

Curriculum Vitae

SZU-HUA (TERESA) CHEN

Motion Analysis Lab
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EDUCATION

- Anticipated in 2019** **Ph.D. Candidate in Human Physiology, University of Oregon (GPA: 4.03)**
 Emphases: Biomechanics, Motion Analysis, Balance Control, Neuromechanics
 Chair: Li-Shan Chou, Ph.D.
- 2012** **M.S. in Physical Therapy, National Taiwan University (GPA: 3.96)**
 Emphases: Orthopedic Rehabilitation, Sports Physical Therapy, Ultrasonography
 Advisors: Huei-Ming Chai, Ph.D., PT & Shwu-Fen Wang, Ph.D., PT
- 2010** **B.S. in Physical Therapy, National Taiwan University (GPA: 4.00)**

GRANT

- Awarded**
 2017 Professional Training Opportunities Program, *Northwest Center for Occupational Health and Safety* (Principal Investigator) **\$5,805**
- Not awarded
 2018 The DLF Research Scholarship, *The De Luca Foundation* (Principal Investigator) **\$15,000**

AWARD, HONORS, SCHOLARSHIP

- 2019 Ursula (Sue) Moshberger Scholarship, *Department of Human Physiology, University of Oregon*
- 2018 Ursula (Sue) Moshberger Scholarship, *Department of Human Physiology, University of Oregon*
- 2018 Outstanding Reviewer, *Gait & Posture*
- 2017 Student Travel Award, *ACSM Biomechanics Interest Group*
- 2016-2018 Government Fellowship for Studying Abroad, *Ministry of Education, Taiwan (\$16,000/year)*
- 2015-present Graduate Teaching Fellowship, *University of Oregon*

PUBLICATIONS

Peer Reviewed Journal Articles

- [3] **Chen, S.-H.**, Lo, O.-Y., Kay, T., & Chou, L.-S. (2018). Concurrent Phone Texting Alters Crossing Behavior and Induces Gait Imbalance During Obstacle Crossing. *Gait & Posture*, 62, 422–425.
- [2] **Chen, S.-H.** and Chai, H.-M. (2017). The Role of Physical Therapy in Sports Performance. *Formosan Journal of Medicine*, 21(3), 268-275.
- [1] Catena, R.D., **Chen, S.-H.**, & Chou, L.-S. (2017). Does the Anthropometric Model Influence Whole-Body Center of Mass Calculations in Gait? *Journal of Biomechanics*, 59, 23-28.

Book

- [1] Extensibility of the Gastrocnemius Muscle-Tendon Unit After Different Static Stretching Techniques Using Ultrasonography (2012). **[master thesis]**

Manuscripts in Review/Preparation

- [4] **Chen, S.-H.** and Chou, L.-S. (2019). Fatigue Increases the Risk of Dual-Task Obstacle-Crossing.
- [3] **Chen, S.-H.** and Chou, L.-S. (2019). Dual-Task Gait Balance Control After A Fatiguing Protocol.
- [2] Pitt, W., **Chen, S.-H.**, and Chou, L.-S. (2019) Using IMU-Based Biomechanical Markers to Monitor Gait Balance Control Recovery in Acutely Concussed Individuals. *Annals of Biomedical Engineering*. (In Review)
- [1] Pitt, W., **Chen, S.-H.**, Davidson, C, Stowell, C, and Chou, L.-S. (2019) Sensitivity and Specificity of IMU and Neurocognitive Measures to Detect Post-Concussion Gait Imbalance in Dual-Task Walking. *American Journal of Sports Medicine*.

