j.1475-1313.2011.00837.x.
 21. *Rhea CK, Rietdyk S, Haddad JM.* (2010). Locomotor adaptation versus perceptual adaptation when stepping over an obstacle with a height illusion. *PLoS ONE* 5(7): e11544. doi:10.1371/journal.pone.0011544.
 22. *Rietdyk S, Drifmeyer JE.* (2010). The rough terrain problem: Accurate foot targeting as a function of visual information regarding target location. *Journal of Motor Behavior* 42(1): 37-48.
 23. *Chagdes JR, Rietdyk S, Haddad JM, Zelaznik HN, Raman A, Rhea C, Silver T.* (2009). Multiple timescales in postural dynamics associated with vision and a secondary task are revealed by wavelet analysis. *Experimental Brain Research* 197(3): 297-310.
 24. *Kim J, Rietdyk S, Breur GJ.* (2008). Comparison of two-dimensional and three-dimensional systems for kinematic analysis of the sagittal motion of canine hind limbs during walking. *American Journal of Veterinary Research*, 69(9): 1116-1122.
 25. *Rhea CK, Rietdyk S.* (2007). Visual exteroceptive information provided during obstacle crossing did not modify the lower limb trajectory. *Neuroscience Letters*, 418(1): 60-65.
 26. *Rietdyk S & Rhea CK.* (2006). Control of adaptive locomotion: Effect of visual obstruction and visual cues in the environment. *Experimental Brain Research*, 169(2): 272-8.
 27. *Rietdyk S.* (2006). Anticipatory locomotor adjustments of the trail limb during surface accommodation. *Gait and Posture*, 23(3): 268-72.
 28. *Rietdyk S, McGlothlin JD, Knezovich MJ.* (2005). Work experience mitigated age-related differences in balance and mobility during surface accommodation. *Clinical Biomechanics*, 20(10): 1085-1093.
 29. *Rietdyk S, McGlothlin JD, Williams J & Baria A.* (2005). Proactive stability control while carrying loads and negotiating an elevated surface. *Experimental Brain Research*, 165(1): 44-53.
 30. *Winter, D.A., Patla, A.E., Ishac, M.G. & Rietdyk, S.* (2001). Ankle muscle stiffness in the control of balance during quiet standing. *Journal of Neurophysiology*, 85: 2630-2633.
 31. *Rietdyk, S., Patla, A.E., Winter, D.A., Ishac, M.G. & Little, C.E.* (1999). Balance recovery from medio-lateral perturbations of the upper body during standing. *Journal of Biomechanics*, 32(11): 1149-1158. Winner of the New Investigator Award, North American Congress on Biomechanics.
 32. *Patla, A.E., Prentice, S.D., Rietdyk, S., Allard, S. & Martin, C.* (1999). What guides the selection of alternate foot placement during locomotion in humans? *Experimental Brain Research*, 128: 441-450.
 33. *Rietdyk, S. & Patla, A.E.* (1998). Context dependent reflex control: Some insights into the role of balance. *Experimental Brain Research*, 119(2): 251-259.
 34. *Patla, A.E., Rietdyk, S., Martin, C. & Prentice, S.* (1996). Locomotor patterns of the leading and trailing limb while going over solid and fragile obstacles: Some insights into the role of vision during locomotion. *Journal of Motor Behavior*, 28(1): 35-47.

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35. Elliot, D.B., Patla, A.E., Flanagan, J.G., Spaulding, S., **Rietdyk, S.**, Strong, G. & Brown, S. (1995). The Waterloo Vision and Mobility Study: postural control strategies in subjects with ARM. *Ophthalmic and Physiological Aspects*, 15(6): 553-559, 1995.
 36. Spaulding, S.J., Patla, A.E., Flanagan, J., Elliot, D.B., **Rietdyk, S.** & Brown, K.S. (1995). Waterloo Vision and Mobility Study: Normal gait characteristics during dark and light adaptations in individuals with age-related maculopathy. *Gait and Posture*, 3(4):227-235, 1995.
 37. **Rietdyk, S.** & Patla, A.E. (1994). Does the step length requirement in the subsequent step influence the strategies used for step length regulation in the current step? *Human Movement Science*, 13: 109-127.
 38. Spaulding, S.J., Patla, A.E., Elliot, D.B., Flanagan, J., **Rietdyk, S.** & Brown, S. (1994). Waterloo Vision and Mobility Study: Gait adaptations to altered surfaces in individuals with age-related maculopathy. *Optometry and Vision Science: Special Issue on Vision and Aging*, 71(12):770-777.
 39. Patla, A.E. & **Rietdyk, S.** (1993). Visual control of limb trajectory over obstacles during locomotion: effect of obstacle height and width. *Gait and Posture*, 1: 45-60.
 40. Patla, A.E., Frank, J.S., Winter, D.A., **Rietdyk, S.**, Prentice, S. & Prasad, S. (1993). Age-related changes in balance control system: initiation of stepping. *Clinical Biomechanics*, 8: 179-184.

INVITED BOOK CHAPTERS

1. Hollands M, Hollands K, & **Rietdyk S.** (2017). Visual Control of Adaptive Locomotion and Changes Due to Natural Ageing. In Barbieri FA & Vitório R (Eds), *Locomotion and Posture in Older Adults* (pp. 55-72). Springer International Publishing.
2. Templin TJ, **Rietdyk S.**, Claxton LJ & Savage M (2014) Kate: Recognising and addressing developmental coordination disorder. In Armour, K (Ed), *Pedagogical Cases in Sport, Exercise, and Movement*. London, Routledge.

