

Liang-Ching Tsai, PT, PhD
Curriculum Vitae – February 2022

Full Name: Liang-Ching Tsai
Rank: Associate Professor
Department: Department of Physical Therapy, Georgia State University
Office Address: 140 Decatur Street Suite 1271, Atlanta, GA 30303, USA

I. EDUCATION

- 12/2011 – 01/2014 **Post-doctoral Fellow**, Department of Physical Medicine and Rehabilitation, Northwestern University, Chicago, IL
- 08/2011 – 11/2011 **Post-doctoral Fellow**, Biodynamics Laboratory, Sensory Motor Performance Program, Rehabilitation Institute of Chicago, Chicago, IL
- 08/2005 – 05/2011 **Doctor of Philosophy**, Biokinesiology
University of Southern California, Los Angeles, CA
- 09/2003 – 06/2005 **Master of Science**, Human Movement Science
University of North Carolina at Chapel Hill, Chapel Hill, NC
- 09/1996 – 06/2000 **Bachelor of Science**, Physical Therapy
National Taiwan University, Taipei, Taiwan

II. PROFESSIONAL CREDENTIALS CERTIFICATIONS AND LICENSURE

a. Academic and Research Experiences:

- 05/2020 – Present **Associate Professor**, Department of Physical Therapy, Georgia State University, Atlanta, GA
- 10/2018 – Present **Adjunct Faculty**, Department of Orthopaedics, Emory University, Atlanta, GA
- 02/2017 – Present **Adjunct Faculty**, Department of Kinesiology and Health, Georgia State University, Atlanta, GA
- 04/2015 – Present **Adjunct Faculty**, Center of Advanced Brain Imaging, Georgia Institute of Technology / Georgia State University, Atlanta, GA
- 02/2014 – 04/2020 **Assistant Professor**, Department of Physical Therapy, Georgia State University, Atlanta, GA
- 09/2005 – 12/2010 **Teaching Assistant**, Division of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles, CA
- 09/2003 – 05/2004 **Research Assistant**, Division of Physical Therapy, University of North Carolina at Chapel Hill, Chapel Hill, NC
- 03/2002 – 05/2003 **Research Assistant**, School and Graduate Institute of Physical Therapy, National Taiwan University, Taipei, Taiwan

b. Professional and Clinical Experiences:

- 08/2002 – 12/2002 **Physical Therapist**, Schmidt Group Practice Clinic, Taipei, Taiwan

c. Licensure:

08/2000 – Present **Physical Therapist**, Examination Yuan of the Republic of China, Taiwan

III. SCHOLARSHIP AND PROFESSIONAL DEVELOPMENT

a. Publications

i. Journal Articles (Published; * indicates mentored student research and/or senior author)

1. **Tsai LC**, Jeanfreau CM, Hamblin KA, Popovich JM, Lyle MA, Cottmeyer DF, Warren GL. Time, graft, sex, geographic location, and isokinetic speed influence the degree of quadriceps weakness after anterior cruciate ligament reconstruction: A systematic review and meta-analysis. *Knee Surg Sport Tr A (in press)*.
2. Lyle MA, Jensen JC, Hunnicutt JL, Brown JJ, Chambliss CP, Newsome MA, Xerogeanes JW, **Tsai LC***. Associations of strength and spatiotemporal gait variables with knee loading during gait after anterior cruciate ligament reconstruction. *J Athl Train. (in press)*.
3. Law MA, Ko YA, Miller AL, Lauterbach KN, Hendley CL, Johnson JE, **Tsai LC***. Age, rehabilitation and surgery characteristics are re-injury risk factors for adolescents following anterior cruciate ligament reconstruction. *Phys Ther Sport. 49:196-203, 2021*.
4. Hunnicutt JL, Xerogeanes JW, **Tsai LC**, Sprague PA, Newsome MA, Slone HS, Lyle MA. Terminal knee extension deficit and female sex predict poorer quadriceps strength following ACL reconstruction using allsoft tissue quadriceps tendon. *Knee Surg Sports Traumatol Arthrosc. 29(9):3085-3095, 2021*
5. Ho KY, Chen YJ, Farrokhi S, **Tsai LC**, Liao TC, Haas N, Powers CM. Selective atrophy of the vastus medialis: Does it exist in females with patellofemoral pain? *Am J Sports Med. 49(3):700-705, 2021*.
6. Nguyen LY, Harris KD, Morelli KM. **Tsai LC***. Increased knee flexion and varus moments during gait with high-heel shoes: A systematic review and meta-analysis. *Gait Posture. 85(2021):117-125, 2021*
7. **Tsai LC**, Wu YN, Liu SQ, Zhang LQ. Changes in muscle stress and sarcomere adaptation in mice following ischemic stroke. *Front Physiol. 11:581846, 2020*.
8. **Tsai LC**, Zhao Z, Fridenmaker SM, Warren GL. Enhancement of knee extension voluntary and electrically-evoked strength with the body tilted backward. *Isokinet Exerc Sci. 28(2):101-109, 2020*.
9. **Tsai LC**, Cooper ES, Hetzendorfer KM, Warren GL, Chang YH, Willett NJ. Effects of treadmill running and limb immobilization on knee cartilage degeneration and locomotor joint kinematics in rats following knee meniscal transection. *Osteoarthritis Cartilage. 27(12):1851-59, 2019*.
10. Frank R, **Tsai LC**, Chong B, Hodgens M, Garcia JD, Morelli M. The effect of lumbopelvic joint manipulation and traditional quadriceps strengthening on improving knee extensor muscle activation and torque production: a randomized controlled trial. *J Exerc Sports Ortho. 6(2):1-8, 2019*.
11. **Tsai LC**, Ko, YA, Hammond KE, Xerogeanes JW, Warren GL, Powers CM. Increasing hip and knee flexion during a drop landing task reduces tibiofemoral shear and compressive forces: implications for ACL injury prevention training. *J Sports Sci. 35(24):2405-11, 2017*.

