

# Curriculum Vitae

## Shawn C. Roll, PhD, OTR/L, RMSKS, FAOTA, FAIUM

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### Academic Positions

#### **University of Southern California, Chan Division of Occupational Science and Occupational Therapy**

*Associate Professor (Tenured), 2017 – Current*

*Director, PhD Program in Occupational Science, 2017 – Current*

*Director, Musculoskeletal Sonography and Occupational Performance Research Lab, 2013 – Current*

*Assistant Professor, 2011 – 2017*

#### **The Ohio State University, School of Allied Medical Professions**

*Graduate Research Assistant, 2008 – 2011*

*Graduate Teaching Associate, 2007 – 2008*

### Education

#### **The Ohio State University**

**Ph.D. in Health and Rehabilitation Sciences, 2011**

**Graduate Interdisciplinary Specialization in College and University Teaching**

*Dissertation: Relationship of ultrasonographic physiologic changes to personal factors and psychosocial stressors in the development and diagnosis of carpal tunnel syndrome. Advisor: Kevin D. Evans, PhD*

#### **The Ohio State University**

**M.S. in Allied Health Professions, 2006**

**Minor in Research Methods in Human Resources Development**

*Thesis: Discovery of interprofessional perceptions of Ohio Bureau of Workers' Compensation vocational rehabilitation professionals during the provision of physical rehabilitation services for injured workers. Advisor: Sharon Flinn, PhD*

#### **The Ohio State University**

**B.S. in Allied Health Professions (Occupational Therapy), Magna Cum Laude with Distinction, 2002**

*Honors Thesis: Office ergonomics: A university departmental study. Advisor: Sandra Rogers, PhD*

### Licenses and Certifications

**California Occupational Therapist # 12323** (expires 9/30/23)

**Ohio Occupational Therapist # 5928** (expires 6/30/25)

**Registered Occupational Therapist (NBCOT) # 1064868** (expires 3/30/26)

**Registered Musculoskeletal Sonographer (ARDMS) # 168487** (expires 12/31/23)

**Certified Work Capacity Evaluator # 900615** (8/1/05-7/31/15)

### Research Interests

- Understanding the complexities of occupational engagement and performance; in particular, the impact of interactions among individuals, daily activities, and the physical, social, and organizational environments on health and well-being
- Enhancing the assessment, prevention, and treatment of musculoskeletal disorders with a focus on work-related conditions of the upper extremities and the use of sonographic imaging

### Academic Profiles

**ORCID:** [0000-0002-4202-396X](https://orcid.org/0000-0002-4202-396X)

**Web of Science ResearcherID:** [C-5246-2011](https://orcid.org/C-5246-2011)

**MyNCBI Bibliography:** <https://www.ncbi.nlm.nih.gov/myncbi/shawn.roll.1/bibliography/public/>

**Google Scholar:** <https://scholar.google.com/citations?user=SAu5q1oAAAAJ&hl=en>

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**GRANTS, CONTRACTS, and OTHER RESEARCH FUNDING**

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**Total Career Funding: \$7,028,089****External – Federal and Foundation Funding*****Principal Investigator and Co-Principal Investigator (\$5,996,047)***

- 1. Detecting and mapping stress patterns across space and time: Multimodal modeling of individuals in real-world physical and social work environments**  
Sponsor: IIS-2204942, National Science Foundation (NSF), Smart and Connected Health Program  
Role: Principal Investigator  
Percentage of Effort: 10%  
Total Costs: \$1,099,995  
Status: Funded, September 2022 – August 2026  
Overall Goals: This project aims to describe individualized experiences of stress and develop multimodal models using a wide range of bio-behavioral, environmental, and activity engagement sensing technologies to inform personalized, automated, or technology-supported intervention approaches to stress management as workers engage in their daily work.
- 2. Demolishing barriers to democratize future construction operations by providing multi-sensory capabilities for effective remote work**  
Sponsor: ECCS-2222572, National Science Foundation (NSF), Future of Work at the Human-Technology Frontier Program  
Role: Co-Principal Investigator  
Percentage of Effort: 10%  
Total Costs: \$1,799,999  
Status: Funded, October 2022 – September 2026  
Overall Goals: This project aims to integrate existing and novel technologies to create a multi-sensory teleoperation workstation to promote safe effective construction work and increase diversity and inclusion in the construction workforce.
- 3. Mitigating risk and promoting occupational safety and health when developing and integrating AI in the workplace**  
Sponsor: 22IPA-2216235, National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control (CDC)  
Role: Governmental Assignee / Principal Investigator  
Percentage of Effort: 15%  
Total Costs: \$30,815  
Status: Funded, September 2022 – August 2023  
Overall Goals: This project aims to identify hazards of artificial intelligence (AI) in the workplace, examine concerns related to situational awareness, describe evidence-based practices for training, identify factors affecting acceptance and trust of technologies, and provide preliminary framework for assessing occupational health and safety of novel AI in the workplace.
- 4. Documenting progression of acute to chronic musculoskeletal injuries: A national survey of ultrasound users**  
Sponsor: Society for Diagnostic Medical Sonography Foundation  
Role: Co-Principal Investigator  
Percentage of Effort: 10%  
Total Costs: \$50,817  
Status: Funded, May 2022 – December 2022  
Overall Goals: This study built a national registry of ultrasound users to examine the multifaceted contributors to work-related injuries among workers and identify solutions to promote health and well-being in the workforce.
- 5. Symbiotic coevolution of intelligent office desks and human users to promote productivity, health, and wellness**  
Sponsor: CMMI-1763134, National Science Foundation (NSF), Mind Machine and Motor Nexus Program  
Role: Co-Principal Investigator  
Percentage of Effort: 10%  
Total Costs: \$687,100  
Status: Funded, August 2018 – December 2022  
Overall Goals: This project envisioned the emergence of an intelligent workstation that learns preferences and patterns through sensing, feedback, and control to adjust the workstation and moderate poor worker behaviors.

**6. Sonographic tissue morphology in early-stage work-related median nerve pathology**

Sponsor: R01-OH010665, National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control (CDC)

Role: Principal Investigator

Percentage of Effort: 50%

Total Costs: \$2,324,186

Status: Funded, October 2015 – September 2020

Overall Goals: This study evaluated impacts of intensive hand activity on tissue morphology, discomfort, and occupational performance to develop screening techniques for early detection of median nerve injury in the workplace.

**7. Effects of mind-body interventions on stress, anxiety, and pain in hand therapy patients**

Sponsor: American Society of Hand Therapists, Founders Grant

Role: Principal Investigator

Percentage of Effort: 20%

Total Costs: \$3,135

Status: Funded, July 2014 – June 2015

Overall Goals: The aim of this project was to evaluate the proximal effects of mindfulness and visual biofeedback on stress, anxiety and pain in patients receiving hand therapy for hand dysfunction due to an orthopedic injury.

**Project Principal Investigator (\$337,614)****8. Integration of occupational therapy and sonographic imaging in research and clinical practice**

Sponsor: K12-HD055929, National Center for Medical Rehabilitation Research (NCMRR), National Institute of Child Health and Human Development (NICHD/NIH), Rehabilitation Research Career Development (RRCD) Program

Role: Project PI (PI: K Ottenbacher)

Percentage of Effort: 75%

Total Sub-Award Costs: \$337,614

Status: Funded, September 2011 – August 2016

Overall Goals: This project supported skill development in qualitative inquiry and musculoskeletal sonography to evaluate the translation of sonography into a tool for prevention, assessment, and rehabilitation of musculoskeletal disorders.

**Co-Investigator, Collaborator, and Mentor (\$403,223)**

(\*asterisk indicates student mentee)

**9. Informing a precision medicine approach to post-surgical flexor tendon rehabilitation using sonography**

Sponsor: American Hand Therapy Foundation

Role: Co-Investigator / Mentor (PI: S. Takata\*)

Total Costs: \$6,350

Status: Funded, July 2019 – June 2023

Overall Goals: This project aims to identify the most sensitive sonographic measures associated with recovery for patients who have undergone repair of flexor tendons in the hand and to identify markers of poor recovery, all of which can be used to inform treatment planning to reduce post-surgical complications and improve rehabilitation.

**10. Standardizing a rigorous Doppler sonographic protocol to examine intraneural blood flow within the median nerve**

Sponsor: Society for Diagnostic Medical Sonography Foundation

Role: Co-Investigator / Mentor (PI: B. Yao\*)

Total Costs: \$4,000

Status: Funded, January 2022 – December 2022

Overall Goals: This project developed and validated a standardized imaging protocol for measuring blood flow within the median nerve and identified the effects of environmental conditions and engaging in various occupational activities.

**11. Automated detection of stress in offices using machine learning**

Sponsor: UCLA, Southern California NIOSH Education and Research Center

Role: Co-Investigator / Mentoring Committee (PI: M. Awada\*)

Total Costs: \$6,585

Status: Funded, August 2021 – July 2022

Overall Goals: This study mimicked office work stressors to examine automated stress detection and identify physiological and behavioral features used to refine and establish generalized stress detection algorithms with high accuracies.

- 12. Novel precision medicine approach to advance rehabilitation of surgically repaired tendons of the hand**  
Sponsor: F31-AR074894, National Institute for Arthritis and Musculoskeletal and Skin Disorders (NIAMS/NIH)  
Role: Sponsor / Lead Mentor (PI: S. Takata\*)  
Total Costs: \$103,454  
Status: Funded, August 2019 – January 2022  
Overall Goals: This predoctoral fellowship provided training in sonographic image acquisition/analysis and research methods, as a means for evaluating the healing and recovery process in individuals who have undergone repair of flexor tendons in the hand and identifying the most sensitive measures associated with recovery across phases of rehabilitation.
- 13. Development of a sonographic image acquisition and analysis protocol for surgically repaired flexor tendons of the hand**  
Sponsor: Society for Diagnostic Medical Sonography Foundation  
Role: Co-Investigator / Mentor (PI: S. Takata\*)  
Total Costs: \$5,000  
Status: Funded, April 2019 – December 2021  
Overall Goals: This project aimed to develop a reliable sonographic image acquisition and analysis protocol to evaluate morphologic characteristics of the recovery process in individuals who have undergone repair of flexor tendons in the hand and identify the most sensitive measures associated with recovery across phases of rehabilitation.
- 14. Quantifying sonographic changes in upper extremity tissue integrity following application of negative pressure in patients with systemic sclerosis: A feasibility study**  
Sponsor: Lymphatouch, Inc  
Role: Consultant (PI: Susan Murphy)  
Total Costs: \$9,000  
Status: Funded, March 2019 – February 2020  
Overall Goals: This feasibility study determined the optimal sonographic methods relevant to upper extremity outcomes in treatment for patients with systemic sclerosis.
- 15. Integrating mindfulness-based interventions with outpatient rehabilitation in hand therapy**  
Sponsor: California Foundation for Occupational Therapy  
Role: Mentor (PI: M. Hardison\*)  
Total Costs: \$3,000  
Status: Funded, October 2017 – May 2019  
Overall Goals: This project aimed to understand the psychosocial needs of hand therapy clients and develop a holistic model for hand therapy intervention that integrates mindfulness-based meditations within therapy sessions.
- 16. An experimental investigation utilizing portable ultrasound and Doppler as diagnostic alternative in CTS**  
Sponsor: R21-OH009907, National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control (CDC)  
Role: Co-Investigator (PI: K. Evans)  
Total Costs: \$265,834  
Status: Funded, September 2010 – August 2012  
Overall Goals: This study assessed the progression of median nerve neuropathy and the utility of portable ultrasound as a sensitive means for tracking median nerve pathology by studying changes in morphology in a non-human primate model of carpal tunnel syndrome (CTS).