REFEREED CONFERENCE PROCEEDINGS (Total 105 refereed conference presentations between 1990-present; last five years listed here):

1. *Muir BC, Bodratti LA, Morris CE, Haddad JM, van Emmerik REA, **Rietdyk S.*** Circumstances leading to inadvertent trips in the lab for young, middle-aged and older adults. World Congress of the International Society for Posture and Gait Research, Fort Lauderdale, FL, June 2017. International, podium.
2. *Cho H, Heijnen M, Romine N, **Rietdyk S.*** Can visual fixation on an obstacle prevent trips? World Congress of the International Society for Posture and Gait Research, Fort Lauderdale, FL, June 2017. *International, poster.*
3. *Muir BC, Haddad JM, van Emmerik REA, **Rietdyk S.*** Middle-aged adults have reduced ankle braking and push-off power in order to achieve the same gait speed as young adults. World Congress of the International Society for Posture and Gait Research, Fort Lauderdale, FL, June 2017. International, poster.
4. *Muir BC, Haddad JM, van Emmerik REA, **Rietdyk S.*** Stepping over obstacles reveals gait changes in middle-aged adults not evident during steady state gait. World Congress of the International Society for Posture and Gait Research, Fort Lauderdale, FL, June 2017. International, podium.
5. *Cui C, **Rietdyk S.**, Ambike S.* Lower-limb joints stabilize trailing toe height during repeated obstacle crossing
6. *Heijnen MJH, **Rietdyk S.*** Failures in adaptive locomotion: Knowledge of obstacle contact is instrumental to guide limb trajectory. World Congress of the International Society for Posture and Gait Research, Fort Lauderdale, FL, June 2017. International, poster.
7. *Cruise D, Chagdes JR, Liddy JJ, **Rietdyk S.**, Haddad JM, Zelaznik HN & Raman A.* Studying Balance on an Active Balance Board with Controllable Stiffness and Time-delay. Midwest American Society of Biomechanics, Grand Rapids, MI. February, 2017. Regional, podium.

8. *Pontecorvo SM, Heijnen MJH, Muir BC, Rietdyk S.* Relationship between gaze behavior and failure to cross a stationary, visible obstacle. Midwest American Society of Biomechanics, Grand Valley, MI, February 2017. Regional, podium.
9. *Cho HY, Romine N, Kim J, Heijnen M, Ziaie B, Rietdyk S.* Gait asymmetry during uphill, downhill and level walking while outdoors. Midwest American Society of Biomechanics, Grand Valley, MI, February 2017. Regional, podium.
10. *Gomez D, Dyke SJ, Rietdyk S, Ramirez J.* Efectos de la interacción dinámica humano-estructura en puentes peatonales (Dynamic human-structure interaction effects in footbridges). 18 Convencion Cientifica de Ingenieria y Arquitectura (18th Scientific Convention of Engineering and Architecture), Havana, Cuba. November, 2016. International, poster.
11. *Haddad, J.M., Snyder, S., McDonough, M.H., Rietdyk, S., Simon, K., Altenburger, P.A., Salsabili, H., Zauber, E., & Huber, J.E.* A combined cognitive- and balance-based training intervention for people with Parkinson's disease: COBALT. 4th World Parkinson Congress, Portland, OR. September, 2016. International, poster.
12. *Salsabili, H., Huber, J.E., Snyder, S., Simon, K., McDonough, M.H., Rietdyk, S., & Haddad, J.M.* The integration between posture, manual control, and speech in people with Parkinson's disease. 4th World Parkinson Congress, Portland, OR. September, 2016. International, poster.
13. *Chagdes JR*, Liddy, J.J., Huber, J.E., Zelaznik, H.N., Rietdyk, S., Raman, A., & Haddad, J.M.* Dynamic instabilities induced through altered visual cues and their relationship to postural response latencies. American Society of Mechanical Engineering, International Design Engineering Technical Conferences & Computer and Information in Engineering Conference, Charlotte, NC. August, 2016. International, podium.
14. *Cho HY, Romine N, Kim J, Heijnen M, Ziaie B, Rietdyk S.* Gait asymmetry during uphill, downhill and level walking while outdoors. 40th Annual Meeting of the American Society of Biomechanics, Raleigh, NC. August, 2016. National, poster.
15. *Romine N, Cho HY, Kim J, Heijnen M, Ziaie B, Rietdyk S.* Gait asymmetry during outdoor unrestrained locomotion in able-bodied participants. 40th Annual Meeting of the American Society of Biomechanics, Raleigh, NC. August, 2016. National, poster.
16. *Liddy JJ*, Chagdes, J.R., Huber, J.E., Zelaznik, H.N., Rietdyk, S., Raman, A., & Haddad, J.M.* Neuromuscular time-delay and visually-induced dynamic instabilities. The North American Society for the Psychology of Sport and Physical Activity, Montreal, QB, June, 2016. National, poster.
17. *Chagdes, J.R., Haddad, J.M., Rietdyk, S., Zelaznik, H.N., and Raman, A.* "Understanding the role of time-delay on maintaining upright stance on rotational balance boards," Proceedings of the ASME 2015 International Design Engineering Technical Conferences & Computer and Information in Engineering Conference, Boston, MA, August 2015. National.
18. *Cruise D, Rietdyk S, Haddad JM, Zelaznik HN, Chagdes JR, Liddy JJ, Raman A.* Principal component analysis of human balance on a tunable balance board. 39th Annual Meeting of the American Society of Biomechanics, Columbus, OH, USA. National, poster.
19. *Heijnen MJH, Rietdyk S.* Falls in the real world are related to obstacle crossing behaviors in a lab setting for young adults. World Congress of the International Society for Posture and Gait Research, Seville, Spain, June 2015. International, poster.
20. *Heijnen MJH, Kim A, Kim J, Ziaie B, Rietdyk S.* The step width of young and middle-aged adults was substantially reduced by texting and walking. World Congress of the International Society for Posture and Gait Research, Seville, Spain, June 2015. International, poster.
21. *Pontecorvo SM, Heijnen MJH, Muir BC, Rietdyk S.* Relationship between gaze behavior and failure to cross a stationary, visible obstacle. World Congress of the International Society for Posture and Gait Research, Seville, Spain, June 2015. International, poster.
22. *Kim A, Kim J, Heijnen MJH, Rietdyk S, Ziaie B.* Concurrent validity of a wearable smartphone-enabled camera-based system for assessment of postural sway. World Congress of the International Society for Posture and Gait Research, Seville, Spain, June 2015. International, poster.