12. **Tsai LC**, Ren Y, Gaebler-Spira DJ, Revivo G, Zhang LQ. Effects of an off-axis pivoting elliptical training program on gait function in persons with spastic cerebral palsy: a preliminary study. *Am J Phys Med Rehabil.* 96(7):515-22, 2017.
13. Cheng CH, Chen RW, **Tsai LC**, Chang YJ, Tang WT, Liu WY. Comparisons of fatigue effect due to competitive tennis match or simulated tennis stroke on exercise physiology and performance of tennis players: a literature review. *Physical Education Journal (in Chinese).* 49(3):253-262, 2016.
14. Lin YC, **Tsai LC**, Cheng HYK, Lin YH, Cheng CH. Postural steadiness after prolonged standing on different sloped surface in young healthy adults. *Biomed Eng Appl Basis Commun.* 28(1):1-7, 2016.
15. Lin CY, **Tsai LC**, Press JM, Zhang LQ. Lower limb muscle activation patterns during off-axis elliptical compared to conventional gluteal muscle strengthening exercises. *J Sport Rehabil.* 25(2):164-72, 2016.
16. Wu YN, Ren Y, **Tsai LC**, Gao F, Zhang LQ. In vivo simultaneous evaluations of sarcomere imaging and muscle fiber tension. *J Biomech.* 49(5):797-801, 2016.
17. Cheng CH, **Tsai LC**, Chung HC, Chien A, Wang SF, Wang, JL, Lai DM, Hsu WL. Exercise training for non-operative and post-operative patients with cervical radiculopathy: a literature review. *J Phys Ther Sci.* 27(9):3011-8, 2015.
18. Wang YT, Limroongreungrat W, Chang LS, Ke X, **Tsai LC**, Chen YP, Lewis J. Immediate video feedback on ramp, wheelie, and curb wheelchair skill training for persons with spinal cord injury. *J Rehabil Res Dev.* 52(4):421-30, 2015.
19. **Tsai LC**, Lee SJ, Yang AJ, Ren Y, Press JM, Zhang LQ. Effects of off-axis elliptical training on reducing pain and improving knee function in individuals with patellofemoral pain. *Clin J Sport Med.* 25(6):487-93, 2015.
20. **Tsai LC**, Powers CM. Increased hip and knee flexion during landing decreases tibiofemoral compressive loads in females who have undergone anterior cruciate ligament reconstruction. *Am J Sports Med.* 41(2):423-9, 2013.
21. **Tsai LC**, Scher IS, Powers CM. Quantification of tibiofemoral shear and compressive loads using a MRI-based EMG-driven knee model. *J Appl Biomech.* 29(2):229-34, 2013.
22. **Tsai LC**, McLean S, Colletti PM, Powers CM. Greater muscle co-contraction results in increased tibiofemoral compressive forces in females who have undergone anterior cruciate ligament reconstruction. *J Orthopaed Res.* 30(12):2007-14, 2012.
23. **Tsai LC**, Colletti PM, Powers CM. Magnetic resonance imaging-measured muscle parameters improved knee moment prediction of an EMG-driven model. *Med Sci Sports Exerc.* 42(2):305-12, 2012.
24. Lyle MA, Sigward SM, **Tsai LC**, Pollard CD, Powers CM. Influence of maturation on instep kick biomechanics in female soccer athletes. *Med Sci Sports Exerc.* 43(10):1948-54, 2011.
25. **Tsai LC**, Sigward SM, Pollard CD, Fletcher MJ, Powers CM. Effects of fatigue and recovery on knee mechanics during side-step cutting. *Med Sci Sports Exerc.* 41(1):1952-7, 2009.
26. **Tsai LC**, Yu B, Mercer VS, Gross MT. Comparison of different structural foot types for measures of standing postural control. *J Orthop Sports Phys Ther.* 36(12):942-53, 2006.

ii. Journal Articles (In Review; * indicates mentored student research and/or senior author)

1. Morelli KM, Newkirk-Pulliam NE, Angelich CM, Buckner QT, Homan CM, Irwin JP, Butler AJ, **Tsai LC***. Assessment of gait and function of bilateral lower extremity after unilateral total ankle arthroplasty: A case report. *Physiother Theory Pract* (in review).

iii. Journal Articles (In Preparation):

1. Popovich JM, O'Callaghan ML, White GM, Corbin KN, Jensen JC, **Tsai LC**. Muscle atrophy varies among the four quadriceps muscles in patients following ACL reconstruction: MRI evaluation. (target submission date: 4/2022)

iv. Letter to the Editor

1. **Tsai LC**, Lyle MA, Popovich JM. Re: Hip strength and knee pain in high school runners: a prospective study (Letter to the Editor). *PM R*. 4:634-5, 2012.

v. Conference Proceedings and Abstracts (* indicates mentored student research project)

1. Francis JI, Aiken KA, Shields DM, Lyle MA, Popovich JM, **Tsai LC***. Meta-analysis challenges the use of the uninjured leg to monitor quadriceps recovery after ACL reconstruction. American Physical Therapy Association Combined Sections Meeting; San Antonio, TX: February 2022.
2. Cottmeyer DF, Hoang B, Lyle MA, Warren GL, **Tsai LC***. Can exercise interventions reduce external knee adduction moment during gait? A systematic review and meta-analysis. American Physical Therapy Association Combined Sections Meeting; San Antonio, TX: February 2022. *In J Orthop Sports Phys Ther*. 52(1) CSM68. 2022.
3. Sprague PA, Mosteller K, Orman K, Russell C, **Tsai LC**, Xerogeanes JW, Lyle MA. Asymmetric joint kinetics across three different jumping tasks after ACL reconstruction. American Physical Therapy Association Combined Sections Meeting; San Antonio, TX: February 2022. *In J Orthop Sports Phys Ther*. 52(1) CSM128. 2022.
4. Shields DM, Aiken KA, Francis JI, Wright SW, Igbinadolor EP, Davis DM, Taylor HE, **Tsai LC***. The effects of reducing walking speed on knee loading magnitude and between-limb loading asymmetry following ACL reconstruction. American Physical Therapy Association Georgia ImPacT Meeting (Virtual): October 2021.
5. Cottmeyer DF, Hoang B, Lyle MA, Warren GL, **Tsai LC***. Exercise interventions are not effective in reducing external knee adduction moment during gait: A systematic review and meta analysis. American Physical Therapy Association Georgia ImPacT Meeting (Virtual): October 2021.
6. Gordon LD, Brown JR, Seward SW, **Tsai LC**, Morelli KM. Physical therapists' perceptions on the lack of diversity in home exercise programs for patient education. American Physical Therapy Association Georgia ImPacT Meeting (Virtual): October 2021.
7. Korlewitz RJ, **Tsai LC**, Lyle MA, Popovich JM. Increased gluteus maximus size 6 months post anterior cruciate ligament reconstruction suggests a compensatory response for persistent quadriceps weakness. Orthopaedic Research Society Annual Meeting (Virtual): February 2021.
8. Sims MM, Wright SW, Taylor HE, Igbinadolor EP, Davis DM, **Tsai LC***. Modulating walking speed changes knee loading magnitude, but between-limb loading asymmetry persists following