#### **Internal – University Funding**

##### ***Principal Investigator and Co-Principal Investigator (\$235,600)***

- 17. USC Center for Mindfulness Science**  
Sponsor: USC Collaboration Fund, USC Office of Research  
Role: Co-Principal Investigator / Co-Director  
Total Costs: \$180,000  
Status: Funded, July 2018 – June 2024  
Overall Goals: This center aims to contribute meaningful understanding to the component psychological and biological processes underlying mindfulness and to contribute to the understanding of the relationship between mindfulness and well-being as well as the impact of mindfulness practice on wellness and clinical outcomes across the lifespan.

**18. Median nerve mobility: Changes across time and associations with personal/work factors**

Sponsor: Undergraduate Research Associates Program Grant, USC Office of Undergraduate Programs

Role: Principal Investigator

Total Costs: \$6,000

Status: Funded, August 2020 – May 2021

Overall Goals: This project engaged undergraduate students in the analysis of sonographic images of the median nerve as it moves during hand grip to examine the associations of these changes to symptomatology in dental hygiene students.

**19. Observational assessment of injury risk in dental hygiene practice**

Sponsor: Undergraduate Research Associates Program Grant, USC Office of Undergraduate Programs

Role: Principal Investigator

Total Costs: \$4,600

Status: Funded, August 2019 – May 2020

Overall Goals: This project engaged undergraduate students in the analysis of dental hygiene practice to examine dental scaling tasks and identify factors related to symptomatology and median nerve changes in dental hygiene students

**20. Association of nerve movement during functional hand use to pathology development in dental hygienists**

Sponsor: Undergraduate Research Associates Program Grant, USC Office of Undergraduate Programs

Role: Principal Investigator

Total Costs: \$6,000

Status: Funded, August 2018 – May 2019

Overall Goals: This project engaged undergraduate students in the analysis of static and dynamic sonographic images of the carpal tunnel and median nerve to identify macro-morphologic characteristics of the carpal tunnel structure, dynamic movements of the median nerve during functional hand activity, and changes that indicate entrapment of the nerve.

**21. Identifying risk of musculoskeletal injury in dental hygiene practice**

Sponsor: Undergraduate Research Associates Program Grant, USC Office of Undergraduate Programs

Role: Principal Investigator

Total Costs: \$9,000 (including \$4,500 division cost-share)

Status: Funded, August 2017 – May 2018

Overall Goals: This project engaged undergraduate students in the analysis of dental hygiene practice to examine dental scaling tasks and identify factors related to symptomatology and median nerve changes in dental hygiene students.

**22. Integrating electromyography and sonographic imaging for evidence-based therapy for chronic pelvic pain**

Sponsor: Southern California Clinical and Translational Science Institute, Pilot Grant

Role: Principal Investigator (Multiple PI)

Total Costs: \$30,000

Status: Funded, July 2012 – June 2013

Overall Goals: This study used innovative sonographic techniques and electromyography (EMG) recordings to identify important biomarkers of chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS) to improve clinical screening practices.

***Co-Investigator, Collaborator, and Mentor (\$55,605)***

(\*asterisk indicates student mentee)

**23. Facilitating post-COVID return-to-work: Triangulation of patient, provider, and employer perspectives**

Sponsor: USC Chan ReSPONs Initiative

Role: Co-Investigator (PI: R. Aldrich)

Total Costs: \$49,605

Status: Funded, February 2023 – January 2024

Overall Goals: The project aims to support post-COVID return-to-work (RTW) by identifying facilitators and barriers using perspectives from patients, healthcare providers, and human resources professionals.

**24. Dental hygienist behaviors as precursors for the development of work-related musculoskeletal disorders**

Sponsor: Individual Provost Fellowship for Undergraduates; USC Provost's Office

Role: Mentor (PI: T. Willie\*)

Total Costs: \$5,000

Status: Funded, June 2021 – May 2022

Overall Goals: The goal of this individual fellowship was to examine the contributions of posture, positioning, and repetitive activity to the development of musculoskeletal pain in dental hygiene students.

**25. Determining validity and reliability of ergonomic assessment tools used in dental hygiene practice**

Sponsor: Individual Provost Fellowship for Undergraduates; USC Provost's Office

Role: Mentor (PI: S. Randolph\*)

Total Costs: \$1,000

Status: Funded, September 2018 – December 2018

Overall Goals: This individual fellowship evaluated the validity and reliability of a new, simple tool for detecting risky postures in dental hygiene practice for self-assessment as part of dental hygiene education or clinical practice.

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**PUBLICATIONS**


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**Peer-Reviewed Journal Publications – Original Research**

(\*asterisk indicates mentee and underline indicates senior author(s) on the publication, when applicable)

1. Evans KE, Stigall-Weikle AN, **Roll SC**, Sommerich CM. Understanding the effects of the COVID-19 pandemic on sonographers and vascular technologists: Sapping the strength from healthcare heroes! *Journal of Diagnostic Medical Sonography, In Press*.
2. Liu R, Awada M, Becerik-Gerber B, Lucas GM, **Roll SC**. Gender moderates the effects of ambient bergamot scent on stress restoration in offices. *Journal of Environmental Psychology, In Press*.
3. Loomis KJ\*, **Roll SC**, Hardison ME. The role of therapist-patient relationships in facilitating engagement and adherence in upper extremity rehabilitation. *Work, [Epub ahead of print]*. doi: [10.3233/WOR-220384](https://doi.org/10.3233/WOR-220384)
4. **Roll SC**, Fukumura YE\*, Sommerich CM, Stigall-Weikle AN, Evans KD. Cross-disciplinary prevalence and associated factors for work-related discomfort in users of ultrasonography: Implications for sonography professionals and healthcare administrators. *Journal of Diagnostic Medical Sonography, [Epub ahead of print]*. doi: [10.1177/87564793231170016](https://doi.org/10.1177/87564793231170016)
5. Hernandez R, Jin H, Pyatak EA, **Roll SC**, Schneider S. Workers' whole day workload and next day cognitive performance. *Current Psychology, [Epub ahead of print]*. doi: [10.1007/s12144-023-04400-y](https://doi.org/10.1007/s12144-023-04400-y)
6. Hernandez R, Jin H, Pyatak EA, **Roll SC**, Gonzalez JS, Schneider S. Perception of whole day workload as a mediator between activity engagement and stress in workers with type 1 diabetes. *Theoretical Issues in Ergonomics Science, [Epub ahead of print]*. doi: [10.1080/1463922X.2022.2149878](https://doi.org/10.1080/1463922X.2022.2149878)
7. Yao B\*, Takata SC\*, Mack WJ, **Roll SC**. Modeling extracurricular activity participation with physical and mental health in college students over time. *Journal of American College Health, 2023; 71(4):1232-1240*. doi: [10.1080/07448481.2021.1926263](https://doi.org/10.1080/07448481.2021.1926263) PMID: PMC8742832
8. Shomer L, **Roll SC**. Lifestyle Redesign® intervention for psychological well-being and function in people with fibromyalgia: A retrospective cohort study. *American Journal of Occupational Therapy, 2022; 76(6):7606205060*. doi: [10.5014/ajot.2022.049243](https://doi.org/10.5014/ajot.2022.049243) PMID: 36485013
9. Awada M\*, Becerik-Gerber B, Lucas GM, **Roll SC**. Cognitive performance, creativity, and stress levels of neurotypical adults under different white noise levels. *Scientific Reports, 2022; 12(1):14566*. doi: [10.1038/s41598-022-18862-w](https://doi.org/10.1038/s41598-022-18862-w) PMID: PMC9418159
10. Hernandez R\*, **Roll SC**, Jin H, Schneider S, Pyatak EA. Validation of the National Aeronautics and Space Administration task load index (NASA-TLX) adapted for the whole day repeated measures context. *Ergonomics, 2022; 65(7):960-975*. doi: [10.1080/00140139.2021.2006317](https://doi.org/10.1080/00140139.2021.2006317) PMID: 34766872
11. Hardison ME\*, Unger J, **Roll SC**. Hand therapy patients' psychosocial symptomology and interests in mindfulness: A cross-sectional study. *Canadian Journal of Occupational Therapy, 2022; 89(1):44-50*. doi: [10.1177/00084174211060120](https://doi.org/10.1177/00084174211060120) PMID: 34783575
12. Rodrigues PB, Xiao Y\*, Fukumura Y\*, Awada A\*, Aryal A, Becerik-Gerber B, Lucas GM, **Roll SC**. Ergonomic assessment of office worker postures using 3D automated joint angle assessment. *Advanced Engineering Informatics, 2022; 52:101596*. doi: [10.1016/j.aei.2022.101596](https://doi.org/10.1016/j.aei.2022.101596)