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23. *Liddy JJ, Kim J, Heijnen MJH, Kim A, Ziaie B, Rietdyk S.* Reliability of multifractal detrended fluctuation analysis using smartphone technology. World Congress of the International Society for Posture and Gait Research, Seville, Spain, June 2015. International, poster.
 24. *Raffegeau TE, Haddad JM, Huber JE, Rietdyk, S.* Walking while talking is cognitively demanding for young adults. World Congress of the International Society for Posture and Gait Research, Seville, Spain, June 2015. International, poster.
 25. *Liddy JJ, Haddad JM, Huber JE, Claxton LJ, Rietdyk S, Zelaznik, H.* Assessing Bimanual Coordination with the Microsoft Kinect. *Proceedings of the North American Society for the Psychology of Sport and Physical Activity NASPSPA 2015 June, 2015, Portland, Oregon, USA.* National.
 26. *Beltran-Pulido AE, Chagdes JR, Zelaznik HN, Chiu G, Haddad JM, Rietdyk S, and Raman A.* Fitts' law behavior when producing rapid aiming movements with delayed visual feedback. *Proceedings of the North American Society for the Psychology of Sport and Physical Activity NASPSPA 2015 June, 2015, Portland, Oregon, USA.*
 27. *Rietdyk S, Heijnen MJH, Muir BC.* Failures of Proactive Gait Adaptations: Individual and Environmental Characteristics that Result in Failure to Cross a Visible, Stationary Obstacle. World Congress of the International Society for Posture and Gait Research, Vancouver, Canada, June 2014. International, podium at symposium "Proactive and Reactive Adaptations to Slips and Trips: Implications for Fall-Risk Assessment and Rehabilitation".
 28. *Heijnen MJH, Rietdyk S.* Prevalence and circumstances of falls in young adults: 29% fell in a five week observation period. World Congress of the International Society for Posture and Gait Research, Vancouver, Canada, June 2014. International, poster.
 29. *Heijnen MJH, Rietdyk S.* Failure to clear stationary, visible obstacles is affected by surface characteristics. World Congress of the International Society for Posture and Gait Research, Vancouver, Canada, June 2014. International, poster.
 30. *Muir BC, Haddad JM, Rietdyk S, Van Emmerik REA.* Dynamic gait instability occurs at different time scales for young and older adults. World Congress of the International Society for Posture and Gait Research, Vancouver, Canada, June 2014. International, poster.
 31. *Muir BC, Rietdyk S, Haddad JM, Heijnen MJH.* The effects of advancing age on adaptive gait: a comparison of adults aged 20-25 years, 65-79 years, and 80-91 years. World Congress of the International Society for Posture and Gait Research, Vancouver, Canada, June 2014. International, poster.
 32. *Kim A, Kim J, Rietdyk S, Ziaie B.* Field assessment of gait: Valid measures of step length and step width provided with a simple, inexpensive device. World Congress of the International Society for Posture and Gait Research, Vancouver, Canada, June 2014. International, poster.
 33. *Kim A, Kim J, Rietdyk S, Ziaie B.* A wearable optical gait analysis system using smartphone camera to assess spatio-temporal parameters. World Congress of Biomechanics WCB 2014, Boston, MA, July 2014. International, poster.
 34. *Muir BC, Rietdyk S, Haddad JM, Van Emmerik REA.* Age-Related Changes in Foot Placement Variability when Approaching and Stepping Over an Obstacle. World Congress of Biomechanics WCB 2014, Boston, MA, July 2014. Presentation selected as finalist in PhD level Student Paper Competition. International, podium.
 35. *Heijnen MJH, Rietdyk S.* Failure to Clear a Stationary Visible Obstacle During Gait in Older Adults. World Congress of Biomechanics WCB 2014, Boston, MA, July 2014. International, poster.
 36. *Chagdes JR, Rietdyk S, Haddad JM, Zelaznik HN, Raman A, Denomme L, Cinelli M.* Limit cycles in standing human posture are an indicator of neuromuscular impairment. World Congress of Biomechanics Conference WCB 2014, Boston, MA, July 2014. International.
 37. *Chagdes JR, Rietdyk S, Haddad JM, Zelaznik HN, Denomme L, Cinelli ME, Raman A.* Dynamic stability and limit cycles in upright human posture. 17th U.S. National Congress on Theoretical & Applied Mechanics USNCTAM 2014, East Lansing, MI, June 2014. National, podium.