SELECTED PRESENTATIONS

Podium Presentation

- [6] **Chen, S.-H.** and Chou, L.-S. (2018, May). Fatigue Affects Balance Control Differently During Single- and Dual-Task Walking in Older Workers. *14th Annual Northwest Biomechanics Symposium* (Bellingham, WA).
- [5] **Chen, S.-H.** and Chou, L.-S. (2017, October). Effects of Working Memory and Muscle Fatigue on Dynamic Gait Balance Control in Older Workers. *2017 Northwest Occupational Health Conference* (Spokane, WA).
- [4] Chou, L.-S., **Chen, S.-H.** & Lo, O.-Y. (2017, June). Concurrent Phone Texting Alters Crossing Behavior and Induces Gait Imbalance during Obstacle Crossing. *World Congress of International Society of Posture and Gait Research* (Lauderdale, FL).
- [3] **Chen, S.-H.**, Taylor, J. & Chou, L.-S. (2017, May). Lower Limb Muscle Fatigue Perturbs Gait Balance during Dual-Task Walking. *ACSM's 64th Annual Meeting* (Denver, Colorado)
- [2] **Chen, S.-H.**, Lo, O.-Y., Kay, T., & Chou, L.-S. (2016, July). Effect of Smartphone Texting on Gait Characteristics During Obstacle Crossing. *XIV International Symposium on 3D Analysis of Human Movement* (Taipei, Taiwan).
- [1] **Chen, S.-H.**, Chai, H.-M., Jhu, J.-L., & Wang, S.-F. (2009, March). Contraction Ability of Transversus Abdominis in Elite Fin Swimmers. *The 58th Academic Conference of the Physical Therapy Association of ROC (Taiwan)* (Taipei, Taiwan)

Poster Presentation (* indicates mentee)

- [8] **Chen, S.-H.** and Chou, L.-S. (2019, July). A Preliminary Investigation on Gait Balance Control after Fatigue: Effects of Age and Cognitive Demand. *43th Annual Conference of the American Society of Biomechanics* (Calgary, Canada).
- [7] **Chen, S.-H.**, Taylor, J. *, & Chou, L.-S. (2018, August). Fatigue Affects Balance Control Differently During Single- and Dual-Task Walking in Older Workers. *42th Annual Conference of the American Society of Biomechanics* (Rochester, MN).
- [6] **Chen, S.-H.**, Taylor, J. *, & Chou, L.-S. (2017, August). Lower Extremity Muscle Fatigue Changes Obstacle-Crossing Behaviors and Working Memory Performance. *41th Annual Conference of the American Society of Biomechanics* (Boulder, CO).
- [5] **Chen, S.-H.**, Taylor, J. *, & Chou, L.-S. (2017, June). Effect of Muscle Fatigue on Gait Balance Control During Dual-Task Walking. *World Congress of International Society of Posture and Gait Research* (Lauderdale, FL).
- [4] Smith, S. *, **Chen, S.-H.**, & Chou, L.-S. (2017, May). Effects of Lower Extremity Muscle Fatigue on Dual-Task Obstacle-Crossing in Active and Inactive Young Adults. *13th Annual Northwest Biomechanics Symposium* (Eugene, OR).
- [3] Taylor, J. *, **Chen, S.-H.**, & Chou, L.-S. (2017, May). Lower Extremity Muscle Fatigue Changes Gait Control and Working Memory Performance in Both Single- and Dual-Tasks. *13th Annual Northwest Biomechanics Symposium* (Eugene, OR).

- [2] **Chen, S.-H.** and Chai, H.-M. (2012, September). Intrarater Reliability of Measurement of Tissue Length of Gastrocnemius Musculotendinous Unit Using Panoramic Ultrasonography. *The 65th Academic Conference of the Physical Therapy Association of ROC (Taiwan)* (Kaohsiung, Taiwan).
- [1] Lin, S.-J., **Chen, S.-H.**, Chai, H.-M., Jan, M.-H., Jiang, C.-C. Effects of proprioceptive neuromuscular facilitation stretching technique on knee joint function in people following unilateral total knee arthroplasty. *The 16th International the World Confederation for Physical Therapy Congress* (Amsterdam, Netherland).

Professional Presentations

- [2] Effects of Fatigue on Balance Control: An Occupational Biomechanics Study. (2018, April). *National Biomechanics Day, University of Oregon*.
- [1] Application of Biomechanics on Industrial Design. (2017, July). *Tatung University* (Taipei, Taiwan).

MENTORING EXPERIENCES

2015-2017	Jocelyn Taylor , <i>Department of Biology, University of Oregon</i> Grant: Undergraduate Research Opportunity Program, <i>University of Oregon</i> , \$1,000
2017-present	Spencer Smith , <i>Department of Human Physiology, University of Oregon</i> Grant: Undergraduate Research Opportunity Program, <i>University of Oregon</i> , \$1,000 Center of Undergraduate Research and Engagement Travel Award , <i>University of Oregon</i>