- ACL reconstruction. American Physical Therapy Association Combined Sections Meeting; Orlando, FL (Virtual): February 2021. (*Podium Presentation*).
9. Wright SW, Igbinalolor EP, Davis DM, Taylor HE, Lye MA, **Tsai LC***. Slower walking speed reduces knee loading magnitude but between-limb loading asymmetry persists following ACL reconstruction. American Physical Therapy Association Combined Sections Meeting; Orlando, FL (Virtual): February 2021. *In J Orthop Sports Phys Ther.* 51(1) CSM161-162. 2021.
 10. Lyle MA, Sprague PA, Bianconi B, Brady E, Pham D, Sofley Z, Hunnicutt JL, Xerogeanes JW, **Tsai LC***. Patients with ACL reconstruction exhibit asymmetric lower-extremity joint loading strategies consistently across three landing tasks. American Physical Therapy Association Combined Sections Meeting; Orlando, FL (Virtual): February 2021. *In J Orthop Sports Phys Ther.* 51(1) CSM15-16. 2021. (*Podium Presentation*).
 11. Sprague PA, Bianconi B, Brady E, Pham D, Sofley Z, Hunnicutt JL, Xerogeanes JW, **Tsai LC**, Lyle MA. Asymmetric landing joint kinetics during single leg hop for distance after quadriceps tendon ACL reconstruction. American Physical Therapy Association Combined Sections Meeting; Orlando, FL (Virtual): February 2021. *In J Orthop Sports Phys Ther.* 51(1) CSM151. 2021.
 12. Korlewitz RJ, **Tsai LC**, Lyle MA, Popovich JM. Hypertrophic changes of the involved limb gluteus maximus 6 months post-anterior cruciate ligament reconstruction surgery. Michigan Osteopathic Association Autumn Scientific Convention (Virtual): November 2020. (*received 1st Place Fellow Research Award*).
 13. Law MA, Sims MM, O'Callaghan ML, Davis EM, White GM, Popovich JM, **Tsai LC***. Longitudinal MRI assessment of individual quadriceps muscle atrophy following anterior cruciate ligament reconstruction. Physical Therapy Association of Georgia Annual Meeting; Cumming, GA (Virtual): October 2020.
 14. Wright SW, Hoey OM, Taylor HE, O'Callaghan ML, Sims MM, Law MA, Lyle MA, **Tsai LC***. Biomechanical factors contributing to between-limb asymmetries in knee flexion and varus moments during gait after anterior cruciate ligament reconstruction. Physical Therapy Association of Georgia Annual Meeting; Cumming, GA, GA (Virtual): October 2020.
 15. Law MA, O'Callaghan ML, Hoey OM, Sims MM, Hunnicutt JL, Lyle MA, **Tsai LC***. Predictors of asymmetrical knee flexion and varus torques during gait following anterior cruciate ligament reconstruction. Southeast ACSM Annual Meeting; Jacksonville, FL: February 2020. (*received Student Research Award*).
 16. White GM, Davis EM, Law MA, Sims MM, O'Callaghan ML, Hoey OM, Woodard AK, Popovich JM, **Tsai LC***. Quadriceps muscle atrophy and heterogenous recovery after anterior cruciate ligament reconstruction: a longitudinal MRI evaluation. American Physical Therapy Association Combined Sections Meeting; Denver, CO: February 2019. *In J Orthop Sports Phys Ther.* 50(1) CSM26-27. 2020. (*Podium Presentation*).
 17. Dalal ES, D'Amico MN, Pelletier KA, Kutsche CT, **Tsai LC**, Morelli KM. Components of functional movement screen may predict short term injury risk in adult recreational athletes. American Physical Therapy Association Combined Sections Meeting; Denver, CO: February 2019.
 18. D'Amico MN, Pelletier KA, Kutsche CT, Dalal ES, **Tsai LC**, Morelli KM. Functional movement screen and y-balance test may not predict short-term injury risk in modern dancers. American

- Physical Therapy Association Combined Sections Meeting; Denver, CO: February 2019. . In J Orthop Sports Phys Ther. 50(1) CSM104. 2020.
19. Popovich JM, Tobin AM, Mendoza I, **Tsai LC***. Gluteal muscle morphology and its association with hip joint loading during gait following ACL reconstruction. American Physical Therapy Association Combined Sections Meeting; Denver, CO: February 2019. In J Orthop Sports Phys Ther. 50(1) CSM54. 2020. (*Podium Presentation*).
 20. Kokx ML, White GM, Hoey OM, Woodard AK, Davis EM, Jensen JC, Brown JJ, Chambliss CP, Lyle MA, **Tsai LC***. Clinically accessible measures that may help modify knee loading during gait following ACL reconstruction. Physical Therapy Association of Georgia Annual Meeting; Atlanta, GA: March 2019.
 21. Davis EM, White GM, Hendley CL, Woodard AK, Hoey OM, Kokx ML, Miller AL, Lauterbach KN, Johnson JE, **Tsai LC***. Age, rehabilitation and surgery characteristics are risk factors for adolescent anterior cruciate ligament reconstruction re-injury. Physical Therapy Association of Georgia Annual Meeting; Atlanta, GA: March 2019.
 22. Mossbarger T, Palo KA, White A, **Tsai LC***, Morelli KM. Lack of association of functional movement screen and y-balance scores with short term injury risk in general adults. American Physical Therapy Association Combined Sections Meeting; Washington, DC: January 2019.
 23. Jensen JC, Brown JJ, Chambliss CP, Lauterbach KN, Miller AL, Davis EM, White GM, Kokx ML, Lyle MA, **Tsai LC***. Clinically accessible measures that may help modulate knee loading during gait. American Physical Therapy Association Combined Sections Meeting; Washington, DC: January 2019. In J Orthop Sports Phys Ther. 49(1) CSM107. 2019.
 24. Miller AL, Lauterbach KN, Hendley CL, Chambliss CP, Brown JJ, Jensen JC, Woodard AK, Hoey OM, Johnson JE, **Tsai LC***. Age and characteristics of surgery and rehabilitation as risk factors for re-injury in adolescents with anterior cruciate ligament reconstruction. American Physical Therapy Association Combined Sections Meeting; Washington, DC: January 2019. In J Orthop Sports Phys Ther. 49(1) CSM186. 2019.
 25. **Tsai LC**, McKinney JM, Cooper ES, Warren GL, Chang YH, Willett NJ. Early increase in voluntary running activity was associated with a slower rate of cartilage degeneration in rats following medial meniscal transection. Seventh Annual Symposium on Regenerative Rehabilitation; Seattle, WA: October 2018.
 26. Brown JJ, Chambliss CP, Jensen JC, Lauterbach KN, Miller AL, Hoey OM, Woodard AK, Lyle MA, **Tsai LC***. Identification of clinically accessible measures to assist in modulating knee joint loading during gait. Association of Schools of Allied Health Professions Conference; St. Petersburg, FL: October 2018. (*Podium Presentation*).
 27. Jeanfreau CM, Hamblin KA, Warren GL, Leslie SL, **Tsai LC***. Knee extensor strength in the uninjured leg following anterior cruciate ligament reconstruction: A meta-analysis. American College of Sports Medicine 65th Annual Meeting; Minneapolis, MN: May 2018. In Med Sci Sports Exerc. 50(5S): 505. 2018.
 28. Jensen JC, Miller AL, Corbin KN, Kawamura JY, Patel RG, Hammond KE, Xerogeanes JW, **Tsai LC***. Varying degrees of atrophy among individual quadriceps muscles following anterior cruciate ligament reconstruction. Physical Therapy Association of Georgia Annual Meeting; Athens, GA: April 2018.