38. Kristen L. Clark, Kathryn A. Sands, Steven McKenzie, Jeff M. Haddad, **Shirley Rietdyk**, Wayne W. Campbell. Effects of whey protein supplementation on dietary compensation and muscle energetics in elderly adults. Experimental Biology, Boston, USA, April 2013. National, poster.
39. Kathryn A. Sands, Kristen L. Clark, Stephen McKenzie, Jeff M. Haddad, **Shirley Rietdyk**, Wayne W. Campbell. Effects of short-term protein supplementation on muscle work efficiency in elderly adults. Experimental Biology, Boston, USA, April 2013. National, poster.
40. *Raffegau, T.*, **Rietdyk, S.**, Haddad, J. M., & Huber, J. The impact of extemporaneous speech on adaptive locomotion. National Association of Sport Psychology and Physical Activity (NASPSPA). New Orleans, Louisiana, June 2013. National, podium.
41. *Muir BC*, **Rietdyk S**, Haddad JM. The transition period between initiation and steady state gait as a function of advancing age. 60th annual Meeting of the American College of Sports Medicine and 4th World Congress on Exercise is Medicine. Indianapolis, IN, May, 2013. Abstract published in: *Medicine and Science in Sports and Exercise*, 45. National, poster.
42. *Raffegau T*, **Rietdyk S**, Haddad JM, Huber JE. Gait and speech are interdependent in young healthy adults. 60th annual Meeting of the American College of Sports Medicine and 4th World Congress on Exercise is Medicine. Indianapolis, IN, May, 2013. Abstract published in: *Medicine and Science in Sports and Exercise*, 45. National, poster.

INVITED LECTURER

1. Rietdyk S. Department of Health and Kinesiology 2017 Charles C. Cowell Lecture. Gait and environmental characteristics that increase fall-risk. April, 2017. Regional meeting.
2. Rietdyk S. Gait and environmental characteristics that increase susceptibility to trips and falls. Seminar Series of Physical Therapy Department, University of Illinois at Chicago, IL. September, 2013. Regional meeting.
3. Rietdyk S. Gait and environmental characteristics that increase susceptibility to trips and falls. Colloquium of Health and Kinesiology Department, Purdue University, IN. September, 2013. Regional meeting.
4. Haddad, J. M., Rietdyk, S. & Claxton, L. J. Task-dependent postural control throughout the life-span. Department of Psychology, Indiana University, Bloomington, IN. April, 2013. Regional meeting.
5. Rietdyk S. The contribution of visual inputs to maintaining balance and mobility in complex environments. Seminar Series of Department of Mechanical and Aerospace Engineering, Dayton University, OH. Sponsored by the LEADER consortium, through an NSF ADVANCE grant. March, 2011. Regional meeting.
6. Rietdyk S. Rough terrain: The effect of visual cues on locomotor behavior. Cognition, Action and Perception Seminar, Department of Psychology, University of Cincinnati, Cincinnati, OH, May 2010. Regional meeting.
7. Rietdyk S. Aftab Patla's perspective on stability: Four legs good, two legs bad. The Aftab Patla Memorial Symposium at the North American Congress on Biomechanics, Ann Arbor, MI, August 2008. International meeting.
8. Rietdyk S. Effect of age and work experience on balance and mobility control. Initiative on Aging, University of Illinois at Urbana-Champaign, IL, November, 2004. Regional meeting.
9. Rietdyk S. Balance control during stance and locomotion. Purdue University Neuroscience Retreat, Purdue University, IN, March, 2004. Regional meeting.
10. Rietdyk S. Postural stability: Effect of age, experience and handling small loads. School of Health Sciences Seminar, Purdue University, IN, October, 2003. Regional meeting.
11. Rietdyk S. Maintaining balance as we age. 2002 Indiana Governor's Conference on Aging and In-Home Services, Indianapolis, IN, October 2002. Regional meeting.
12. Rietdyk S. Diabetic neuropathy and its effects on mobility. Pedortho '94, Pedorthic Association of Canada, Waterloo, July 1994. National meeting.

FUNDING

External Funding in Support of Research

- National Science Foundation/“Nonlinear dynamics and bifurcations of human posture on tunable balance boards” Role: Co-PI with Dr. Arvind Raman (Mechanical Engineering) and Dr. Howard Zelaznik (Health and Kinesiology) and Dr. Jeffrey Haddad (Health and Kinesiology). The goal of this research is the development and assessment of an interactive balance board which will enable early detection of neuromuscular disorder and improve rehabilitation for balance-impaired individuals. \$550,392 (2013-2017).
- National Science Foundation sub-contract with Drexel University/“Development of a common platform for unifying humanoids research” Role: Co-PI with PI Dr. George Lee (Electrical and Computer Engineering, Purdue) and Dr. Zygmunt Pizlo (Psychology, Purdue). My role is the development of decision algorithms to drive robot locomotor behavior based on visual characteristics of the environment. \$200,000 (2010-2015).
- FAA/NASA/Transport Canada PARTNER COE, Project 8/ “Sonic Boom Mitigation (Project 8: Supersonic Metrics)” Role: Co-PI with Dr. Patricia Davies (Mechanical Engineering), on portion of grant focused on startle modelling; \$70,000 (2009-2010).
- National Institute for Occupational Safety and Health, University of Cincinnati Pilot Project Research Training Program/ “Do Optical Properties of Obstacles Affect the Risk of Tripping in Construction Workers?” Role: PI; Co-PIs Mr. Chris Rhea, PhD advisee and Dr. Jim McGlothlin, School of Health Sciences, Purdue; \$5,000 (2006).
- National Institute for Occupational Safety and Health, University of Michigan Pilot Project Research Training Program “Risk Assessment of Tripping in Construction Workers: Application of Action Perception Theory” Role: PI; Co-PIs Mr. Chris Rhea, PhD advisee and Dr. Jim McGlothlin, School of Health Sciences, Purdue; \$13,385 (2006).
- National Institute for Occupational Safety and Health ERC NORA (National Occupational Research Agenda) “Training in interdisciplinary ergonomic research: Collaboration between University of Cincinnati and Purdue University” Role: Co-PI. Multi-disciplinary project includes Dr. Kermit Davis (PI), Department of Environmental Health, University of Cincinnati and Dr. James McGlothlin (Co-PI), School of Health Sciences, Purdue University. \$6,800 (2005).
- Interdisciplinary Innovation Initiative, School of Technology, Purdue. Interdisciplinary Airline Job Hazard Assessment” Role: Co-PI; PI Gary Eiff, Aviation Technology; Co-PI James D. McGlothlin, Health Science. \$30,000 internal funds; \$20,000 external funds from Jet Blue (2004-2005).
- National Institute for Occupational Safety and Health, University of Michigan Pilot Project Research Training Program “Can Visual References Enhance Balance Control in the Occupational Environment in both Younger and Older Construction Workers?” Role: PI; Joint research with Dr. Jim McGlothlin from the School of Health Sciences, Purdue University. \$28,550 (2002).
- National Institute for Occupational Safety and Health, University of Cincinnati Pilot Project Research Training Program “How Is Postural Stability Affected by Age and Manual Materials Handling in the Occupational Environment?” Role: PI; Joint research with Dr. Jim McGlothlin from the School of Health Sciences, Purdue University. \$5,025 (2002).