13. Fang Y\*, Baker NA, Dole J\*, **Roll SC**. Quality of patient education handouts for carpal tunnel syndrome available on the internet: A systematic analysis of content and design. *Archives of Physical Medicine and Rehabilitation*, 2022; 103(2):297-304. doi: [10.1016/j.apmr.2021.08.010](https://doi.org/10.1016/j.apmr.2021.08.010) PMID: 34547274
14. Pozzi F, Sousa CO, Plummer HA, Andrade B, Awokuse D, Kono N, Mack WJ, **Roll SC**, **Michener LA**. Development of shoulder pain with job-related repetitive load: Mechanisms of tendon pathology and anxiety. *Journal of Shoulder and Elbow Surgery*, 2022; 31(2):225-234. doi: [10.1016/j.jse.2021.09.007](https://doi.org/10.1016/j.jse.2021.09.007) PMID: 34656782
15. Yao B\*, **Roll SC**. An ultrasound study of the mobility of the medial nerve during composite finger movement in the healthy young wrist. *Muscle and Nerve*, 2022; 65(1):82-88. doi: [10.1002/mus.27437](https://doi.org/10.1002/mus.27437) PMCID: PMC8671362
16. Awada M\*, **Becerik-Gerber B**, Lucas GM, **Roll SC**. Associations among home indoor environmental quality factors and worker health while working from home during COVID-19 pandemic. *Journal of Engineering for Sustainable Buildings and Cities*, 2021; 2(4):041001-10. doi: [10.1115/1.4052822](https://doi.org/10.1115/1.4052822)
17. Hernandez R\*, Pyatak EA, Jin H, Schneider S, Spruitz-Metz D, **Roll SC**. Understanding worker well-being relative to high-workload and recovery activities across a whole day: Pilot testing an ecological momentary assessment technique. *International Journal of Environmental Research and Public Health*, 2021; 18(4):10354. doi: [10.3390/ijerph181910354](https://doi.org/10.3390/ijerph181910354) PMCID: PMC8507775
18. Fukumura YE\*, Schott J\*, **Becerik-Gerber B**, Lucas GM, **Roll SC**. Negotiating time and space when working from home: Experiences during COVID-19. *Occupational Therapy Journal of Research*, 2021; 41:223-231. doi: [10.1177/15394492211033830](https://doi.org/10.1177/15394492211033830) PMID: 34315290
19. Krause D\*, **Roll SC**, **Javaherian-Dysinger H**, Daher N. Comparative efficacy of the dorsal application of Kinesio tape and splinting for carpal tunnel syndrome: A randomized controlled trial. *Journal of Hand Therapy*, 2021; 34:351-361. doi: [10.1016/j.jht.2020.03.010](https://doi.org/10.1016/j.jht.2020.03.010) PMID: 32893100
20. Awada M\*, **Becerik-Gerber B**, Lucas GM, **Roll SC**. Working from home during the COVID-19 pandemic: Impact on office worker productivity and work experience. *Work*, 2021; 69(4):1171-1189. doi: [10.3233/WOR-210301](https://doi.org/10.3233/WOR-210301) PMID: 34420999
21. **Roll SC**, Hardison ME\*, Forrest JL, Colclazier NL\*, Sumi JY, Baker NA. A standardized protocol for the comprehensive assessment of dental hygiene work. *Work*, 2021; 69(3):1041-1052. doi: [10.3233/WOR-213534](https://doi.org/10.3233/WOR-213534) PMCID: PMC8316250
22. Aryal A\*, **Becerik-Gerber B**, Lucas GM, **Roll SC**. Intelligent agents to improve thermal satisfaction by controlling personal comfort systems under different levels of automation. *IEEE Internet of Things Journal*, 2021; 8:7089-7100. doi: [10.1109/JIOT.2020.3038378](https://doi.org/10.1109/JIOT.2020.3038378)
23. Xiao Y\*, **Becerik-Gerber B**, Lucas GM, **Roll SC**. Impacts of working from home during COVID-19 pandemic on physical and mental well-being of office workstation users. *Journal of Occupational and Environmental Medicine*, 2021; 63:181-190. doi: [10.1097/JOM.0000000000002097](https://doi.org/10.1097/JOM.0000000000002097) PMCID: PMC7934324
24. Fukumura YE\*, Gray JM, Lucas GM, **Becerik-Gerber B**, **Roll SC**. Worker perspectives on incorporating artificial intelligence into office workspaces: Implications for the future of office work. *International Journal of Environmental Research and Public Health*, 2021; 18(4):1690. doi: [10.3390/ijerph18041690](https://doi.org/10.3390/ijerph18041690) PMCID: PMC7916505
25. **Murphy SL**, Krause D, **Roll SC**, Gandikota G, Barber M, Khanna D. Development of a musculoskeletal ultrasound protocol to examine upper extremity rehabilitation outcomes in systemic sclerosis. *Journal of Diagnostic Medical Sonography*, 2021; 37:13-23. doi: [10.1177/8756479320965210](https://doi.org/10.1177/8756479320965210) PMCID: PMC7842414
26. Fang Y\*, Tung KD\*, Beleno J, Forrest JL, **Roll SC**. Characterization of tasks and efficiency of dental hygiene students during clinical laboratory training. *Journal of Dental Hygiene*, 2020; 94:30-37. PMCID: [PMC7534457](https://pubmed.ncbi.nlm.nih.gov/344457/)
27. **Roll SC**, Hardison ME\*, Vigen C, Black DS. Mindful body scans and sonographic biofeedback as preparatory activities to address patient psychological states in hand therapy: A pilot study. *Hand Therapy*, 2020; 25:98-106. doi: [10.1177/1758998320930752](https://doi.org/10.1177/1758998320930752) PMCID: PMC7685254
28. Yao B\*, Gan K\*, Lee A\*, **Roll SC**. Comparing shape categorization to circularity measurement in the evaluation of median nerve compression using sonography. *Journal of Diagnostic Medical Sonography*, 2020; 36:224-232. doi: [10.1177/8756479319898471](https://doi.org/10.1177/8756479319898471) PMCID: PMC7020616

29. Takata SC\*, Hardison ME\*, **Roll SC**. Fostering holism in hand therapy: Emergent themes of client experiences of mind-body interventions. *Occupational Therapy Journal of Research*, 2020; 40:122-130. doi: [10.1177/1539449219888835](https://doi.org/10.1177/1539449219888835) PMID: PMC7054132
30. Krause D\*, [Ryan S](#), Krpalek D, **Roll SC**, [Javaherian-Dysinger H](#), Daher N. Participants' perceptions of Kinesio tape for carpal tunnel syndrome: A qualitative study. *Hand Therapy*, 2019; 24:37-47. doi: [10.1177/1758998319841646](https://doi.org/10.1177/1758998319841646)
31. Tung KD\*, Fukumura YE\*, Baker NA, Forrest JL, **Roll SC**. Identifying an optimal sampling method to estimate postural risk in a dynamic work task. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 2019; 63(1), 1028-1033. doi: [10.1177/1071181319631180](https://doi.org/10.1177/1071181319631180) PMID: PMC6945821
32. Takata SC\*, **Roll SC**. Identification of aberrant muscle bellies in the carpal tunnel using sonography. *Journal of Diagnostic Medical Sonography*, 2019; 35:62-68. doi: [10.1177/8756479318807469](https://doi.org/10.1177/8756479318807469) PMID: PMC6214479
33. Dhyani M, **Roll SC**, Gilbertson MW, Orlowski M, Anvari A, Li Q, Anthony B, [Samir AE](#). A pilot study to precisely quantify forces applied by sonographers while scanning: A step toward reducing ergonomic injury. *Work*, 2017; 58:241-247. doi: [10.3233/WOR-172611](https://doi.org/10.3233/WOR-172611) PMID: 28922185
34. McLaughlin-Gray J, Frank G, **Roll SC**. Integrating musculoskeletal sonography into rehabilitation: Therapists' experiences with training and implementation. *Occupational Therapy Journal of Research (OTJR)*, 2017; 37:40-49. doi: [10.1177/1539449216681275](https://doi.org/10.1177/1539449216681275) PMID: PMC5830115
35. Hardison ME\*, **Roll SC**. Factors associated with success in an occupational rehabilitation program for work-related musculoskeletal disorders. *American Journal of Occupational Therapy*, 2017; 71:7101190040p1-7101190040p8. doi: [10.5014/ajot.2016.023200](https://doi.org/10.5014/ajot.2016.023200) PMID: PMC5182016
36. **Roll SC**, McLaughlin-Gray J, Frank G, Wolkoff M\*. Exploring occupational therapists' perceptions of the usefulness of musculoskeletal sonography in upper-extremity rehabilitation. *American Journal of Occupational Therapy*, 2015; 69(4):6904350020p1-6904350020p6. doi: [10.5014/ajot.2015.016436](https://doi.org/10.5014/ajot.2015.016436) PMID: PMC4482581
37. **Roll SC**, Volz KR, Fahy C, Evans KD. Carpal tunnel syndrome severity staging using sonographic and clinical measures. *Muscle and Nerve*, 2015; 51:838-845. doi: [10.1002/mus.24478](https://doi.org/10.1002/mus.24478) PMID: PMC4388767
38. **Roll SC**, Rana M, Sigward SM, Yani M, Kirages DJ, Kutch JJ. Reliability of superficial male pelvic floor structural measurements using transperineal linear-array sonography. *Ultrasound in Medicine and Biology*, 2015; 41:610-617. doi: [10.1016/j.ultrasmedbio.2014.09.008](https://doi.org/10.1016/j.ultrasmedbio.2014.09.008) PMID: PMC4297525
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#### **Peer-Reviewed Journal Publications – Systematic Review and Theoretical Papers**

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#### **Peer-Reviewed Journal Manuscripts – In Review**

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78. Hardison ME, **Roll SC**. Mindfulness meditation in upper extremity rehabilitation: A qualitative pilot study. *Musculoskeletal Care*, In Review.
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#### **Peer-Reviewed Journal Manuscripts – In Preparation**

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89. **Roll SC**, Yao B\*, Takata SC, Mack WJ. Factors contributing to neck, shoulder, and hand discomfort in dental hygiene students. *Journal of Dental Education*, In Preparation.

#### **Books, Chapters, and Practice Guidelines**

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1. **Roll SC**. Work and Industry. In: Pyatak EA, Lee ES, eds. *50 Studies Every Occupational Therapist Should Know*. Oxford, England: Oxford University Press; 2023. ISBN: [9780197630402](https://doi.org/10.1093/med/9780197630402)
2. Fukumura YE\*, **Roll SC**. Injury Prevention through Ergonomic Assessment, Education, and Intervention: Healthy Backpack Wearing in School-Aged Children. In: Pyatak EA, Lee ES, eds. *50 Studies Every Occupational Therapist Should Know*. Oxford, England: Oxford University Press; 2023. ISBN: [9780197630402](https://doi.org/10.1093/med/9780197630402) doi: [10.1093/med/9780197630402.003.0015](https://doi.org/10.1093/med/9780197630402.003.0015)
3. Hegmann KT, Kaufman LR, Berenji M, Cook-Shimanek MC, Greiwe RM, Jain N, Melhorn JM, Michener LA, Moses JE, Pushkin GW, **Roll SC**, Strain RE, Weiss MS (American College of Occupational and Environmental Medicine (ACOEM) evidence-based practice panel). *ACOEM Clinical Practice Guideline for Shoulder Disorders*. MDGuidelines. Westminster, CO: Reed Group, Ltd.; 2023. Available at: [www.MDGuidelines.com](http://www.MDGuidelines.com)

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1. Work-Related Musculoskeletal Injuries in Sonographers. *Journal of Diagnostic Medical Sonography*; **Roll SC**, Ed., 2017; 33(5).
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3. Injuries & Prevention in Health Care Providers. *Work*; **Roll SC**, Ed., 2012; 42(3).

#### Editorials, Commentaries, and Other Publications

1. **Roll SC**, Lucas GM, Becerik-Gerber B. Authors' response to "Work from home (WFH) during COVID-19: Is virtual reality (VR) a new solution to new problems?". *Journal of Occupational and Environmental Medicine*, 2021; 63(10):e757-758. doi: [10.1097/JOM.0000000000002340](https://doi.org/10.1097/JOM.0000000000002340) PMID: PMC8478102
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5. **Roll SC**, Darragh AR, O'Brien JC, Fisher TF. In Memoriam: Jane Douglas Case-Smith. *OTJR: Occupational, Participation, and Health*, 2014; 34:171-175. doi: [10.3928/15394492-20141006-03](https://doi.org/10.3928/15394492-20141006-03)
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8. **WorkLife Connection** – Clinical Newsletter Editor – Fairfield Medical Center  
2007 – Volume 3, Issues 1-2; 2006 – Volume 2, Issues 1-4; 2005 – Volume 1, Issues 1-4

#### Peer-Reviewed, Published Conference Abstracts

(\*asterisk indicates mentee and underline indicates senior author(s) on publication, when applicable)

1. Loomis KJ\*, **Roll SC**, Hardison ME. Therapist-patient relationships in outpatient upper extremity rehabilitation: Facilitating engagement and adherence. *American Journal of Occupational Therapy*. 2022; 76(Supplement\_1):7610505027p1. doi: [10.5014/ajot.2022.76S1-PO27](https://doi.org/10.5014/ajot.2022.76S1-PO27)
2. Yao B\*, Takata SC\*, **Roll SC**. OT student health and extracurricular activity participation: A need to support well-being in OT education. *American Journal of Occupational Therapy*. 2022; 76(Supplement\_1):7610505056p1. doi: [10.5014/ajot.2022.76S1-PO56](https://doi.org/10.5014/ajot.2022.76S1-PO56)
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10. **Roll SC**, Cristino A\*, Mitchell J. Characterizing changes in the median nerve during hand grip using dynamic sonographic imaging. *Arthritis and Rheumatology*, 2018; 70(S9):1335-1336.
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22. **Evans KD, Roll SC, Volz KR, Sommerich CM.** Spectral Doppler measurement of perineural flow within the median nerve compared to nerve conduction studies. *Ultrasound in Medicine and Biology*, 2011; 37:S6. doi: [10.1016/j.ultrasmedbio.2011.05.052](https://doi.org/10.1016/j.ultrasmedbio.2011.05.052)
23. **Evans KD, Roll SC, Volz KR, Sommerich CM.** Ultrasound contrast enhanced interrogation of the median nerve to document peripheral vascular flow in an animal model. *Ultrasound in Medicine and Biology*, 2011; 37:S6. doi: [10.1016/j.ultrasmedbio.2011.05.054](https://doi.org/10.1016/j.ultrasmedbio.2011.05.054)
24. **Sommerich CM, Gumpina R, Roll SC, Le P, Chandler D.** Investigating effects of controller algorithm on torque tool operator. *Proceedings of the 2009 Industrial Engineering Research Conference*; Miami, FL. 2009.