29. Brown JJ, Chambliss CP, Lauterbach KN, Kawamura JY, Patel RG, Corbin KN, Newsome MA, **Tsai LC***. Static standing postural control and knee muscle strength may not be informative of Y-Balance test performance. Physical Therapy Association of Georgia Annual Meeting; Athens, GA: April 2018.
30. Cooper ES, **Tsai LC**, Hetzendorfer KM, Chang YH, Willett NJ. Region-specific knee cartilage degeneration associates with altered kinematics in exercise and immobilized osteoarthritis rats. 2018 Osteoarthritis Research Society International World Congress; Liverpool, UK: April 2018.
31. Corbin KN, Kawamura JY, Jensen JC, Patel RG, Miller AL, Hammond KE, Xerogeanes JW, **Tsai LC***. Muscle atrophy varies among the four quadriceps muscles in patients following ACL reconstruction: MRI evaluation. American Physical Therapy Association Combined Sections Meeting; New Orleans, LA: February 2018. In *J Orthop Sports Phys Ther.* 48(1) A36. 2018. (Podium Presentation).
32. Jeanfreau CM, Hamblin KA, Leslie SL, Warren GL, **Tsai LC***. Factors explaining varying knee extensor strength deficits post ACL reconstruction: a meta-analysis. American Physical Therapy Association Combined Sections Meeting; New Orleans, LA: February 2018. In *J Orthop Sports Phys Ther.* 48(1) A13. 2018. (Podium Presentation).
33. Patel RG, Kawamura JY, Corbin KN, Lauterbach KN, Chambliss CP, Brown JJ, Newsome MA, **Tsai LC***. Are postural stability and knee strength associated with the Y-Balance test in ACLR and healthy individuals? American Physical Therapy Association Combined Sections Meeting; New Orleans, LA: February 2018. In *J Orthop Sports Phys Ther.* 48(1) A52-3. 2018. (Podium Presentation).
34. Frank R, Chong B, Hodgens M, **Tsai LC***, Garcia J, Morelli KM. Knee extensor voluntary activation and strength following lumbopelvic manipulation and exercises. American Physical Therapy Association Combined Sections Meeting; New Orleans, LA: February 2018.
35. Corbin KN, Kawamura JY, Jensen JC, Patel RG, Miller AL, Hammond KE, Xerogeanes JW, **Tsai LC***. Do individual quadriceps muscles atrophy the same in patients following anterior cruciate ligament reconstruction? Association of Schools of Allied Health Professions Conference; San Antonio, TX: October 2017. (Podium Presentation).
36. Cooper ES, Hetzendorfer KM, **Tsai LC**, Willett NJ, Chang YH. 3D X-ray motion analysis indicates treadmill exercise exacerbates knee osteoarthritis in MMT rats. 2017 Annual American Society of Biomechanics Meeting; Boulder, CO, August 2017. (Podium Presentation).
37. **Tsai LC**, Cooper ES, Hetzendorfer KM, Reece DS, Chang YH, Waters CR, Guldberg RE, Warren GL, Willett NJ. Altered joint loading affects cartilage degeneration and limb function in rats following knee meniscal transection. American College of Sports Medicine 64th Annual Meeting; Denver, CO, June 2017. In *Med Sci Sports Exerc.* 49(5S): 949. 2017.
38. Waters CR, Balfour TS, Talley BL, Corbin KN, Hammond KE, Xerogeanes JW, **Tsai LC***. Distinct altered knee and hip landing mechanics in women with ACL reconstruction using an allograft. American Physical Therapy Association Combined Sections Meeting; San Antonio, TX, February 2017. In *J Orthop Sports Phys Ther.* 47(1) A222-3. 2017.
39. Balfour TS, Waters CR, Talley BL, Corbin KN, Patel RG, Kawamura JY, **Tsai LC***. Limb asymmetry in landing knee mechanics is associated with isokinetic quadriceps strength not degree of voluntary activation. American Physical Therapy Association Combined Sections Meeting; San Antonio, TX, February 2017. In *J Orthop Sports Phys Ther.* 47(1) A165-6. 2017.

40. **Tsai LC**, Hetzendorfer KM, Cooper ES, Reece DS, Chang YH, Waters CR, Guldberg RE, Warren GL, Willett NJ. Effects of altered joint loading on cartilage degeneration, voluntary activity, and knee kinematics in rats after medial meniscal transection. Fifth Annual Symposium on Regenerative Rehabilitation; Atlanta, GA, October 2016.
41. Waters CR, Balfour TS, Talley BL, Corbin KN, Hammond KE, Xerogeanes JW, **Tsai LC***. Altered hip and knee landing mechanics persist in women with allograft ACL reconstruction. Physical Therapy Association of Georgia Annual Fall Meeting; Chattanooga, TN, October 2016.
42. Piletsky GG, Patel AY, Suarez TP, Buuck DJ, Warren GL, Powers CM, **Tsai LC***. Associations of MRI-measured thigh muscle volumes with knee mechanics. American Physical Therapy Association Combined Sections Meeting; Anaheim, CA, February 2016. In *J Orthop Sports Phys Ther.* 46(1) A194-5. 2016.
43. Patel AY, Piletsky GG, Suarez TP, Buuck DJ, Waters CR, Powers CM, **Tsai LC***. Associations of MRI-measured thigh muscle volumes with knee mechanics following anterior cruciate ligament reconstruction. Physical Therapy Association of Georgia Annual Fall Meeting; Pine Mountain, GA, October 2015.
44. **Tsai LC**, Cheuy VA, Warren GL, Hammond KE, Xerogeanes JW, Patel A, Powers CM. Quadriceps and hamstring muscle volume following anterior cruciate ligament reconstruction using an allograft: MRI evaluation. American College of Sports Medicine 62nd Annual Meeting; San Diego, CA, May 2015. In *Med Sci Sports Exerc.* 47(5S): 78. 2015.
45. Bhuiyan MA, Kistenberg R, Wang K, Dugenske A, Zhang C, Wang B, **Tsai LC**, McIntire I, Deems J, Butler AJ. Multiple sensor embedded prosthetic sockets with wireless data communication capabilities for improved quality-of-life for transtibial prosthesis wearers. American Academy of Orthotists & Prosthetists Annual Meeting; New Orleans, LA, February 2015.
46. **Tsai LC**, Ren Y, Wang L, Gaebler-Spira DJ, Revivo GA, Zhang LQ. Improved gait function in children with cerebral palsy following an off-axis elliptical training program. American Physical Therapy Association Combined Sections Meeting; Indianapolis, IN, February 2015. (*Podium Presentation*).
47. **Tsai LC**, Ren Y, Wang W, Lee SJ, Kang SH, Gaebler-Spira DJ, Zhang LQ. Off-axis elliptical training to reduce gait abnormalities in children with cerebral palsy. 67th Annual American Academy for Cerebral Palsy and Developmental Medicine Meeting; Milwaukee, WI: October 2013.
48. **Tsai, LC**, Liu SQ, Wu YN, Liu C, Ren Y, Zhang LQ. Changes in passive muscle tension and sarcomere length following stroke. 2013 Annual American Society of Biomechanics Meeting; Omaha, NE: September 2013.
49. **Tsai LC**, Lee SJ, Lin C, Yang A, Ren Y, Gaiger F, Chang AH, Press JM, Zhang LQ. Effectiveness of an off-axis training on improving knee function in individuals with patellofemoral pain. 2012 American Congress of Rehabilitation Medicine Annual Conference; Vancouver, British Columbia, Canada: October 2012. In *Arch Phys Med Rehabil.* 93(10): e13. 2012. (*Podium Presentation*).
50. **Tsai LC**, Pollard CD, Salem GJ, Powers CM. Post-training increased hip and knee flexion during landing decreases tibiofemoral compressive forces in females who have undergone anterior