External Funding in Support of Entrepreneurial Activities

- National Science Foundation/“SBIR Phase I: Validation and optimization of balance and gait assessment technology in order to identify fall-risk in older adults” Role: Co-Owner of SmartGait LLC with Dr. Babak Ziaie (Electrical and Computer Engineering). This grant focuses on the commercial development of a

device, SmartGait, that will provide an easy and inexpensive assessment of fall-risk in large cohorts. \$225,000 for one year (2017).

Elevate Ventures Indiana SBIR/STTR Phase I Matching Grant Program / “Validation and optimization of balance and gait assessment technology in order to identify fall-risk in older adults” Role: Co-Owner of SmartGait LLC with Dr. Babak Ziaie (Electrical and Computer Engineering). This grant focuses on the commercial development of a device, SmartGait, that will provide an easy and inexpensive assessment of fall-risk in large cohorts. \$50,000 with no end date (2017-).

Elevate Purdue Foundry Fund, Elevate Ventures Indiana / SmartGait: A physical therapist in your pocket. Role: Co-Owner of SmartGait LLC with Dr. Babak Ziaie (Electrical and Computer Engineering). This grant focuses on the commercial development of a device, SmartGait, that will provide an easy and inexpensive assessment of fall-risk in large cohorts. \$20,000 with no end date (2015-).

Internal Funding in Support of Research

Purdue University Research Foundation, July 2013- June 2014 “Trip-Related Loss of Balance” Role: PI. \$16,500.

Research Incentive Grant, College of Liberal Arts, Purdue University (Nov 2008-Dec 2009) “Fall prevention through trip training” Role: PI. \$1,000.

Center on Aging and the Life Course, Purdue University (June-August, 2005) “Relationship of Age, Timing and Postural Control” Role: Co-PI. Interdisciplinary project with Dr. Howard Zelaznik (Co-PI), Department of Health and Kinesiology. \$6,705.

Research and Discovery Support Program, College of Liberal Arts (March, 2005): “Aging, Balance and Voluntary Movement Timing” Role: PI. \$2,500.

Research and Discovery Support Program, School of Liberal Arts (April, 2003): “Anticipatory Recovery from Perturbations: Effect of Age” Role: PI. \$2,500.

Purdue Research Foundation, Summer Faculty Grant (Summer 2001): “The elderly and balance: Development of a clinical test.” Role: PI. \$6,000.

Internal Funding in Support of Entrepreneurial Activities

TRASK Innovation Fund, Purdue University, January-August 2015 “SmartGait: A device to assess gait parameters and predict falls” Interdisciplinary project with Dr. Babak Ziaie, Department of Electrical and Computer Engineering. Role: Co-PI. \$20,000.

Entrepreneurial Leadership Academy, Purdue University Aug. 2012 – June 2013 “Accurate assessment of fall risk” Role: PI. \$5,000

Internal Funding in Support of Teaching

College of Health and Human Sciences Instructional Equipment Program 2014 / “Student training in objective assessment of coordination, balance, and mobility across the lifespan” Role: Co-Investigator, PI: Dr. Jeff Haddad and co-investigator: Dr. Laura Claxton. \$38,179

College of Health and Human Sciences Instructional Equipment Program 2011/ “Student training in objective assessment of gait” Role: PI, co-investigators: Drs. Laura Claxton and Jeff Haddad. \$28,244.

College of Liberal Arts Instructional Equipment 2010/ “Equipment to add laboratory experiences to several Motor Behavior classes” Role: co-investigator; PI: Dr. Laura Claxton with co-investigators Drs. Jeff Haddad and Howard Zelaznik. \$18,732.

Dean's Incentive Grant Award, School of Liberal Arts (Spring 2002) "Development of a new graduate course: PE 590, Age-related changes in the balance control system." \$606.

College of Liberal Arts 2010 Instructional Equipment / Undergraduate Instructional/Laboratory Equipment 2001
Co-investigators Drs. Rietdyk, Corbetta and Zelaznik. \$52,000.