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## MEDIA and PRESS

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### Webinars, Podcasts, and Videos

1. National Science Foundation (NSF) Multimedia Gallery: Intelligent desk that promotes office worker health, wellness, and productivity, 2019. Available 12/17/19 at: [https://nsf.gov/news/mmg/mmg\\_disp.jsp?med\\_id=185956&from=](https://nsf.gov/news/mmg/mmg_disp.jsp?med_id=185956&from=)
2. **Roll SC.** Center for Intelligent Environments (CENTIENTS): Consideration of humans as ‘occupational beings’ in human-building interactions, 2019. Available 6/6/19 at: <https://www.youtube.com/watch?v=97Ltm9m43Ow>
3. **Dhyani M, Roll SC, Jacobs K.** Learn at Work: A pilot study to precisely quantify forces applied by sonographers while scanning, 2018. Available 11/14/18 at: <https://www.youtube.com/watch?v=AyENk3xhTDs>
4. **Roll SC, Scholl C.** JDMS Podcast: Barriers to performing ergonomic scanning techniques for sonographers, 2018. Available 9/10/18 at: <https://soundcloud.com/jdmspodcast/barriers-to-performing-ergonomic-scanning-techniques-for-sonographers>

### News and Web Articles

1. **USC Viterbi News** (March 21, 2023): “Stressed at work? USC Researchers aim to change that.” Available 3/21/23 at: <https://viterbischool.usc.edu/news/2023/03/stressed-at-work-usc-researchers-aim-to-change-that/>
2. **USC Viterbi News** (March 13, 2023): “The nature of dangerous construction work is radically changing.” Available 3/13/23 at: <https://viterbischool.usc.edu/news/2023/03/the-nature-of-dangerous-construction-work-is-radically-changing/>
3. **American Heart Association News** (April 27, 2022): “Hybrid work can be healthy at home and the office.” Available 4/27/22 at: <https://www.heart.org/en/news/2022/04/27/hybrid-work-can-be-healthy-at-home-and-the-office>
4. **The Atlanta Journal-Constitution** (March 18, 2022): “Survey: Remote work during pandemic causes new mental, physical issues.” Available 3/18/22 at: <https://www.ajc.com/pulse/survey-remote-work-during-pandemic-causes-new-mental-physical-issues/K6LPGPH2J5A6FLIUIZMG63GJOI/> (article picked up on multiple international websites)
5. **The Horizons Tracker** (February 21, 2022): “Research explores how remote work affects our health and productivity.” Available 2/21/22 at: <https://adigaskell.org/2022/02/21/research-explores-how-remote-work-affects-our-health-and-productivity/>
6. **USC Chan News** (November 17, 2021): “Work-from-home survey reveals pandemic’s impacts upon employees’ physical and mental health, productivity, and daily routines: How to support office workers’ health and wellness, when the “office” can be located anywhere.” Available 11/17/21 at: <https://chan.usc.edu/news/latest/work-from-home-survey-reveals-pandemics-impacts-upon-employees-physical-and-mental-health-productivity-and-daily-routines>
7. **Frankfurter Allgemeine Zeitung** (July 26, 2021): “Krank durchs Homeoffice [Sick Through the Home Office].” Available 7/26/21 at: <https://www.faz.net/aktuell/karriere-hochschule/welche-effekte-hat-das-homeoffice-auf-die-gesundheit-17450095.html>

8. **The Ladders** (December 10, 2020): "Survey reveals all the ways remote work is ruining the health of Americans." Available 12/10/20 at: <https://www.theladders.com/career-advice/survey-reveals-all-the-ways-remote-work-is-ruining-the-health-of-americans>
9. **American Dental Association News** (May 24, 2019): "June JADA finds more research needed into musculoskeletal care for dental professionals." Available 5/24/19 at: <https://www.ada.org/en/publications/ada-news/2019-archive/may/june-jada-finds-more-research>
10. **USC News** (April 25, 2019) and **PhysOrg** (April 26, 2019): "How intelligent workstations will use AI to improve health and happiness." Available 4/25/19 at: <https://news.usc.edu/155992/intelligent-workstations-desk-design/> and <https://phys.org/news/2019-04-intelligent-workstations-ai-health-happiness.html>
11. **USC Chan Magazine** (Spring 2019): "Designing tomorrow's workstation, today." Available 4/1/19 at: <https://chan.usc.edu/news/magazine/spring2019/designing-tomorrows-workstation-today>
12. **CovalentCareers** (January 30, 2018): "Mindfulness and occupational therapy: Your new secret power." Available 1/30/18 at: <https://covalentcareers.com/resources/mindfulness-occupational-therapy-new-secret-power/>
13. **TONIC (Vice)** (March 7, 2017): "The people who make you look good are suffering." Available 3/7/17 at: [https://tonic.vice.com/en\\_us/article/the-people-who-make-you-look-good-are-suffering](https://tonic.vice.com/en_us/article/the-people-who-make-you-look-good-are-suffering)
14. **US Bone and Joint Initiative Newsletter** (July 2016): "Innovating musculoskeletal injury prevention, assessment, and rehabilitation." Available as of 7/1/16 at: <http://www.usbji.org/news/newsletters/july-2016>
15. **ASHT Times** (Summer 2016; Volume 23, Issue 2): "Advancing the field through research." Available 6/20/16 at: <http://ahint.epubxp.com/t/166675-asht-times>
16. **USC News** (January 21, 2016): "Can pictures prevent carpal tunnel syndrome? Using sonographic imaging, a USC professor seeks to detect the earliest signs of the disorder." Available 3/31/16 at: <http://news.usc.edu/90994/can-pictures-prevent-carpal-tunnel-syndrome/>
17. **USC Chan Magazine** (Winter 2015): "Picturing prevention." Available 3/31/16 at: <http://chan.usc.edu/alumni/magazine/winter2015/picturing-prevention>
18. **USC Chan Magazine** (Fall 2014): "Game changer: Sonography and mind-body techniques could revolutionize the way we practice hand rehabilitation." Available 3/31/16 at: <http://chan.usc.edu/uploads/magazine/USC-Chan-Magazine-fall2014.pdf>
19. **USC Chan Magazine** (Fall 2011): "Party of five." Available 3/31/16: <http://chan.usc.edu/alumni/magazine/fall2011/party-of-five>
20. **Radiology Today** (November 16, 2009): "Scanning in pain – Sonographers seek relief from job-related hazard." Available as of 3/31/16 at: <http://www.radiologytoday.net/archive/rt111609p24.shtml>
21. **SDMS NewsWave** (August 2009): "Latest survey shows musculoskeletal injuries among sonographers not abating.": <https://www.yumpu.com/en/document/view/4152186/latest-survey-shows-musculoskeletal-injuries-among-sonographers->

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## PRESENTATIONS

### Invited, International

1. **Roll SC**, Cutchin M, Park M, Smith RO. Contributions of occupational science and occupational therapy to well-being in built environments. Moderator and participant in panel discussion: International Network of Networks for Well-being in the Built Environment, 2022; virtual event.
2. **Roll SC**. PhD education in occupational science. Presentation at: 1<sup>st</sup> Annual Academic Conference of the Chinese Association of Rehabilitation Medicine and International Rehabilitation Equipment Exhibition, 2017; Beijing, China.
3. **Roll SC**. Occupational science PhD research training. Presentation at: Seminar on Graduate Education of Rehabilitation Therapy, Peking University Health Science Center, 2017; Beijing, China.

**Invited, National**

1. **Roll SC.** Impacts of working from home during the COVID-19 pandemic on office worker health and wellbeing. Platform presentation at: Marconi Conference of the Office Ergonomics Research Committee, 2022; Atlanta, GA.
2. Becerik-Gerber B, Lucas GM, **Roll SC.** AI and other technologies to support health and wellbeing in the workplace. Platform presentation at: Marconi Conference of the Office Ergonomics Research Committee, 2022; Atlanta, GA.
3. **Roll SC,** Cruz T, Chiou S, Garg S, Hwang G, Sudsawad P. Funding opportunities for occupational therapists and occupational scientists. Moderator for panel presentation at: 10<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2022; Madison, WI.
4. **Roll SC,** Becerik-Gerber B, Lucas GM. Leveraging a transdisciplinary approach to develop effective AI solutions to reduce risk and promote worker health. Webinar presentation for: Artificial Intelligence Interest Group of the National Institute for Occupational Safety and Health, 2022; virtual event.
5. Mulcahey MJ, Kramer J, Pfeiffer E, **Roll SC,** Stark S. How my research in occupational therapy informs practice, and elevates equity, justice, and human potential. Panel presentation at: American Occupational Therapy Association Inspire Annual Conference, 2022; San Antonio, TX.
6. **Roll SC.** Top 10 things every POCUS user should know according to the ergonomist. Podium presentation at: Annual Convention of the American Institute of Ultrasound in Medicine, 2022; San Diego, CA.
7. Cowan A, Ivy C, King j, MacDermid J, McGee C, **Roll SC,** Stegink-Jansen C. Research “speed dating”. Panelist at: 44<sup>th</sup> Annual Meeting of the American Society of Hand Therapists, 2021; St. Louis, MO.
8. **Roll SC.** Enhancing worker health through multi-level, transdisciplinary research. Honorary lecture at: American Occupational Therapy Foundation Research Excellence Symposium, 2021; virtual event.
9. **Roll SC.** Pathways among occupational performance, body structures, and worker health. Platform presentation at: USC Chan Occupational Science Symposium, 2019; Los Angeles, CA.
10. **Roll SC,** et al. The life and times of a scientist. Panel presentation at: Summer Institute for Future Scientists in Occupational Therapy, 2019; Charleston, SC.
11. **Roll SC.** Consideration of humans as ‘occupational beings’ in human-building interactions. Presentation at: NSF Workshop on Dynamic Interaction of Embodied Human and Machine Intelligence, 2019; Los Angeles, CA.
12. **Roll SC.** Individual identification, prevention, and management of work-related musculoskeletal discomfort. Instructional Session at: Annual Convention of the American Institute of Ultrasound in Medicine, 2019; Orlando, FL.
13. Sayeed Y, Stearns T, Baker JP, Henningsen C, **Roll SC,** Evans KD. Ergonomic redesign – tools to give your career longevity. Hands-on Scanning Workshop at: Annual Convention of the American Institute of Ultrasound in Medicine, 2019; Orlando, FL.
14. Baranek G, **Roll SC,** Rocker J, Aguillon A, Liew SL, Holguin J, Margetis J. Creating synergies between clinicians and scientists. Keynote Panel at: AOTA Adult Physical Rehabilitation Specialty Conference, 2018; Los Angeles, CA.
15. **Roll SC,** Takata SC\*. Illuminating the nuances of carpal tunnel syndrome: Advanced concepts in prevention and rehabilitation for the experienced therapist. Instructional course at: 41<sup>st</sup> Annual Conference of the American Society of Hand Therapists, 2018; Dallas, TX.
16. **Roll SC,** Takata SC\*, Aguillon A, Rocker J. Musculoskeletal sonography: Introductory training and clinical application for hand therapy. Conference Institute (4-hrs) at: 40<sup>th</sup> Annual Conference of the American Society of Hand Therapists, 2017; Anaheim, CA.
17. **Roll SC.** Musculoskeletal ultrasound: Techniques, pearls, and pitfalls. Instructional course at: Annual Convention of the American Institute of Ultrasound in Medicine, 2017; Orlando, FL.
18. Nagdev, A...**Roll SC.** Peripheral nerve blocks in the emergency department. Hands-on Scanning Workshop at: Annual Convention of the American Institute of Ultrasound in Medicine, 2017; Orlando, FL.