- cruciate ligament reconstruction. American Physical Therapy Association Combined Sections Meeting; Chicago, IL: February 2012. (*Podium Presentation*).
51. **Tsai LC**, McLean S, Colletti PM, Powers CM. Increased tibiofemoral compressive loads in females who have undergone anterior cruciate ligament reconstruction. 2011 Annual American Society of Biomechanics Meeting; Long Beach, CA: August 2011.
 52. Lyle MA, **Tsai LC**, Valero-Cuevas F, Gregor RJ, Powers CM. Dynamic coordination of leg musculature is associated with agility in high school soccer athletes. 2011 Annual American Society of Biomechanics Meeting; Long Beach, CA: August 2011.
 53. **Tsai LC**, Joiner DG, Powers CM. Altered knee biomechanics persist in females who have undergone ACL reconstruction using an allograft. American College of Sports Medicine 58th Annual Meeting; Denver, CO: May 2011. In *Med Sci Sports Exerc.* 43(5S): 807. 2011.
 54. Hashish R, Samarawickrame S, Wang M-Y, Yu S-Y, **Tsai LC**, Salem GJ. The influence of different marker sets on lower extremity dynamics during walking. American College of Sports Medicine 58th Annual Meeting; Denver, CO: May 2011. In *Med Sci Sports Exerc.* 43(5S): 918. 2011.
 55. Lyle MA, **Tsai LC**, Stearns KM, Valero-Cuevas FJ, Gregor RJ, Powers CM. Male and female soccer athletes perform differently on a test of lower extremity coordination. Herman Ostrow School of Dentistry of USC Research Day; Los Angeles, CA: February 2011.
 56. Yang NH, **Tsai LC**, Powers CM. Biomechanical analysis of knee cartilage stress for individuals with anterior cruciate ligament reconstruction. 2010 Summer Bioengineering Conference; Naples, FL: June 2010.
 57. **Tsai LC**, Lyle MA, Popovich JM, Powers CM. Post-training increases in knee and hip flexion during landing decreases tibiofemoral joint shear and compressive loads. ACL Research Retreat V; Greensboro, NC: March 2010. (*Podium Presentation*).
 58. Sterns KM, Pitch E, Lyle MA, **Tsai LC**, Fisher BE, Powers CM. The effect of lower extremity strength vs. skill acquisition training protocols on corticomotor excitability and hip biomechanics during landing. APTA Combined Sections Meeting; San Diego, CA: February 2010.
 59. **Tsai LC**, Powers CM. Subject-specific anatomic parameters in an EMG-driven musculoskeletal model results in improved knee joint moment predictions when compared to generic and scaled models. 2009 Annual American Society of Biomechanics Meeting; State College, PA: August 2009. (*Podium Presentation*).
 60. **Tsai LC**, Popovich JM, Lyle MA, Powers CM. Subject specific parameters improve joint moment prediction of an EMG-driven knee joint model. 2008 North American Congress on Biomechanics; Ann Arbor, MI: August 2008. (*Podium Presentation*).
 61. **Tsai LC**, Sigward SM, Pollard CD, Fletcher MJ, Powers CM. The effects of fatigue and recovery on knee kinetics and kinematics during side-step cutting. ACL Research Retreat IV; Greensboro, NC: March 2008. (*Podium Presentation*).
 62. **Tsai LC**, Sigward SM, Pollard CD, Fletcher MJ, Powers CM. The effects of fatigue and recovery on knee kinetics and kinematics during side-step cutting. XXI International Society of Biomechanics; Taipei, Taiwan: July 2007. In *J Biomechanics.* 40(S2): S102, 2007. (*Podium Presentation*).

b. Research Support and Grantsmanship

i. Extramural Grants and Funding

1. R01 (1R01AR080154-01), National Institute of Health
Title: Regenerative rehabilitative principles in modulating weight bearing and joint kinematics to delay post-traumatic knee osteoarthritis (score: 24/100; 4 percentile)
05/2022-04/2027 (Target Date); Amount Requested: \$2,397,074
Role: Principal Investigator (30% effort)
2. Research Grant, Georgia Foundation for Physical Therapy
Title: Quadriceps muscle function and knee loading following quadriceps tendon autograft anterior cruciate ligament reconstruction: comparison to the gold standard patella tendon autograft
05/2018 – 04/2020; Amount Awarded: \$10,000
Role: Principal Investigator
3. Pilot Funding Program, Alliance for Regenerative Rehabilitation Research & Training (AR3T; supported by National Institute of Health, P2CHD086843. PI: Ambrosio and Bonninger, University of Pittsburgh) (Re-submission)
Title: Joint load modulation on post-injury knee OA
07/2017 – 06/2019 (1yr no-cost extension); Amount Awarded: \$45,807 (Direct: \$42,414)
Role: Pilot project Principal Investigator
4. RR&D Small Projects in Rehabilitation Research (SPiRE) (Re-submission), Veterans Health Administration. I21RX002372-02
Title: Combined stem cell and rehabilitation therapies for osteoarthritis
07/2017 – 06/2019; Amount Awarded: \$200,000 (GSU Portion: \$44,050)
Role: Co-Investigator (10% effort; PI: Willett)
5. Research Grant, Physical Therapy Association of Georgia
Title: Alterations in knee mechanics and quadriceps muscle function during rehabilitation in adolescent patients following ACL reconstruction
10/2016 – 09/2017; Amount Awarded: \$300
Role: Principal Investigator
6. Research Grant, Physical Therapy Association of Georgia
Title: The effect of lumbopelvic joint manipulation and traditional quadriceps strengthening on knee extensor muscle activation
10/2016 – 09/2017; Amount Awarded: \$150
Role: Co-Investigator (PI: Morelli)
7. Switzer Fellowship, National Institute on Disability and Rehabilitation Research. H133F130031
Title: The effectiveness of an off-axis elliptical training program on improving gait function in children with cerebral palsy
10/2013-09/2014; Amount Awarded: \$65,000
Role: Principal Investigator
8. Advanced Rehabilitation Research Training Grant, National Institute on Disability and Rehabilitation Research, H133P110013
Title: Rehabilitation sciences for engineers and basic scientists: an advanced training program.
10/2011-09/2016; Amount Awarded: N/A
Role: Trainee (Training completed: 12/2011-09/2013)

9. Matching Dissertation Grant, International Society of Biomechanics
Title: Biomechanical analysis of knee joint loading for individuals with anterior cruciate ligament reconstruction
04/2010-03/2011; Amount Awarded: \$5,000
Role: Principal Investigator
10. Student Grant-in-Aid Award, American Society of Biomechanics
Title: Will subject-specific anatomic parameters improve moment prediction of an EMG-driven knee model?
05/2009-04/2010; Amount Awarded: \$2,000
Role: Principal Investigator

ii. Intramural Grants and Funding

1. The Student Technology Fee, Georgia State University
Title: HUMAC NORM dynamometer for muscle strength assessment
08/2019-06/2020; Amount Awarded: \$34,500
Role: Co-Principal Investigator (PI: Brandenberger)
2. Lewis Foundation Research Award, Georgia State University
Title: Effects of knee loading modulation and timing of intervention on cartilage health and gait kinematics in rats after traumatic knee injuries
07/2017-06/2019; Amount Awarded: \$10,000 (*Declined*)
Role: Principal Investigator
3. Research Initiation Grant, Georgia State University
Title: Effects of knee loading modulation and timing of intervention on cartilage degeneration and gait kinematics
07/2017-06/2018; Amount Awarded: \$19,926
Role: Principal Investigator
4. The Student Technology Fee, Georgia State University
Title: Wireless pressure mat for learning of human gait
08/2015-06/2016; Amount Awarded: \$28,493.88
Role: Principal Investigator
5. Intramural Grant, B.F. Lewis College of Nursing and Health Professions, Georgia State University
Title: Cartilage degeneration and functional capacities following knee injuries: the effect of exercise training volume and association with lower limb biomechanics
10/2014-06/2015; Amount Awarded: \$10,470
Role: Principal Investigator

iii. Extramural Non-Funded Proposals

1. R01 (Re-submission), National Institute of Health
Title: Influence of limb weight bearing and joint kinematics on progression of tissue degeneration in post-traumatic knee osteoarthritis (score: 45/100)
Submitted 03/2020; Amount Requested: \$1,964,792 (direct cost)
Role: Principal Investigator (30% effort)