TEACHING ACTIVITIES

Undergraduate Courses (Average evaluation for courses: 4.1/5; for instructor: 4.3/5)

Motor Function in Older Adults
Biomechanical Foundations of Motor Skills
Analysis of Human Motion
Biomechanics and Motor Control of Human Gait
Independent Inquiry in Movement and Sport Science

Graduate Courses (Average evaluation for courses: 4.6/5; for instructor: 4.7/5)

Research Methods in Movement Sciences
Neural Control of Locomotion
Control of Balance and Adaptive Locomotion
Advanced Topics in Motor Control
Biomechanics of Human Motion

GRADUATE STUDENT SUPERVISION

M.S. Thesis Committee Chair (8 students)

Romine, Nathaniel (2017). Diverted gaze in obstacle crossing. Department of Health and Kinesiology.
Pontecorvo, Samuel (2015). Gaze behavior during adaptive gait. Department of Health and Kinesiology.
Raffegeau, Tiphonie (2013, co-chair Dr. Haddad). The relationship between mobility and communication in young healthy adults. Department of Health and Kinesiology.
Muir, Brittney (2011). Improving Gait Characteristics in Older Adults: The Effects of Biodex Balance System SDTM and Wobble Board Balance Training. Department of Health and Kinesiology.
Schanfein, Leigh (2009). The use of self-motion feedback for balance control in younger and older dancers. Department of Health and Kinesiology.
Drifmeyer, Julia (2008). Control of Locomotion: The Effect of Visual Obstruction and Visual Cues. Department of Health and Kinesiology.
Torgerud, Steven (2004). The effect of age on balance in the work environment. Department of Health and Kinesiology.
McCarty, Jeff (2002). Biomechanical analysis of golf putting. Department of Health and Kinesiology.

Ph.D. Thesis Committee Chair (5 students)

Cui, Chuyi (in progress). Department of Health and Kinesiology.
Cho, HyeYoung (in progress). Department of Health and Kinesiology.
Heijnen, Michel (2016). Failures in adaptive locomotion in healthy young adults. Department of Health and Kinesiology.
Muir, Brittney (2015, co-chair Dr. Haddad). The effects of locomotor task challenge on the gait strategies of young, middle-aged, and older adults. Department of Health and Kinesiology.
Chagdes, James (2012, co-chair Dr. Raman). Nonlinear dynamics of human posture on rigid and compliant surfaces. Department of Mechanical Engineering
Rhea, Chris (2009). Control of adaptive gait: effect of experience and light level on action and perception. Department of Health and Kinesiology.

M.S. Thesis Committee Member (13 students)

- Vitucci, Ginina (in progress). Department of Mechanical Engineering.
- McKeeman, Jonathan (2017). An examination of the relationship between Fitts' Law and Schmidt's Law. Department of Health and Kinesiology.
- McGough, Jacob (2017). Quantification of Muscle Force in the Human Anconeus (and Triceps) using Dimensional Analysis of Surface EMG. Department of Mechanical Engineering.
- Kruse, Jennifer (2015). Estrogen, muscle damage, and the repeated bout effect. Department of Health and Kinesiology.
- Liddy, Joshua (2014). Using the Microsoft Kinect to Assess Human Bimanual Coordination. Department of Health and Kinesiology.
- Harris, Rachel (2014). Postural sway in infants at low and high risk for autism spectrum disorder. Department of Health and Kinesiology.
- Cruise (nee Hickman), Denise (2014). Design, Development, and Testing of a Balance Board with Variable Torsional Stiffness and Time Delay. Department of Mechanical Engineering.
- Pham, Hahn (2013). The relationship between visual task-demands and postural stability in infancy. Department of Health and Kinesiology.
- Larson, Peter (2012). Effects of radial forcing on spring-mass running. Department of Mechanical Engineering.
- Beiser, David (2009). Carbohydrate supplementation during prolonged intermittent exercise in endurance trained women. Department of Health and Kinesiology.
- Studenka, Breanna (2004). The effects of synchronization on tapping and circle drawing variability over a range of durations. Department of Health and Kinesiology.
- Snapp-Childs, Winona (2003). Dynamic changes in step width, lateral acceleration and arm position in early walking: A comparison of infant and adult gait. Department of Health and Kinesiology.
- Haslett, Kristi (2002). Control of timing in single tapping and circle drawing tasks. Department of Health and Kinesiology.

M.S. Non-Thesis Committee Member (3 students)

- Rheaume, Nicole (2008). Individual Differences in 1/f Noise between Tapping and Circle Drawing. Department of Health and Kinesiology
- Tsai, Jennifer (2004). Timing and spatial variability in speed accuracy trade-off tasks. Department of Health and Kinesiology.
- Potts, Scott (2003). The effects of age and manual materials handling on postural stability among residential construction roofers. School of Health Sciences.

Ph.D. Thesis Committee Member (21 students)

- Knodel, Nathan (in progress). Department of Mechanical Engineering.
- Manish, Anand (in progress). Department of Mechanical Engineering.
- Cruise, Denise (in progress). Department of Mechanical Engineering.
- Gomez, Daniel (in progress). Department of Civil Engineering.
- Arnold, Amanda (in progress). Department of Health and Kinesiology.
- Salsabili, Hoda (in progress). Department of Health and Kinesiology.
- Liddy, Joshua (in progress). Department of Health and Kinesiology.
- Shen, Zhuohua (in progress). Department of Mechanical Engineering.
- Ryu, Joong Hyun (in progress). Department of Health and Kinesiology.
- Li, Chih-Wei (in progress). Department of Mechanical Engineering.
- Park, Hyungju (Andy) (2016). Representation and control of coordinated tasks for human-robot systems. Department of Electrical and Computer Engineering.
- Ackerman, Jeffrey (2016). Coupled dynamics of legged locomotion with suspended loads. Department of Mechanical Engineering.