19. **Roll SC**, Marik TL. AOTA EBP system reviews of interventions for musculoskeletal conditions of the upper extremity. Instructional course at: 39<sup>th</sup> Annual Meeting of the American Society of Hand Therapists, 2016; Washington, DC.
20. **Roll SC**. Becoming an evidence-based practitioner. Sonography community instructional session at: Annual Convention of the American Institute of Ultrasound in Medicine, 2016; New York, NY.
21. **Roll SC**, et. al. What makes a winning proposal: Perspectives from grant reviewers. Panel presentation at: 4<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2015; Los Angeles, CA.
22. Lieberman D, Arbesman M, Dorsey J, Marik TL, Poole J, **Roll SC**, Siegel P, Snodgrass J. Systematic review on occupational therapy and adults with musculoskeletal disorders and arthritis. Panel presentation at: 95<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2015; Nashville, TN.
23. **Roll SC**. Introducing musculoskeletal sonography, part I: Structures and pathologies of the hand. Instructional course at: 37<sup>th</sup> Annual Meeting of the American Society of Hand Therapists, 2014; Boston, MA.
24. **Roll SC**. Introducing musculoskeletal sonography, part II: Clinical applications for hand therapy. Instructional course at: 37<sup>th</sup> Annual Meeting of the American Society of Hand Therapists, 2014; Boston, MA.

#### Invited, State/Regional

1. **Roll SC**. Mobilizing collective knowledge. **Keynote Speaker**, Rehabilitation Sciences Visiting Professor, J. Leonard Goldner Orthopaedic Research Day, Duke University, 2023; Durham, NC.
2. **Roll SC**. Leveraging worker-environment-technology transactions to maximize health, well-being, and performance in Industry 4.0. Visiting Professor, Duke University, Divisions of Occupational and Physical Therapy, 2023; Durham, NC.
3. **Roll SC**. Musculoskeletal sonography for rehabilitation professionals. Continuing Education Course (1 CEU), University of California Los Angeles, Rehabilitation Services Department, 2019; Los Angeles, CA.
4. **Roll SC**. Examining the pathways among body structures, occupational performance, and health. Guest Speaker, Tufts University, Occupational Therapy Department, 2019; Medford, MA.
5. **Roll SC**. Bidirectional pathways among occupational performance, tissue morphology, and health. **Keynote Speaker**, *Physical Stresses: Keeping us Alive and Well*, An Interdisciplinary Research Conference on Mechanotransduction, 2018; Oklahoma City, OK.
6. **Roll SC**. Musculoskeletal sonographic imaging of the upper extremity: Current trends in practice and research. **Keynote Speaker**, Annual Meeting, Central Ohio Ultrasound Society, 2016; Columbus, OH.
7. **Roll SC**. Innovative approaches to advancing occupational performance in individuals with upper extremity musculoskeletal disorders. **Keynote Speaker**, Occupational Therapy Association of California, 14<sup>th</sup> Annual Afternoon Tea with a Scholar, 2015; Los Angeles, CA.
8. **Roll SC**. Hands-on sonographic imaging for hand therapists. Continuing Education Course (6 CEU), Hand Therapy Society of Greater Los Angeles, 2013; Los Angeles, CA.
9. **Roll SC**. Evidence based practice from classroom to clinic. **Keynote Speaker**, Wisconsin Council on Education, Annual State Conference, 2010; Milwaukee, WI.
10. **Roll SC**. Advanced sub-acute and chronic rehabilitation. Presentation in *Return-to-work Process: Orthopedic Surgeries and Rehab*, Continuing Education Course (4.5 CEU), Fairfield Medical Center, 2007; Lancaster, OH.
11. **Roll SC**. Office ergonomics. Luncheon speaker, Fairfield County Business & Industry Safety Council, 2005; Lancaster, OH.
12. **Roll SC**. An introduction to functional capacity evaluations. Presentation in *Evaluations in Industrial Rehabilitation*, Continuing Education Course (4.5 CEU), Fairfield Medical Center, 2004; Lancaster, OH.

**Peer-Reviewed, International**

(\* indicates mentee)

1. **Roll SC**, Marchioni M, Becerik-Gerber B. Well-being and inclusion in the built environment: Integrating an occupational perspective into an emerging transdisciplinary field. Paper presentation at: 18<sup>th</sup> World Federation of Occupational Therapists International Congress and Exhibition, 2022; Paris, France.
2. Fang Y\*, Baker NA, Dole J, **Roll SC**. Developing a quality evaluation method for occupational therapy patient education materials: The case of carpal tunnel syndrome. Paper presentation at: 18<sup>th</sup> World Federation of Occupational Therapists International Congress and Exhibition, 2022; Paris, France.
3. Fukumura YE\*, Kijel MT\*, Xiao Y, Becerik-Gerber B, Lucas GM, **Roll SC**. Artificial intelligence to support worker health, well-being, and participation: Using an occupational lens for workplace technology development. Paper presentation at: 18<sup>th</sup> World Federation of Occupational Therapists International Congress and Exhibition, 2022; Paris, France.
4. Loomis KJ\*, Hardison ME, **Roll SC**. An exploration of therapist-patient relationships in outpatient physical rehabilitation. Paper presentation at: 18<sup>th</sup> World Federation of Occupational Therapists International Congress and Exhibition, 2022; Paris, France.
5. Tung KD\*, Fukumura YE\*, Baker NA, Forrest JL, **Roll SC**. Identifying an optimal sampling method to estimate postural risk in a dynamic work task. Paper presentation at: 2019 International Annual Meeting of the Human Factors and Ergonomics Society, 2019; Seattle, WA.
6. **Roll SC**, Melrose D, Forrest JL. Implementation of ergonomic, observational techniques that empower dental hygiene educators, practitioners, and students to reduce the risk of work-related injuries. Workshop presentation at: International Symposium on Dental Hygiene, 2019; Brisbane, Australia.
7. Beleno J, Melrose MD, Wilkins K, Forrest JL, Mack WJ, **Roll SC**. Identifying risk of upper extremity injuries in dental hygiene professionals. Paper presentation at: Annual Meeting of the Canadian Dental Hygienists Association, 2017; Ottawa, Canada.
8. **Roll SC**, Gray JM, Frank G. Competency development and complexities of clinical integration of musculoskeletal sonography by non-physician rehabilitation providers. Paper presentation at: 15<sup>th</sup> World Congress of Ultrasound in Medicine and Biology 2015; Orlando, FL.
9. Evans KD, Volz KR, Pargeon R, **Roll SC**. Musculoskeletal sonography: Evaluation of the carpal tunnel and median nerve. Paper presentation at: International Foundation for Sonography Education and Research Symposium 2012; Las Cruces, New Mexico.
10. **Roll SC**, Evans KD, Freimer ML, Case-Smith J, Sommerich CM. Relationship of median nerve ultrasonographic measures to anthropometric and demographic factors for diagnosis of carpal tunnel syndrome. Paper presentation at: 13<sup>th</sup> World Congress of Ultrasound in Medicine and Biology 2011; Vienna, Austria.
11. Evans KD, **Roll SC**, Volz KR, Sommerich CM. Spectral Doppler measurement of perineural flow within the median nerve compared to nerve conduction studies. Paper presentation at: 13<sup>th</sup> World Congress of Ultrasound in Medicine and Biology 2011; Vienna, Austria.
12. Evans KD, **Roll SC**, Volz KR, Sommerich CM. Ultrasound contrast enhanced interrogation of the median nerve to document peripheral vascular flow in an animal model. Paper presentation at: 13<sup>th</sup> World Congress of Ultrasound in Medicine and Biology 2011; Vienna, Austria.

**Peer-Reviewed, National**

(\* indicates mentee)

1. Fukumura YE\*, **Roll SC**. Centering occupation in injury prevention: Perspectives in understanding the musician. Paper presentation at: 21<sup>st</sup> Annual Research Annual Conference of the Society for the Study of Occupation: USA, 2023; St. Louis, MO. (*accepted, pending presentation*)

2. Loomis KJ\*, **Roll SC**. Is the collective definition of occupation-based therapy exclusionary? Paper presentation at: 21<sup>st</sup> Annual Research Annual Conference of the Society for the Study of Occupation: USA, 2023; St. Louis, MO. (*accepted, pending presentation*)
3. Parga M\*, Fang Y\*, **Roll SC**. OS at work: Transdisciplinary opportunities to improve health and occupational performance in technology-enabled workplaces. Panel presentation at: 21<sup>st</sup> Annual Research Annual Conference of the Society for the Study of Occupation: USA, 2023; St. Louis, MO. (*accepted, pending presentation*)
4. **Roll SC**, Fukumura YE\*, Sommerich CM, Evans KD. Is ergonomics enough? Appreciating multilayered transactions within work systems to support worker health and well-being. Paper presentation at: 21<sup>st</sup> Annual Research Annual Conference of the Society for the Study of Occupation: USA, 2023; St. Louis, MO. (*accepted, pending presentation*)
5. Fang Y\*, Liu J\*, **Roll SC**. Challenges and opportunities in work and industry OT practice: An online survey. Paper presentation at: 11<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2023; Columbus, OH. (*accepted, pending presentation*)
6. Fukumura YE\*, Sommerich CM, Stigall-Weikle N, Evans KD, **Roll SC**. Understanding work system transactions in the workplace: An application study of sonographers. Paper presentation at: 11<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2023; Columbus, OH. (*accepted, pending presentation*)
7. Loomis KJ\*, **Roll SC**. Understanding the multidimensional hand therapy process: Building foundational knowledge to comprehensively capture practice-based data. Paper presentation at: 11<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2023; Columbus, OH. (*accepted, pending presentation*)
8. Loomis KJ\*, Shin J\*, **Roll SC**. Musculoskeletal ultrasonography to support upper extremity rehabilitation: A scoping review. Paper presentation at: American Society of Hand Therapists Annual Meeting, 2022; Washington, DC.
9. Fang Y\*, **Roll SC**. Evaluating the content and design of client education materials to develop or identify high-quality resources. Short course at: American Occupational Therapy Association Inspire Annual Conference, 2022; San Antonio, TX.
10. Takata SC\*, **Roll SC**. Identifying critical therapeutic windows in the postsurgical recovery timeline for flexor tendon repairs to optimize functional outcomes. Short course at: American Occupational Therapy Association Inspire Annual Conference, 2022; San Antonio, TX.
11. **Roll SC**, Takata SC\*, Yao B\*, Mack WJ. Reference values for cross-sectional area of the median nerve: A meta-analysis. Paper presentation at: Annual Convention of the American Institute of Ultrasound in Medicine, 2022; San Diego, CA.
12. **Roll SC**, Becerik-Gerber B, Lucas GM, Awada M, Xiao Y. Healthy occupational engagement in built environments: Lessons learned from work-from-home transitions during COVID-19. Paper presentation at: 27<sup>th</sup> USC Chan Occupational Science Symposium, 2021; *presented virtually due to COVID-19*.
13. Fukumura YE\*, Becerik-Gerber B, Lucas GM, **Roll SC**. Impact of COVID-19 on work: The transactional nature of work from home. Paper presentation at: 27<sup>th</sup> USC Chan Occupational Science Symposium, 2021; *presented virtually due to COVID-19*.
14. Yao B\*, **Roll SC**. Comparing median nerve displacement and sliding during gripping between dominant and non-dominant hands. New Investigator Award Competition presentation at: Annual Convention of the American Institute of Ultrasound in Medicine, 2021; *presented virtually due to COVID-19*.
15. **Roll SC**. A transdisciplinary approach to designing intelligent workspaces that promote health, well-being, and human performance. Panel presentation at: Health in Buildings Roundtable Conference, National Institutes of Health, 2020; *accepted, but canceled due to COVID-19*.
16. Yao B\*, Gan K\*, Lee A\*, **Roll SC**. Comparison between objective and subjective sonography evaluation of median nerve shape in the carpal tunnel during finger movement. Paper presentation at: Annual Convention of the American Institute of Ultrasound in Medicine, 2020; *presented virtually due to COVID-19*.
17. Pozzi F, Sousa CO, Plummer H, Andrade B, Hewus A, Kono N, Mack W, **Roll S**, Michener L. Repetitive dental hygienist job-related tasks increase the risk of shoulder pain and altered supraspinatus morphology. Paper presentation at: Combined Sections Meeting (CSM) of the American Physical Therapy Association, 2020; Denver, CO.