2. R01, National Institute of Health
Title: Influence of limb weight bearing and joint kinematics on progression of tissue degeneration in post-traumatic knee osteoarthritis rehabilitation (score: 49/100)
Submitted 06/2019; Amount Requested: \$1,550,000 (direct cost)
Role: Principal Investigator (30% effort)
1. Magistro Family Foundation Research Grant, Foundation for Physical therapy Research
Title: Critical evaluation of postoperative exercises to optimize care after anterior cruciate ligament reconstruction
Submitted 08/2019; Amount Requested: \$100,000
Role: Co-Principal Investigator (12% effort; PI: Lyle)
2. Scott F. Nadler PASSOR Musculoskeletal Research Grant, Foundation for Physical Medicine and Rehabilitation
Title: Lumbopelvic neuromuscular control and muscle volumes in patients following anterior cruciate ligament reconstruction
Submitted 04/2019; Amount Requested: \$30,000
Role: Co-Investigator (PI: Popovich)
3. Pilot Grants Program, Georgia Clinical & Translational Science Alliance (CTSA)
Title: Critical evaluation of postoperative exercises to optimize care after anterior cruciate ligament reconstruction
Submitted 03/2019; Amount Requested: \$40,000
Role: Co-Principal Investigator (PI: Lyle)
4. Small Business Innovation Research, Department of Defense
Title: Real-time soldier assessment – a wearable system
Submitted 02/2019; Amount Requested: \$162,500 (GSU Portion: \$13,233; \$8,565 direct cost)
Role: Co-Investigator (5% effort; PI: Roos)
5. Imagine, Innovate and Impact (I3) Award, Emory University
Title: Transforming ACL reconstruction clinical outcomes by an innovative update to the standard early postoperative rehabilitation
Submitted 10/2018; Amount Requested: \$150,255
Role: Co-Principal Investigator (PI: Lyle)
6. Veterans Affairs Merit Award (Re-submission), Department of Veterans Affairs (Score: 204/500)
Title: Functional outcomes following stem cell-based joint cartilage regeneration
Submitted 12/2017; Amount Requested: \$1,095,900
Role: Co-Investigator (5% effort; PI: Drissi)
7. Veterans Affairs Merit Award, Department of Veterans Affairs (Score: 236/500)
Title: Functional outcomes following stem cell-based joint cartilage regeneration
Submitted 06/2017; Amount Requested: \$1,095,900
Role: Co-Investigator (5% effort; PI: Drissi)
8. R15 (Re-submission), National Institute of Health
Title: Knee compressive load and muscle function during ACL repair rehabilitation
Submitted 06/2016; Amount Requested: \$290,644 (direct cost)
Role: Principal Investigator (25% effort)
9. RR&D Small Projects in Rehabilitation Research (SPiRE) (I21), Department of Veterans Affairs
Title: Combined stem cell and rehabilitation therapies for osteoarthritis (Score: 233/500)

Submitted 03/2016; Amount Requested: \$200,000 (GSU Portion: \$44,050)
Role: Co-Investigator (10% effort; PI: Willett)

10. Alliance for Regenerative Rehabilitation Research & Training (AR3T) Pilot Funding Program, (supported by National Institute of Health)
Title: Stem cells and joint load modulation on knee oa
Submitted 02/2016; Amount Requested: \$47,762 (awarded for a fellowship of \$17,500 instead)
Role: Principal Investigator
11. R15, National Institute of Health
Title: Knee compressive load and muscle function during ACL repair rehabilitation (score: 69/100)
Submitted 06/2015; Amount Requested: \$299,870 (direct cost)
Role: Principal Investigator (25% effort)
12. Veterans Affairs Merit Award, Department of Veterans Affairs
Title: Monitoring lower limb amputee using embedded sensors and wireless communication
Submitted 10/2014; Amount Requested: \$1,018,628 (direct cost)
Role: Co-Investigator (25% effort; PI: Butler)

c. Other Professional Presentations

1. “*Clinical Challenges following Traumatic Knee Injuries*”. KH-9560 Neuromechanics of Human Locomotion (Fall 2019), Department of Kinesiology and Health, Georgia State University. November 2019.
2. “*Post-Surgical ACL Recovery: New Challenges to Return to Sport*”. imPacT Annual Meeting, Physical Therapy Association of Georgia. March 2019.
3. “*Rehabilitative Principle on Delaying Osteoarthritis following Traumatic Knee Injuries*”. Seminar, Atlanta Department of Veterans Affairs. November 2017.
4. “*Impaired Muscle Function and Altered Joint Loading following Knee Injuries: Implication for Post-Injury Rehabilitation*”. KH-9560 Neuromechanics of Human Locomotion (Fall 2017), Department of Kinesiology and Health, Georgia State University. October 2017.
5. “*What Is the Rehabilitative Principle of Joint Loading Modulation on Delaying Osteoarthritis following Traumatic Knee Injuries?*”. KH-8980 Seminar in Biomechanics (Spring 2017), Department of Kinesiology and Health, Georgia State University. April 2017.
6. “*Joint Loading and Muscle Function following Anterior Cruciate Ligament Reconstruction*”. KH-9560 Neuromechanics of Human Locomotion (Fall 2015), Department of Kinesiology and Health, Georgia State University. November 2015.
7. “*Knee Joint Loading following ACLR: Implications for Joint Health and Post-Surgical Rehabilitation*”. Brownbag Lunchtime Seminar, School of Applied Physiology, Georgia Institute of Technology. March 2015.
8. “*Increased Knee Compressive Loading in Females with Anterior Cruciate Ligament Reconstruction*”. SMPP Seminar, Rehabilitation Institute of Chicago. April 2011.
9. “*Basics of Joint Kinematics & Muscle Anthropometry*”. PT 554 Analytical Anatomy, Division of Biokinesiology & Physical Therapy, University of Southern California. January 2010.

10. “*Biomechanical Analysis of Knee Joint Loading in Individuals with Anterior Cruciate Ligament Reconstruction*”. Biokinesiology Division Seminar, University of Southern California. October 2008.

IV. INSTRUCTION

a. Teaching

- 2017 – Present PT 8100 – Introductory Clinical Research, Department of Physical Therapy, Georgia State University (3 credit hours; Summer; 40-45 students; Role: Instructor)
- 2016 – Present PT 7135 – Therapeutic Application of Physical Agents, Department of Physical Therapy, Georgia State University (2 credit hours; Spring; 36-44 students; Role: Instructor)
- 2015 – Present PT 8999 – Capstone Project in Physical Therapy, Department of Physical Therapy, Georgia State University (2-3 credit hours; Fall and Spring; 10-15 students; Role: Instructor)
- 2015 – Present PT 7825 – Prosthetics and Orthotics, Department of Physical Therapy, Georgia State University (3 credit hours; Summer; 36-44 students; Role: Course Coordinator)
- 2014 – Present PT 7615 – Human Movement Science I, Department of Physical Therapy, Georgia State University (3 credit hours; Fall; 36-45 students; Role: Instructor)
- 2015 – 2016 PT 8600 – Research III, Department of Physical Therapy, Georgia State University (2 credit hours; Fall; 4 students; Role: Instructor)
- 2014 – 2016 PT 7700 – Research II, Department of Physical Therapy, Georgia State University (2 credit hours; Fall; 10-12 students; Role: Instructor)
- 2015 PT 8800 – Research IV, Department of Physical Therapy, Georgia State University (2 credit hours; Summer; 32 students; Role: Instructor)
- 2010 PT 529 – Life Span Motor Control, Division of Physical Therapy & Biokinesiology, University of Southern California (Fall; 90-96 students; Role: Teaching Assistant)
- 2010 PT 574 – Clinical Biomechanics, Division of Physical Therapy & Biokinesiology, University of Southern California (Summer; 90-96 students; Role: Teaching Assistant)
- 2006 – 2009 PT 554 – Analytical Anatomy, Division of Physical Therapy & Biokinesiology, University of Southern California (Spring; 90-96 students; Role: Teaching Assistant)
- 2008 – 2009 PT 514 – Musculoskeletal Gross Anatomy, Division of Physical Therapy & Biokinesiology, University of Southern California (Fall; 90-96 students; Role: Teaching Assistant)
- 2006 – 2008 PT 551 – Therapeutic Application of Physical Agents, Division of Physical Therapy & Biokinesiology, University of Southern California (Summer; 90-96 students; Role: Teaching Assistant)
- 2007 PT 582 – Mechanics of Human Gait, Division of Physical Therapy & Biokinesiology, University of Southern California (Fall; 90-96 students; Role: Teaching Assistant)