- Cai, Fuwen (2014). Coordination between hand and trunk movements in a fitts' law task. Department of Health and Kinesiology.
- Alshehabat, Musa (2012). Instrumented gait analysis to characterize pelvic limb ataxia in dogs. Department of Veterinary Clinical Sciences.
- Marshall, Andrew (2011). Development of a model of startle for sonic booms. Department of Mechanical Engineering.
- Hughes, Charmayne (2010). The effects of physical object coupling on interlimb coordination. Department of Health and Kinesiology.
- Lin, Hsien-I (2009). On robot skill learning: Self-organizing capability and understanding robot motor capability. Department of Electrical and Computer Engineering.
- Kim, Jongmin (2009). Gait analysis as a measure of neurological function in dogs. Department of Veterinary Clinical Sciences.
- Ritchie, Dan (2008). Effect of two doses of an exercise intervention on mobility and function in older adults. Department of Health and Kinesiology.
- Studenka, Breanna (2008). Error Correction Timing Behavior in Tapping and Circle Drawing. Department of Health and Kinesiology.
- Snapp-Childs, Winona (2007). On the Stability and Flexibility of Walking Patterns in 4-6 Year Olds and Adults. Department of Health and Kinesiology.
- Naksuk, Nirut (2006). Humanoid Robot Locomotion. Department of Electrical and Computer Engineering.

External Ph.D. Thesis Committee Member

- Worden, Timothy (2016). Examination of dual-task training protocols to alter performance on a concurrent auditory Stroop and obstacle crossing dual-task test. Human Health and Nutritional Sciences and Neuroscience. University of Guelph.

ENTERPRENEURIAL ACTIVITIES

- 2013-present Co-PI developing a balance and gait assessment device: SmartGait™. Joint project with Dr. Babak Ziaie (Electrical and Computer Engineering). We have a provisional patent, have started a small business (SmartGait LLC), and have received \$315,000 in funding from internal and external granting mechanisms.
- US patent 14/591,561 Ziaie, Kim, Kim, Rietdyk, Gait Analysis for Predicting Falls in Elderly using Smart Phone's Camera, priority date Jan 2014

COMMUNITY ENGAGEMENT / SERVICE LEARNING

- 2014 EPICS faculty advisor for the team "Healthy Aging and Living Projects". Development of device to prevent injury from falls (EPICS = Engineering Projects in Community Service; teams of undergraduates design, build, and deploy real systems to solve engineering-based problems for local community service and education organizations)
- 2010-present Dr. Rietdyk co-developed a service learning class with Dr. Jeffrey Haddad (Health and Kinesiology). Senior undergraduate students work one-on-one with older adults each week at University Place, a local continuing care retirement community affiliated with Purdue University. The course promotes intergenerational experiences as students learn to improve the motor skills of older adults in our community. The course serves approximately 35 students and up to 70 older adults each year.

SERVICE PRESENTATIONS

1. Maintaining Mobility and Independence. Co-presented by Drs. Haddad, Huber, Rietdyk to the Purdue President's Council "Back to Class", West Lafayette, IN, October, 2017
2. Humans are Surprisingly Bad at Walking. Presented to the Advisory Council of Health and Kinesiology, Purdue, West Lafayette, IN, September, 2017

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3. Preventing Falls. Presented to residents of Westminster Village, West Lafayette, IN, May, 2017.
 4. Balance and Mobility. Presented to the Multiple Sclerosis Support Group at Rosewalk Village, Lafayette, IN, April, 2017.
 5. Falls in Young and Older Adults. Guest Lecture in BME 496 Smart Healthcare Engineering, Purdue University, West Lafayette, IN, March, 2017.
 6. Preventing Falls in Older Adults. Presented to healthcare providers at Mulberry Health and Retirement Community, Mulberry, IN, April, 2016.
 7. Preventing Falls in an Aging Population. Presented to President's Council Back to Class Event (Purdue Alumni), Naples, FL, February, 2016.
 8. Balance and Mobility in Older Adults. Presented to the residents of University Place (a continuing care retirement community), West Lafayette, IN, West Lafayette, IN, January, 2015.
 9. Gait Difficulties in People with Parkinson's Disease. Presented to the Parkinson's Disease Support Group in West Lafayette, IN, March, 2014.
 10. Improving Balance and Mobility in Later Life. Co-presented (with Dr. Jeffrey Haddad) to the Purdue University Retirees Association, West Lafayette, IN, April, 2013.
 11. University Place Intervention Research Initiative: 2009-2012. Presented to the residents of University Place (a retirement community), West Lafayette, IN, West Lafayette, IN, September, 2012.
 12. Improving Balance and Mobility in Older Adults. Co-presented (with Dr. Jeffrey Haddad) as an Inservice Presentation to Physical and Occupational Therapists at St. Elizabeth Regional Health, West Lafayette, IN, July, 2011.
 13. Engaging University Aging Research in a Continuing Care Retirement Community. Published in The Journal of Active Aging, March/April 2010.
 14. New undergraduate course: Motor function in older adults. Provided to residents of University Place (a residence facility for older adults) as a call-out for residents to participate in a senior undergraduate course which provides balance assessments and balance training, West Lafayette, IN, August, 2010
 15. Does balance training improve precision manual control and functional gait? Provided to residents of University Place (a residence facility for older adults), West Lafayette, IN, June 2010
 16. Open House: Balance Assessments. Provided to residents of University Place (a residence facility for older adults), West Lafayette, IN, September, 2009
 17. Balance and Mobility in Adults. Presented at the Home and Family Conference sponsored by Purdue Extension, Consumer and Family Sciences. West Lafayette, IN, May, 2007.
 18. Balance and Mobility in Adults. Presented to the Purdue University Extension Consumer and Family Sciences educators by IP videoconference. West Lafayette, IN, December, 2006.
 19. Balance, Exercise and Parkinson's Disease. Presented to the Parkinson's Disease Support Group in West Lafayette, IN, November, 2005.
 20. The Aging Workforce: Steps to take to Maintain Health and Safety. Presented to manufacturers in Kosciusko County, Warsaw, IN during meeting of Chamber of Commerce, September, 2004.
 21. Maintaining Balance: Effect of Age and Experience. Dean's Advisory Council, School of Liberal Arts, Purdue University, IN, April, 2004.
 22. Researcher Working to Catch Elderly Before they Fall. Magazine article: Indianapolis Prime Times, January, 2004.
 23. Studying Balance in the Older Adult. Television broadcast: WLFI West Lafayette, IN, November, 2003.
 24. Can We Prevent Falls in the Occupational Environment? Presented to Sullivan and Fortner Roofing Company employees, Lafayette, IN, October, 2003.
 25. Risks of Residential Roofing. Presented to Sullivan and Fortner Roofing Company employees, Lafayette, IN, January, 2003.