18. **Roll SC**, Takata SC\*, Fukumura YE\*. Linking occupation to physical and psychological stress: Implications for students in healthcare professions. Paper presentation at: 18<sup>th</sup> Annual Research Conference of the Society for the Study of Occupation: USA, 2019; Scottsdale, AZ.
19. Takata SC\*, **Roll SC**. Sonographic prevalence of space-occupying long flexor muscle bellies in the carpal tunnel of healthy individuals. New Investigator Award Competition presentation at: Annual Convention of the American Institute of Ultrasound in Medicine, 2019; Orlando, FL.
20. **Roll SC**, Takata SC\*, Rocker J, Aguillon A. Alice in anatomy-land: Using sonography to step through the looking glass and evaluate anatomy in the treatment of musculoskeletal conditions. Tech Lab presentation at: 97<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2019; New Orleans, LA.
21. **Roll SC**, Hardison ME\*, Baker NA. Characterizing occupational tasks of dental hygiene students to identify risks of developing musculoskeletal disorders. Paper presentation at: 7<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2018; Kansas City, MO.
22. **Roll SC**, Hardison ME\*, Colclazier NL\*. Risk assessment for musculoskeletal strain among dental hygienists: Validity and reliability of a video observation technique. Paper presentation at: 96<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2018; Salt Lake City, UT.
23. Takata SC\*, Wade E\*, **Roll SC**. Linking research to practice for upper extremity musculoskeletal disorders: Interventions, outcomes, and diagnoses examined over the last 10-years. Paper presentation at: 96<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2018; Salt Lake City, UT.
24. Takata SC\*, **Roll SC**. Patient experiences of participating in mind-body interventions in an outpatient rehabilitation setting. Paper presentation at: 96<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2018; Salt Lake City, UT.
25. Hardison ME\*, **Roll SC**. Effects of mind-body interventions on stress, anxiety, and pain in hand therapy patients. Paper presentation at: 96<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2018; Salt Lake City, UT.
26. Hardison ME\*, Takata SC\*, Carandang K, **Roll SC**. Using patient experiences of health management occupations to guide research on medical adherence. Panel presentation at: 16<sup>th</sup> Annual Research Conference of the Society for the Study of Occupation: USA, 2017; Seattle, WA.
27. Takata SC\*, Wade E\*, **Roll SC**. Linking research to practice in hand therapy: A mapping review. Paper presentation at: 40<sup>th</sup> Annual Conference of the American Society of Hand Therapists, 2017; Anaheim, CA.
28. Takata SC\*, **Roll SC**. Relationship of internal carpal tunnel measurements to external wrist-ratio: Implications for prevention of carpal tunnel syndrome. Paper presentation at: 6<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2017; Boston, MA.
29. **Roll SC**, Mitchell J. Relationship of internal carpal tunnel measurement to external wrist-ratio: Implications for prevention and diagnosis. Paper presentation at: Annual Convention of the American Institute of Ultrasound in Medicine, 2017; Orlando, FL.
30. **Roll SC**, Aguillon A. Diagnostic ultrasonography: A clinical tool for occupational therapists. Tech Day presentation at: 95<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2017; Philadelphia, PA.
31. **Roll SC**, Gray JM, Frank G. Training and competency development for clinical implementation of musculoskeletal sonography by hand therapists. Paper presentation at: 39<sup>th</sup> Annual Meeting of the American Society of Hand Therapists, 2016; Washington, DC.
32. Hardison ME\*, **Roll SC**. Integrating evidence and client perspectives for the use of mindfulness interventions in hand therapy. Paper presentation at: 39<sup>th</sup> Annual Meeting of the American Society of Hand Therapists, 2016; Washington, DC.
33. **Roll SC**, Mack WJ, Forrest JL, Baker LL, Baker NA. Identification of early-stage median nerve pathology: Protocol for a longitudinal, multiple cohort study. Paper presentation at: 5<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2016; Pittsburgh, PA.
34. Hardison ME\*, Black DS, **Roll SC**. Effects of mind-body interventions on stress, anxiety, and pain in hand therapy. Paper presentation at: 5<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2016; Pittsburgh, PA.

35. **Roll SC**, Gray JM, Frank G, Wolkoff M\*. Therapist perceptions of the utility of sonographic imaging in the rehabilitation of musculoskeletal disorders. Paper presentation at: 4<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2015; Los Angeles, CA.
36. **Roll SC**, Evans KD, Sommerich CM. Longitudinal changes in median nerve morphology due to physical work exposure. Paper presentation at: 3<sup>rd</sup> Annual Occupational Therapy Summit of Scholars, 2014; Philadelphia, PA.
37. **Roll SC**, Rocker JD, Aguillon A. Enhancing treatment for patients with pain and limitations in functional hand use with sonography. Short course presentation at: 94<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2014; Baltimore, MD.
38. **Roll SC**, Rocker JD, Aguillon A. Dynamic, real-time visualization of musculoskeletal tissues using sonography. Tech presentation at: 94<sup>th</sup> Conference of the American Occupational Therapy Association, 2014; Baltimore, MD.
39. **Roll SC**, Rocker JD, Aguillon A, Wolkoff M. If only I could see inside! Cutting-edge use of sonography to enhance upper extremity orthopedic rehabilitation. Workshop presentation at: 93<sup>rd</sup> Annual Conference of the American Occupational Therapy Association, 2013; San Diego, CA.
40. **Roll SC**, Selhorst L\*, Evans KD. Using the Rapid Upper Limb Assessment to associate upper extremity positioning with musculoskeletal discomfort. Paper presentation at: 93<sup>rd</sup> Annual Conference of the American Occupational Therapy Association, 2013; San Diego, CA.
41. **Roll SC**, Evans KD, Sommerich CM. Longitudinal analysis of grey scale imaging and electromyography in an animal model of carpal tunnel syndrome. New Investigator Award Competition presentation at: Annual Convention of the American Institute of Ultrasound in Medicine, 2013; New York, NY.
42. **Roll SC**, Evans KD, Case-Smith J. Predicting symptoms and decreased function due to carpal tunnel syndrome with sonographic imaging. Research platform presentation at: 92<sup>nd</sup> Annual Conference of the American Occupational Therapy Association, 2012; Indianapolis, IN.
43. **Roll SC**, Evans KD. Visualization of changes in the median nerve in carpal tunnel syndrome. Research platform presentation at: 92<sup>nd</sup> Annual Conference of the American Occupational Therapy Association, 2012; Indianapolis, IN.
44. **Roll SC**. Diagnostic ultrasonography: A clinical tool for occupational therapists. Tech day presentation at: 92<sup>nd</sup> Annual Conference of the American Occupational Therapy Association, 2012; Indianapolis, IN.
45. **Roll SC**. A novel method for measuring acute physiologic changes in the median nerve at the worksite. Paper presentation at: 90<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2010; Orlando, FL.

#### Peer-Reviewed, State/Regional

1. **Roll SC**. Can I return to work? Evaluation of physical capacities and work-readiness. Workshop presentation at: Annual Conference of the Occupational Therapy Association of California, 2012; Pasadena, CA.

#### Peer-Reviewed Posters, International/National/State/Regional

(\* indicates mentee)

1. Fukumura YE\*, **Roll SC**. Considering stakeholder perspectives of well-being: A survey of student musicians. Poster presentation at: 21<sup>st</sup> Annual Research Conference of the Society for the Study of Occupation: USA, 2023; St. Louis, MO. (*accepted, pending presentation*)
2. Fang Y\*, Liu J\*, **Roll SC**. Challenges and opportunities in work and industry occupational therapy practice. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2023; Los Angeles, CA.
3. Fukumura YE\*, Evans KD, Sommerich CM, **Roll SC**. Prevalence and factors associated with work-related discomfort in sonographers. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2023; Los Angeles, CA.
4. Loomis KJ\*, **Roll SC**. Relationship of external wrist ratio to sonographic carpal tunnel measurements. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2023; Los Angeles, CA.