b. Student Advisement

i. Student Research

- 01/2021 – Present **DPT Student Research Mentoring**, *Student: Kyle Falvery and Chad Kinshaw*. Title: Changes in knee biomechanics following meniscus tears: A meta analysis. Department of Physical Therapy, GSU (Role: Advisor)
- 01/2021 – Present **DPT Student Research Mentoring**, *Student: Kylie Aiken, Javan Francis, and DeAndra Shields*. Title: Lower extremity mechanics and muscle function following meniscus tears. Department of Physical Therapy, GSU (Role: Advisor)
- 09/2020 – Present **Ph.D. Student Research Mentoring**, *Doctoral Student: Daniel Cottmeyer*. Department of Physical Therapy, GSU (Role: Advisor)
- 01/2020 – 05/2022 **DPT Student Research Mentoring**, *Student: DeVaughn M. Davis, Elihu P. Igbinadolor, Hannah E. Taylor, and Sydney W. Wright*. Title: Effects of modulating gait speed on lower extremity kinetics in patients following ACL reconstruction. Department of Physical Therapy, GSU (Role: Advisor)
- 01/2020 – 05/2022 **DPT Student Research Mentoring**, *Student: Daniel Cottmeyer and Brian Hoang*. Title: A meta-analysis to determine the effects of exercise interventions on modulating knee adduction moment during walking. Department of Physical Therapy, GSU (Role: Advisor)
- 01/2019 – 05/2021 **DPT Student Research Mentoring**, *Student: Mallory Law and Macie Sims*. Title: Determine the biomechanical factors responsible for persistent asymmetry in knee joint loading following ACL reconstruction. Department of Physical Therapy, GSU (Role: Advisor)
- 07/2018 – 05/2020 **Dissertation Committee**, *Doctoral Student: Diego M Ferreira, M.S.* Department of Kinesiology and Health, GSU (Role: Committee Member)
- 07/2017 – 05/2020 **Dissertation Committee**, *Doctoral Student: Rebecca J. Ban, M.S.* Department of Kinesiology and Health, GSU (Role: Committee Member)
- 01/2018 – 05/2020 **DPT Student Research Mentoring**, *Student: Emma Davis, Olivia Hoey, Madeleine Kokx, Grace White, and Abigail Woodard*. Title: Examine the longitudinal changes in quadriceps muscle sizes and determine biomechanical factors contributing to limb asymmetry in knee loading following ACL reconstruction. Department of Physical Therapy, GSU (Role: Advisor)
- 01/2018 – 05/2020 **DPT Student Research Mentoring**, *Student: Kelsey Harris and Linh Nguyen*. Title: A meta-analysis to determine the effects of high heel shoes on knee kinematics and kinetics during walking. Department of Physical Therapy, GSU (Role: Advisor)
- 01/2017 – 05/2019 **DPT Student Research Mentoring**, *Student: Jonathan Brown, Peyton Chambliss, Jake Jensen, Kristin Lauterbach, and Ashley Miller*. Title: Determine the risk factors of secondary ACL tears in adolescents and identify clinically accessible variables to help monitor knee joint loading in ACL patients. Department of Physical Therapy, GSU (Role: Advisor)
- 10/2016 – 07/2018 **Dissertation Committee**, *Doctoral Student: Susan A. Basile, M.S.* Department of Kinesiology and Health, GSU (Role: Committee Member)

- 04/2015 – 07/2018 **Dissertation Committee**, *Doctoral Student: Matt J. Beerse, M.S.* Department of Kinesiology and Health, GSU (Role: Committee Member)
- 01/2016 – 05/2018 **DPT Student Research Mentoring**, *Student: Katelyn Corbin, Jason Kawamura, and Ravi Patel*; Title: Limb asymmetry in individual quadriceps muscle sizes and Y-balance test performance following ACL Reconstruction. Department of Physical Therapy, GSU (Role: Advisor)
- 01/2016 – 05/2018 **DPT Student Research Mentoring**, *Student: Katherine Hamblin and Christopher Jeanfreau*. Title: A meta-analysis to determine factors explaining varying knee extensor strength post ACL reconstruction. Department of Physical Therapy, GSU (Role: Advisor)
- 01/2015 – 05/2017 **DPT Student Research Mentoring**, *Student: Tyler Balfour, Brian Talley, and Caroline Waters*. Title: Influences of graft choices, quadriceps strength and activation on landing hip and knee mechanics in persons following ACL reconstruction. Department of Physical Therapy, GSU (Role: Advisor)
- 02/2016 – 11/2016 **Post-Doctoral Fellow Mentoring**, *Fellow: Dr. Sandra Mara Meireles Adolph, PhD*, Universidade Federal de São Paulo, Brazil (completed; Role: Supervisor)
- 01/2014 – 05/2016 **DPT Student Research Mentoring**, *Student: David Buuck, Anisha Patel, Gennady Piletsky, and Anthony Suarez*. Title: Associations of MRI-measured thigh muscle volumes with landing knee biomechanics. Department of Physical Therapy, GSU (Role: Advisor)

ii. Student Honor/Awards/Scholarships

- 04/2021 **Lewis College Student Research Award**, Georgia State University (People's Choice Award; awarded to *Kylie A. Aiken, SPT; Javan I. Francis, SPT; and DeAndra M. Shields, SPT*; Role: Research Advisor)
- 03/2021 **Physical Therapy Student Research Award**, Georgia State University (awarded to *Mallory A. Law, SPT*; Role: Research and Academic Advisor)
- 04/2020 **Lewis College Student Research Award**, Georgia State University (1st Place; awarded to *Mallory A. Law, SPT; Elihu P. Igbinalolor, SPT; and DeV Vaughn M. Davis, SPT*; Role: Research Advisor)
- 04/2020 **Lewis College Student Research Award**, Georgia State University (People's Choice Award; awarded to *Macie M. Sims, SPT; Sydney W. Wright, SPT; and Hannah E. Taylor, SPT*; Role: Research Advisor)
- 03/2020 **Student Research Award**, Southeast Chapter American College of Sports Medicine (awarded to *Mallory A. Law, SPT*; Role: Research and Academic Advisor)
- 03/2020 **Physical Therapy Student Research Award**, Georgia State University (awarded to *Emma M. Davis, SPT and Grace M. White, SPT*; Role: Research Advisor)
- 01/2020 **Student Research Award**, Physical Therapy Association of Georgia (awarded to *Mallory A. Law, SPT*; Role: Research and Academic Advisor)
- 01/2020 **Research Grant**, Physical Therapy Association of Georgia (awarded to *Macie M. Sims, SPT*; Role: Research Advisor)