JOURNAL REVIEWING ACTIVITIES

Archives of Physical Medicine and Rehabilitation
 Cerebral Cortex
 Computer Methods in Biomechanics and Biomedical Engineering
 Developmental Medicine and Child Neurology
 Ergonomics
 Experimental Brain Research
 Experimental Gerontology
 Gait and Posture
 IEEE Transactions on Mechatronics
 Journal of the American Geriatrics Society
 Journal of Applied Physiology
 Journal of Biomechanics
 Journal of Gerontology: Social Sciences
 Journal of Motor Behavior
 Journal of NeuroEngineering and Rehabilitation
 Journal of Neurophysiology
 Journal of Neuroscience Methods
 Journal of the American Geriatric Society
 Motor Control
 Neuroscience Letters
 Ophthalmic and Physiological Optics
 Perceptual and Motor Skills
 PLoS One
 Proceedings of the Royal Society B: Biological Sciences
 Royal Society Open Science

COMMITTEE INVOLVEMENT**International Society for Posture and Gait Research (ISPGR)**

2015-present Member, Scientific Content Committee
 2014-2015 Co-chair, 2015 World Congress of ISPGR in Seville, Spain
 2014-2015 Co-chair, Scientific Content Committee
 2013-2014 Member, Scientific Content Committee
 2012 Member, Promising Young Scientist Award Committee

Purdue University

2017-2018 Member, Search Advisory Committee for the Dean of Health and Human Sciences
 2017-present Member, Center on Aging and the Life Course Steering Committee
 2017 Member, Provost's Office Major Scientific Equipment Program Review Committee
 2001-2004 Member, Gerontology Steering Committee

College of Health and Human Sciences

2017-present Alternate (elected), College of Health and Human Sciences Area Committee
 2011-2013 Member, Faculty Affairs Committee

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| 2012-2013 | Member, Development of Mentoring Policy for HHS (sub-committee of Faculty Affairs Committee) |
| 2012-2013 | Member, Faculty Agenda Committee (sub-committee of Faculty Affairs Committee) |

College of Liberal Arts

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| 2007-2010 | Senator, College Liberal Arts Senate |
| 2007 | Member, College Liberal Arts Task Force (Ad hoc committee) |
| 2006 | Member, Grievance Panel Committee (Ad hoc committee) |
| 2005-2007 | Member, College of Liberal Arts Honors Committee |
| 2003-2007 | Member, College of Liberal Arts Grievance Committee |

Health and Kinesiology Department

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| 2017 | Member, Purdue Research Foundation Graduate Awards Committee |
| 2017 | Member, Wall of Distinction Awards Committee |
| 2016-2017 | Member, Public Health Search Committee |
| 2014-2015 | Chair, Biomechanics Search Committee |
| 2014 | Member, PRF Grant Review Committee |
| 2012-2013 | Member, Public Health Search Committee |
| 2011-2012 | Member, HK Department Head Search Committee |
| 2009-2010 | Chair, Preliminary Exam Review Committee |
| 2008-2010 | Chair, Movement and Sport Science Committee |
| 2008 | Member, MPH Director Search Committee |
| 2007-2008 | Member, Qualifying Exam Committee |
| 2007 | Member, Needs Committee for Ismail Center / University Place |
| 2006-2007 | Member, HK Department Steering Committee |
| 2006-2007 | Member, Exercise Physiology Search Committee |
| 2005-2006 | Member, HK Department Head Search Committee |
| 2005 | Member, Qualifying Exam Committee |
| 2005 | Member, PRF Grant Review Committee |
| 2005 | Member, Motor Development Search Committee |
| 2005 | Member, AARP Grant Review Committee |
| 2003 | Member, Qualifying Exam Committee |
| 2001-2002 | Member, Gerontology Search Committee |
| 2001 | Member, Qualifying Exam Committee |
| 2000-2003 | Member, Professional Development Fund Review Committee |
| 2000-present | Member, Health and Kinesiology Graduate Committee |
| 2000-present | Member, Health and Kinesiology Faculty Committee |