5. Parga M\*, Lucas GM, Becerik-Gerber B, Narayanan S, **Roll SC**. An investigation into office worker perceptions of eustress versus distress. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2023; Los Angeles, CA.
6. Plevack M\*, **Roll SC**. Pelvic floor rehabilitation through a biopsychosocial approach: Linking research to practice. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2023; Los Angeles, CA.
7. Fang Y\*, Kapellusch J, **Roll SC**. Using job task analysis to tailor the Revised Strain Index to a specific occupation for valid and convenient ergonomic assessment. Poster presentation at: 18<sup>th</sup> World Federation of Occupational Therapists International Congress and Exhibition, 2022; Paris, France.
8. Fukumura YE\*, **Roll SC**, Xiao Y, Awada M, Schott J, Becerik-Gerber B, Lucas GM. Supporting health and well-being when working from home: Lessons learned during the COVID-19 pandemic. Poster presentation at: 18<sup>th</sup> World Federation of Occupational Therapists International Congress and Exhibition, 2022; Paris, France.
9. Krause D, **Roll SC**, Javaherian-Dysinger H, Daher N. Comparative efficacy of the dorsal application of Kinesio-tape and splinting for carpal tunnel syndrome: A randomized controlled trial. Poster presentation at: 18<sup>th</sup> World Federation of Occupational Therapists International Congress and Exhibition, 2022; Paris, France.
10. Krause D, Ryan S, Krpalek D, **Roll SC**, Javaherian-Dysinger H, Daher N. Participants' perceptions of Kinesio-tape for carpal tunnel syndrome: A qualitative study. Poster presentation at: 18<sup>th</sup> World Federation of Occupational Therapists International Congress and Exhibition, 2022; Paris, France.
11. Takata SC\*, **Roll SC**. A timeline for tendon healing: Using sonography to support upper extremity rehabilitation. Poster presentation at: 18<sup>th</sup> World Federation of Occupational Therapists International Congress and Exhibition, 2022; Paris, France.
12. Yao B\*, Takata SC\*, **Roll SC**. Occupational therapy student health and extracurricular activity participation: Necessitating the focus of well-being within occupational therapy education. Poster presentation at: 18<sup>th</sup> World Federation of Occupational Therapists International Congress and Exhibition, 2022; Paris, France.
13. Loomis KJ\*, **Roll SC**, Hardison ME. Therapist-patient relationships in outpatient upper extremity rehabilitation: Facilitating engagement and adherence. Poster presentation at: American Occupational Therapy Association Inspire Annual Conference, 2022; San Antonio, TX.
14. Yao B\*, Takata SC\*, **Roll SC**. OT student health and extracurricular activity participation: A need to support well-being in OT education. Poster presentation at: American Occupational Therapy Association Inspire Annual Conference, 2022; San Antonio, TX.
15. Yao B\*, Yang L\*, Gong C\*, **Roll SC**. Doppler sonography evaluation of median nerve intraneural blood flow: A systematic review. Poster presentation at: Annual Convention of the American Institute of Ultrasound in Medicine, 2022; San Diego, CA.
16. Fang Y\*, **Roll SC**. Examining occupational competence and temporality in dental hygiene students. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2022; Los Angeles, CA.
17. Fukumura YE\*, Kijel MT\*, Lucas GM, Becerik-Gerber B, **Roll SC**. Establishing a typology of office work behavior: A pilot study. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2022; Los Angeles, CA.
18. Loomis KJ\*, Shin J\*, **Roll SC**. Musculoskeletal ultrasonography to support upper extremity rehabilitation: A scoping review. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2022; Los Angeles, CA.
19. Yang L\*, Yao B\*, **Roll SC**. Doppler sonography for detecting intraneural blood flow within the median nerve. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2022; Los Angeles, CA.
20. Yao B\*, Takata SC\*, Mack WJ, **Roll SC**. Occupational exposure and musculoskeletal complaints among dental hygiene students. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2022; Los Angeles, CA.
21. Yo SH\*, **Roll SC**. Ergonomic management of upper extremity arthritis: A systematic review. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2022; Los Angeles, CA.

22. **Roll SC**, Takata SC, Yao B, Kono N, Mack WJ. A role for sonographic imaging in workplace screening: identification of individual risk for and early-detection of work-related musculoskeletal disorders. Poster presentation at: XXII World Congress on Safety and Health at Work, 2021; Vancouver, B.C., Canada (*presented virtually due to COVID-19*).
23. Fukumura YE\*, **Roll SC**, Becerik-Gerber B, Aryal A, Xiao Y, Lucas GM. Using artificial intelligence to monitor postural risk in the workplace. Poster presentation at: XXII World Congress on Safety and Health at Work, 2021; Vancouver, B.C., Canada (*presented virtually due to COVID-19*).
24. Fukumura YE\*, Kijel M, Becerik-Gerber B, Lucas GM, **Roll SC**. Developing an artificial intelligence office workstation to support health and well-being. Poster presentation at: 9<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2021; *presented virtually due to COVID-19*.
25. Yao B\*, Takata S\*, **Roll SC**. The effect of participation in eight types of extracurricular activities on college students' health. Poster presentation at: 9<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2021; *presented virtually due to COVID-19*.
26. Fang Y\*, Dole J\*, Baker NA, **Roll SC**. Evaluating the quality and content of printable patient education handouts for carpal tunnel syndrome on the internet. Poster presentation at: 9<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2021; *presented virtually due to COVID-19*.
27. Fang Y\*, Tung KD, **Roll SC**. Modifying the revised strain index for dental hygiene work. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2021; Los Angeles, CA.
28. Fukumura YE\*, Lucas GM, Becerik-Gerber B, **Roll SC**. Work from home during COVID-19: A negotiation of time and space. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2021; Los Angeles, CA.
29. Loomis KJ\*, Hardison ME, **Roll SC**. Therapist-patient relationships in hand therapy: Power, engagement, and adherence. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2021; Los Angeles, CA.
30. Yao B\*, Takata SC\*, **Roll SC**. Extracurricular activity impacts dental hygiene and occupational therapy students' health. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2021; Los Angeles, CA.
31. Takata SC\*, **Roll SC**. Timeline of flexor tendon repair to advance precision approach to rehabilitation. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2021; Los Angeles, CA.
32. Chung Y\*, Willie T\*, Fang Y\*, **Roll SC**. Analyzing potential risk of musculoskeletal disorder and discomfort in dental hygiene students. Poster presentation at: USC Undergraduate SCymposium, 2021; Los Angeles, CA.
33. Lopez A\*, Roldan L\*, Yao B\*, **Roll SC**. Using sonographic imaging to identify the risk of musculoskeletal pain in dental hygienists over time. Poster presentation at: USC Undergraduate SCymposium, 2021; Los Angeles, CA.
34. Fukumura YE\*, Becerik-Gerber B, Lucas GM, **Roll SC**. Understanding office work behavior to inform an artificial intelligence workstation. Poster presentation at: 8<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2020; *accepted but canceled due to COVID-19*.
35. Yao B\*, Takata SC\*, **Roll SC**. The effect of eight occupational categories of extracurricular activity on college students' health. Poster presentation at: 8<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2020; *accepted, but canceled due to COVID-19*.
36. Fukumura YE\*, Becerik-Gerber B, Lucas GM, **Roll SC**. Understanding office worker behavior to inform an artificial intelligence workstation. Poster presentation at: Health in Buildings Roundtable Conference, National Institutes of Health, 2020; *presented virtually due to COVID-19*.
37. Xiao Y, Fukumura YE\*, Aryal A\*, Becerik-Gerber B, **Roll SC**, Lucas GM. Marker-less ergonomic measurements in real office environments. Poster presentation at: Health in Buildings Roundtable Conference, National Institutes of Health, 2020; *presented virtually due to COVID-19*.
38. Takata SC\*, **Roll SC**. Using musculoskeletal sonography to analyze healing tissues of zone II flexor tendon repairs post-surgery. Poster presentation at: Annual Convention of the American Institute of Ultrasound in Medicine, 2020; *presented virtually due to COVID-19*.

39. Fang Y\*, Dole J\*, Baker NA, **Roll SC**. Quality of online patient education handouts for carpal tunnel syndrome. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2020; Los Angeles, CA.
40. Fukumura YE\*, Becerik-Gerber B, Lucas GM, **Roll SC**. Understanding office worker behavior to inform an artificial intelligence workstation. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2020; Los Angeles, CA.
41. Liu JC\*, **Roll SC**. Characterizing working posture and injury risk in dental hygiene students. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2020; Los Angeles, CA.
42. Takata SC\*, **Roll SC**. Using sonography to evaluate healing of surgically repaired flexor tendons. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2020; Los Angeles, CA.
43. Tung KD\*, Baker NA, Forrest JL, **Roll SC**. Evaluating hand strain during the dynamic task of dental scaling. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2020; Los Angeles, CA.
44. Yao B\*, Takata SC\*, **Roll SC**. Effects of extracurricular activity participation on college students' health. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2020; Los Angeles, CA.
45. Forrest JL, Mack WJ, **Roll SC**. Factors associated with the development of hand discomfort in dental hygiene students. Poster presentation at: International Symposium on Dental Hygiene, 2019; Brisbane, Australia.
46. **Roll SC**, Kono N, Forrest JL, Mack WJ. Differential effects of work-related task training on upper extremity health in occupational therapy and dental hygiene students. Poster presentation at: 97<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2019; New Orleans, LA.
47. Tung KD\*, Fukumura YE\*, Baker NA, Forrest JL, **Roll SC**. Identifying an optimal sampling method to estimate postural risk in a dynamic work task. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2019; Los Angeles, CA.
48. Yao B\*, Gan K\*, Lee A\*, **Roll SC**. Dynamic evaluation of median nerve shape in the carpal tunnel. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2019; Los Angeles, CA.
49. Takata SC\*, **Roll SC**. Changes in activity participation by students attaining professional degrees. Poster presentation at: Occupational Therapy Summit of Scholars, 2018; Kansas City, MO.
50. **Roll SC**, Cristino A\*, Mitchell J. Characterizing changes in the median nerve during hand grip using dynamic sonographic imaging. Poster presentation at: American College of Rheumatology and Association of Rheumatology Health Professions Annual Meeting, 2018; Chicago, IL.
51. Aryal A\*, Becerik-Gerbera B, Anselmo F, **Roll SC**, Lucas G. Smart desk to promote health and productivity. Poster presentation at: Health in Buildings for Today and Tomorrow: An Interdisciplinary Conference on Health and the Sustainable Built Environment (NIH, NSF, CDC, GSA), 2018; Bethesda, MD.
52. Melrose D, Wilkins K, Forrest JL, **Roll SC**. Evaluating the development of musculoskeletal injuries in dental hygienists. Poster presentation at: American Dental Education Association Allied Dental Program Directors Conference, 2018; San Diego, CA.
53. **Roll SC**, Takata SC\*. Looking beyond the surface to advance prevention and rehabilitation of carpal tunnel syndrome. Poster presentation at: 96<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2018; Salt Lake City, UT.
54. Sousaa C, Pozzi F, Plummer H, **Roll SC**, Michener L. Shoulder tendon micromorphology and impairments in dental hygienists. Poster presentation at: International Shoulder Group Conference, 2018; Rochester, NY.
55. Randolph S\*, Eckerling R\*, Fang Y\*, Hardison ME\*, **Roll SC**. Identifying risks of development musculoskeletal discomfort in dental hygiene students. Poster presentation at: USC Undergraduate Research Symposium, 2018; Los Angeles, CA.
56. Melrose D, Wilkins K, Forrest JL, **Roll SC**. Evaluating the development of musculoskeletal injuries in dental hygienists. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2018; Los Angeles, CA.
57. Eckerling R\*, Fang Y\*, Randolph S\*, Hardison ME\*, **Roll SC**. Identifying risks of development musculoskeletal discomfort in dental hygiene students. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2018; Los Angeles, CA.