- 10/2019 **Alpha Eta Student Research Award**, Alpha Eta National Honor Society (awarded to *Emma M. Davis, SPT*; Role: Research Advisor)
- 03/2019 **Georgia Foundation for Physical Therapy Student Scholarship** (awarded to *Grace M. White, SPT*; Role: Research and Academic Advisor)
- 03/2019 **Physical Therapy Student Research Award**, Georgia State University (awarded to *Jake C. Jensen, SPT*; Role: Research Advisor)
- 01/2019 **Research Grant**, Physical Therapy Association of Georgia (awarded to *Grace M. White, SPT*; Role: Research and Academic Advisor)
- 10/2018 **Alpha Eta Student Research Award**, Alpha Eta National Honor Society (awarded to *Jonathan J. Brown, SPT*; Role: Research Advisor)
- 04/2018 **Lewis College Student Research Award**, Georgia State University (1st Place; awarded to *Jake C. Jensen, SPT*; *Ashley L. Miller, SPT*; *Emma M. Davis, SPT*; and *Madeleine L. Kokx, SPT*; Role: Research Advisor)
- 03/2018 **Physical Therapy Student Research Award**, Georgia State University (awarded to *Katelyn N. Corbin, SPT*; Role: Research and Academic Advisor)
- 01/2018 **Student Research Award**, Physical Therapy Association of Georgia (awarded to *Jake C. Jensen, SPT*; Role: Research Advisor)
- 01/2018 **Research Grant**, Physical Therapy Association of Georgia (awarded to *Ashley M. Miller, SPT*; Role: Research Advisor)
- 10/2017 **Alpha Eta Student Research Award**, Alpha Eta National Honor Society (awarded to *Katelyn N. Corbin, SPT*; Role: Research and Academic Advisor)
- 04/2017 **Lewis School Student Research Award**, Georgia State University (1st Place; awarded to *Katelyn N. Corbin, SPT*; *Ashley L. Miller, SPT*; and *Jake Jensen, SPT*; Role: Research Advisor)
- 03/2017 **Physical Therapy Student Research Award**, Georgia State University (awarded to *Carly R. Waters, SPT*; Role: Research and Academic Advisor)
- 10/2016 **Georgia Foundation for Physical Therapy Student Scholarship** (awarded to *Caroline R. Waters, SPT*; Role: Research and Academic Advisor)

V. SERVICE

- 06/2019 – Present Research Workgroup Committee, American Physical Therapy Association Georgia (Role: Chair: 05/2020-present; Member: 06/2019-Present)
- 07/2017 – Present Institutional Animal Care and Use Committee (IACUC), Georgia State University (Role: Member)
- 08/2016 – Present Research Committee, Byrdine F. Lewis College of Nursing and Health Professions, GSU (Role: Chair: 09/2018-04/2020; Member: 08/2016-Present)
- 08/2015 – Present Admissions Committee, Department of Physical Therapy, GSU (Role: Member: 05/2018-03/2020; Reviewer and Interviewer: 08/2015-Present)
- 02/2014 – Present Research Committee, Department of Physical Therapy, GSU (Role: Chair)

- 02/2014 – Present Curriculum Committee, Department of Physical Therapy, GSU (Role: Member)
- 08/2021 Promotion and Tenure Committee, Department of Nutrition, Byrdine F. Lewis College of Nursing and Health Professions, GSU (Role: Member)
- 09/2020 Promotion and Tenure Committee, Department of Nutrition, Byrdine F. Lewis College of Nursing and Health Professions, GSU (Role: Member)
- 02/2015 – 09/2017 Georgia State Undergraduate Research Conference, GSU (Role: Reviewer/Judge)
- 04/2015 – 08/2017 Faculty Appeals Committee, Byrdine F. Lewis College of Nursing and Health Professions, GSU (Role: Chair: 08/2016-08/2017; Member: 04/2015-07/2016)
- 08/2016 – 11/2016 Faculty Search Committee for the Department of Occupational Therapy, Byrdine F. Lewis College of Nursing and Health Professions, GSU (Role: Member)
- 08/2015 – 08/2016 Student Retention Committee, Department of Physical Therapy, GSU (Role: Member)

VI. PROFESSIONAL AND ORGANIZATION ACTIVITIES

a. Membership

- 2016 – Present Alpha Eta Honor Society
- 2016 – Present Physical Therapy Association of Georgia
- 2016 – Present American Physical Therapy Association (Physical Therapy Membership)
- 2011 – Present American College of Sports Medicine
- 2008 – Present American Society of Biomechanics
- 2007 – Present International Society of Biomechanics
- 2014 – 2016 American Physical Therapy Association (Faculty Partner Membership)
- 2012 – 2013 American Congress of Rehabilitation Medicine

b. Grant Reviewer

- 04/2019 – 06/2019 Training in Grantsmanship for Rehabilitation Research (TIGRR)
- 03/2019 National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), Washington, DC
- 03/2019 Georgia Foundation for Physical Therapy, Smyrna, GA
- 05/2017 Department of Physical Therapy, University of Nevada, Las Vegas, NV
- 04/2017 National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR), Washington, DC

c. Journal Editor

- 2020 – Present Frontiers in Rehabilitation Sciences (Review Editor)

d. Manuscript/Abstract Reviewer

2021 – Present	Physical Therapy in Sport
2021 – Present	IEEE Transactions on Biomedical Engineering
2020 – Present	Osteoarthritis and Cartilage
2018 – Present	American College of Sports Medicine – Biomechanics Interest Group
2018 – Present	Journal of Biomechanics
2017 – Present	Journal of Orthopaedic Research
2016 – Present	American Physical Therapy Association - Sports & Research Sections
2015 – Present	International Journal of Sports Medicine
2015 – Present	Medicine and Science in Sports and Exercise
2014 – Present	Journal of Applied Physiology
2014 – Present	American Journal of Sports Medicine
2013 – Present	Scandinavian Journal of Medicine and Science in Sports
2013 – Present	American Society of Biomechanics
2012 – Present	Journal of Applied Biomechanics
2012 – Present	Clinical Anatomy

VII. HONORS AWARDS AND RECOGNITIONS

01/2019	Nominee , Early Career Investigator Award, Biomechanics Special Interest Group, American Physical Therapy Association
01/2019	Mentee , Training in Grantsmanship for Rehabilitation Research (TIGRR)
10/2018	Travel Award , International Symposium on Regenerative Rehabilitation
02/2017	Faculty Member Induction , Alpha Eta Honor Society
03/2013	OpenSim Travel Award , National Center for Simulation in Rehabilitation Research
02/2012	Marilyn Gossman Graduate Student Seminar Award , American Physical Therapy Association
05/2011	Golden Cane Award , University of Southern California
11/2010	Excellence in Teaching Award , University of Southern California
08/2010	Jacquelin Perry Scholar Award , University of Southern California
02/2010	Biokinesiology Student Research Award , University of Southern California
08/2009	Co-Chair , Session of Computational Biomechanics, 2009 Annual American Society of Biomechanics Meeting, State College, PA
05/2008	Outstanding Mentorship Award , University of Southern California
02/2008	Biokinesiology Student Research Award , University of Southern California

- 05/2006 **Outstanding Thesis Award**, University of North Carolina at Chapel Hill
- 05/2005 **Mary Clyde Singleton Award**, University of North Carolina at Chapel Hill
- 09/2003 **Merit Scholarship**, University of North Carolina at Chapel Hill