TEACHING EXPERIENCES

<i>University of Oregon, Eugene, OR</i>	
Human Anatomy (HPHY321, HPHY323, HPHY325)	
Lab Instructor	2015-present
Assignment Coordinator	2015-2017
Lab Facilitator + Leaders of Lab Tours to High Schoolers	2017-2018
Teaching Assistant Coordinator	2018-2019
<i>Hungkuang University, Taichung, Taiwan</i>	
Orthopedic Physical Therapy: Lecturer, Case Study Leader	2015
<i>National Taiwan University, Taipei, Taiwan</i>	
Biomechanics, Kinesiology, Surface Anatomy, Elastic-Adhesive Taping: Teaching Assistant	2010-2012

SELECTED CLINICAL EXPERIENCES

<i>National Sports Training Center, Kaohsiung, Taiwan</i>	2013-2014
Physical Therapist in Olympic Weightlifting/Track and Field Teams	
✓ Implemented preventive programs, applied protective devices, developed and carried out rehabilitation program, set timetable for returning to play	
<i>Chinese Taipei Olympic Committee, Taipei, Taiwan</i>	2013-2014
Physical Therapist in Olympic Weightlifting/Track and Field Teams	
✓ Assisted athletes in participation of international sports competitions	

SELECTED PROFESSIONAL EXPERIENCES

<i>Taiwan Physical Therapy Association, Taipei, Taiwan</i>	2015
Deputy Secretary- General	
✓ Initiated a collaborative proposal in physical therapy development with 200+ physical therapists, collaborated with staff in execution of national academic conferences, administered publication of Formosan Journal of Physical Therapy (FJPT) quarterly	
<i>Pergolas Medical Technology, Taipei, Taiwan</i>	2012-2013
Project Manager	
✓ Monitored development of medical products, coordinated with researchers, physicians and manufacture to conduct clinical studies	

SERVICE**Editorial Service**

<i>Ad-Hoc</i> Reviewer, <i>Gait & Posture</i>	2018-present
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Institutional Service

Undergraduate Academic Advisor, <i>University of Oregon</i>	2018
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Laboratory Safety Committee, <i>University of Oregon</i>	2018-present
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Extracurricular Service

Co-founder of SKY@UO, <i>University of Oregon</i>	2018-present
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LICENSES/ CERTIFICATES

Physical Therapist	State of New York, USA, since 2016
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	Taiwan, since 2010
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CPR/AED & First Aid	MEDIC First Aid
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PROFESSIONAL ASSOCIATIONS

Member	American Society of Biomechanics
Member	American College of Sports Medicine
Member	International Society of Posture and Gait Research

RESEARCH PACKAGES

Proficient	SPSS, G*power, Motion Analysis, Cortex, Dynamometer, Microsoft Office Suite, Zotero, Cognitive Test, SuperLab, Biodex, R & Rstudio
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Familiar	Matlab, SPSS Amos, Visual 3D, Git & Github, Electromyography
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SELECTED COURSEWORK

Statistics	Educational Statistics (<i>EDUC614, University of Oregon</i>)	Winter 2016
	Apply Statistic Design & Analysis (<i>EDUC640, University of Oregon</i>)	Spring 2016
	Multiple Regression (<i>EDUC642, University of Oregon</i>)	Fall 2017
	Apply Multivariate Analysis (<i>EDUC644, University of Oregon</i>)	Winter 2018
	Hierarchical and Mixed Effects (<i>DataCamp</i>)	Fall 2018
Neuroscience	Learning & Memory (<i>PSY533, University of Oregon</i>)	Fall 2016
	Movement Disorders (<i>HPHY534, University of Oregon</i>)	Winter 2017
Data Science	Introduction to Data Science with R (<i>EDLD610, University of Oregon</i>)	Fall 2018
	Communicating and Transforming Data (<i>EDLD610, University of Oregon</i>)	Winter 2019
	Functional Programming with R (<i>EDLD610, University of Oregon</i>)	Spring 2019

PROFESSIONAL DEVELOPMENT

2018	Instructor Training: Tai Ji Quan: Moving for Better Balance® (TJQMBB), <i>Oregon Research Institute</i>
2018	Teaching Academy, <i>Department of Human Physiology, UO</i>
2017	Teaching Academy, <i>Department of Human Physiology, UO</i>
2017	Teaching Academy, <i>Department of Human Physiology, UO</i>
2016	Teaching Academy, <i>Department of Human Physiology, UO</i>
2016-2018	Neurophysiology Journal Club, <i>Department of Human Physiology, UO</i>
2015	Teaching Academy, <i>Department of Human Physiology, UO</i>
2015-2018	Biomechanics Journal Club, <i>Department of Human Physiology, UO</i>