58. **Roll SC**, Mitchell J. Dynamic sonographic evaluation of median nerve changes during hand grasp. Poster presentation at: Society of Diagnostic Medical Sonography Annual Conference, 2017; Dallas, TX.
59. Melrose D, Wilkins MA, Forrest JL, **Roll SC**. Identifying risk of hand injuries in dental hygienists: A longitudinal cohort study. Poster presentation at: American Dental Education Association Allied Dental Program Directors Conference, 2017; Baltimore, MD
60. Hardison ME\*, Colclazier NL\*, **Roll SC**. Risk assessment for musculoskeletal strain among dental hygienists using video observation. Poster presentation at: 6<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2017; Boston, MA.
61. Colclazier NL\*, Sumi JY, Forrest JL, **Roll SC**. An observational method for injury risk assessment of dental hygienists. Poster presentation at: 94<sup>th</sup> Annual Conference of the American Dental Hygienists' Association, 2017; Jacksonville, FL.
62. Takata SC\*, Wade E\*, **Roll SC**. Linking research to practice in hand therapy: A mapping review. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2017; Los Angeles, CA.
63. Colclazier NL\*, Sumi JY, Forrest JL, **Roll SC**. Developing an observational method for assessing dental hygienists' injury risk. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2017; Los Angeles, CA.
64. Melrose D, Wilkins K, Forrest JL, **Roll SC**. Identifying risk of upper extremity injuries in dental hygiene professionals. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2017; Los Angeles, CA.
65. Colclazier NL\*, Sumi JY, Forrest JL, **Roll SC**. An observational method for injury risk assessment of dental hygienists. Poster presentation at: Annual Meeting of the Canadian Dental Hygienists Association, 2017; Ottawa, Canada.
66. **Roll SC**, Forrest JL, Mack WJ. Identification of early-stage median nerve pathology using sonographic imaging: Longitudinal, multiple cohort study protocol. Electronic Poster presentation at: Annual Convention of the American Institute of Ultrasound in Medicine, 2017; Orlando, FL.
67. **Roll SC**, Hardison ME\*, Black DS. Effects of mind-body intervention on anxiety, stress, and pain in patients receiving hand therapy. Poster presentation at: 39<sup>th</sup> Annual Meeting of the American Society of Hand Therapists, 2016; Washington, DC.
68. **Roll SC**, Hardison ME\*, Black DS. Effects of mind-body interventions on stress, anxiety, and pain in hand therapy. Poster presentation at: Rehabilitation Research at NIH Meeting, 2016; Bethesda, MD.
69. **Roll SC**, Gray JM, Hardison ME\*. Musculoskeletal sonography of the upper extremity: Training and implementation in the rehabilitation clinic. Poster presentation at: 96<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2016; Chicago, IL.
70. Hardison ME\*, **Roll SC**. Mindfulness in rehabilitation: A scoping review. Poster presentation at: 96<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2016; Chicago, IL.
71. **Roll SC**, Mack WJ, Forrest JL, Baker LL, Baker NA. Identification of early-stage median nerve pathology: Protocol for a longitudinal, multiple cohort study. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2016; Los Angeles, CA.
72. Hardison ME\*, **Roll SC**. Effects of mind-body interventions on anxiety, pain and stress in hand therapy. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2016; Los Angeles, CA.
73. Hardison ME\*, **Roll SC**. How does mindfulness impact the experience of healing in clinical environments? Poster presentation at: 14<sup>th</sup> Annual Research Conferences of the Society for the Study of Occupation USA, 2015; Ft. Lauderdale, FL.
74. Hardison ME\*, **Roll SC**. Mindfulness in rehabilitation: A scoping review. Poster presentation at: 4<sup>th</sup> Annual Occupational Therapy Summit of Scholars, 2015; Los Angeles, CA.
75. **Roll SC**, Gray JM, Frank G. Therapist perceptions of the utility of sonography in rehabilitation of musculoskeletal disorders. Poster presentation at: 95<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2015; Nashville, TN.
76. **Roll SC**, Rana M, Sigward S, Yani M, Kirages D, Kutch J. Cadaveric validation and in-vivo measurement reliability of a novel linear-array transperineal sonographic evaluation of male pelvic floor structures. Poster presentation at: 15<sup>th</sup> World Congress of Ultrasound in Medicine and Biology 2015; Orlando, FL.

77. **Roll SC**, Gray JM, Frank G. Therapist perceptions of sonographic utility in musculoskeletal rehabilitation. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2015; Los Angeles, CA.
78. Hardison ME\*, **Roll SC**. Mindfulness in rehabilitation: A scoping review. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2015; Los Angeles, CA.
79. **Roll SC**, Black DS, Rocker JD, Aguillon A. Visual biofeedback and mindfulness training for hand rehabilitation. Poster presentation at: USC Jacquelin Perry Research Day (Institute for Integrative Health), 2014; Los Angeles, CA.
80. **Roll SC**, Kutch JJ. Reliability of transperineal sonographic evaluation of male pelvic floor structures. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2014; Los Angeles, CA.
81. Wolkoff M\*, Frank G, Mclaughlin-Gray J, **Roll SC**. Therapist perception of the implementation of musculoskeletal sonography in hand rehabilitation. Poster presentation at: 36<sup>th</sup> Annual Meeting of the American Society of Hand Therapists, 2013; Chicago, IL.
82. Tsai J\*, **Roll SC**. Use of musculoskeletal ultrasonography in orthopedic rehabilitation: A scoping review. Poster presentation at: 36<sup>th</sup> Annual Meeting of the American Society of Hand Therapists, 2013; Chicago, IL.
83. **Roll SC**, Kutch JJ. Transperineal sonographic evaluation of the male pelvic floor. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2013; Los Angeles, CA.
84. Rana M\*, **Roll SC**, Kutch JJ. Identifying muscle hyperactivity in chronic pain. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2013; Los Angeles, CA
85. **Roll SC**. Relationship of tissue morphology to symptoms of carpal tunnel syndrome. Poster presentation at: USC Ostrow School of Dentistry Research Day, 2012; Los Angeles, CA.
86. Fahy C\*, **Roll SC**. Sonographic evaluation of median nerve excursion. Poster presentation at: Annual Conference of the Society of Diagnostic Medical Sonography, 2012; Seattle, WA.
87. **Roll SC**, Evans KD. Relationship of psychosocial, personal, and physical factors to physiologic changes in the median nerve. Research in progress poster presentation at: 91<sup>st</sup> Annual Conference of the American Occupational Therapy Association, 2011; Philadelphia, PA.
88. **Roll SC**, Evans KD. Validation of ultrasonographic methods for investigation of carpal tunnel syndrome in surgical candidates. Research in progress poster presentation at: 91<sup>st</sup> Annual Conference of the American Occupational Therapy Association, 2011; Philadelphia, PA.
89. Evans KD, **Roll SC**, Main J, Sommerich CM. Utilizing an animal model to validate a sonographer scanning protocol for the median nerve. Poster presentation at: Annual Conference of the Society of Diagnostic Medical Sonography Annual, 2010; Denver, CO.
90. **Roll SC**, Evans KD. Feasibility of utilizing a hand-carried ultrasound unit for investigating median nerve pathology. Poster presentation at: Ohio State University Medical Center Research Day, 2009; Columbus, OH
91. **Roll SC**, Evans KD. Feasibility of utilizing a hand-carried ultrasound unit for investigating median nerve pathology. Poster presentation at: Annual Conference of the Ohio Occupational Therapy Association, 2009; Dayton, OH.
92. **Roll SC**, Harpster K. Simple, efficient outcomes measurement and reporting for accreditation and marketing. Poster presentation at: 89<sup>th</sup> Annual Conference of the American Occupational Therapy Association, 2009; Houston, TX.
93. **Roll SC**, Flinn S, Case-Smith J, Clutter J. Discovery of interprofessional perceptions of Ohio Bureau of Workers' Compensation professionals during the provision of physical rehabilitation services for injured workers. Poster presentation at: Annual Conference of the Ohio Occupational Therapy Association, 2006; Zanesville, OH.
94. **Roll SC**, Rogers S. Office ergonomics: A university departmental study. Poster presentation at: 83<sup>rd</sup> Annual Conference of the American Occupational Therapy Association, 2003; Washington, DC.
95. **Roll SC**, Rogers S. Office ergonomics: A university departmental study. Poster presentation at: Annual Conference of the Ohio Occupational Therapy Association, 2002; Cleveland, OH.

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**SCHOLARSHIP AWARDS and HONORS**


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**Academy of Research** – American Occupational Therapy Foundation (April 2021)  
**Fellow** – American Institute of Ultrasound in Medicine (November 2019)  
**Sonographer Scientific Poster Competition, 1<sup>st</sup> Place** – Society of Diagnostic Medical Sonography (October 2017)  
**Senior Membership** – American Institute of Ultrasound in Medicine (March 2016)  
**Roster of Fellows** – American Occupational Therapy Association (April 2015)  
**Kenneth R. Gottesfeld Award, 2<sup>nd</sup> Place** – Outstanding Publication, Journal of Diagnostic Medical Sonography (2013)  
**Kenneth R. Gottesfeld Award, 3<sup>rd</sup> Place** – Outstanding Publication, Journal of Diagnostic Medical Sonography (2013)  
**Sonographer Scientific Poster Competition, 1<sup>st</sup> Place** – Society of Diagnostic Medical Sonography (October 2013)  
**New Investigator Award, Finalist** – American Institute of Ultrasound in Medicine (April 2013)  
**Outstanding PhD Graduate Student** – School of Allied Medical Professions, The Ohio State University (May 2010)  
**Kenneth R. Gottesfeld Award, 1<sup>st</sup> Place** – Outstanding Publication, Journal of Diagnostic Medical Sonography (2009)  
**Phi Kappa Phi** – Inducted, Graduate Honor Society, The Ohio State University (2008)  
**Award of Merit** – School of Allied Medical Professions, The Ohio State University (June 2002)  
**Denman Undergraduate Research Forum** – Selected Participant (May 2002)  
**Ohio State University Undergraduate President's Salute** – Honoree, President William Kirwin (February 2002)  
**Pi Theta Epsilon** – Inducted, National Occupational Therapy Honor Society, The Ohio State University (2001)  
**National Collegiate Scholars** – Inducted, National Undergraduate Society, The Ohio State University (2000)  
**Alpha Lambda Delta/Phi Eta Sigma** – Inducted, National Undergraduate Honor Society; Miami University (1999)

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**CURRICULUM and TEACHING**


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**Curriculum Development, Course Design, and Other Academic Advancement**
**1. Holistic Admissions Process**

*University of Southern California — Major Admissions Process Revision — Fall 2019-2020*

Co-led a major revision of the admissions process for the Chan PhD in Occupational Science program: identified and developed criteria for a holistic review of applications, developed a rubric to fairly examine scholarly writing of applicants, created a protocol for a rigorous review process incorporating the standardized review criteria across multiple reviewers, collected data to evaluate protocol implementation, identified and implemented final revisions to improve the process.

**2. PhD in Occupational Science**

*University of Southern California — Major Curriculum Revision — Spring 2016*

Chaired the committee for the revision of the PhD curriculum, which included: revision of degree requirements, development of an advanced standing program track, conceptualization and preparation of three new courses, revision of the program description for the university catalogue, and completion of all supporting rationale documents required for university curriculum review. Also, current courses and programmatic requirements were reviewed and updated to ensure a well-rounded full curriculum.

**3. Grant Writing for Occupational Science (OT 661)**

*University of Southern California — New Course Development — Spring 2016*

8-week intensive, 2-unit, workshop as a capstone for the USC PhD program to provide students with practical applied training in the development of federal grant applications. Developed the course syllabus, description, and grading requirements as part of a full PhD curriculum revision. Graduate/PhD.

**Teaching**
**1. Foundations of Occupational Science (OT 640)**

*University of Southern California — Fall 2020 — Course Director (Faculty)*

Seminar course providing historical perspective on the foundation of the discipline of occupational science and the development of the core constructs over the past, present, and future of the discipline. Graduate/PhD

**2. Research Immersion and Practicum (OT 660)**

*University of Southern California — Fall/Spring Annually, 2017–current— Course Director (Faculty)*

Oversight for immersion experiences within research labs and monthly workshops on cross-cutting, practical aspects of research such as research ethics, academic writing, effective research collaboration, and grant/research management. Graduate/PhD.

**3. The Nature of Occupation (OT 641)**

*University of Southern California — Fall 2015, Fall 2017, Fall 2019 — Course Director (Faculty)*

Seminar course providing a theoretical foundation for the study of occupation using cross-disciplinary perspectives to discuss domains of human engagement in living and learning in everyday life. Graduate/PhD.

**4. Advanced Seminar in Occupational Science (OT 545)**

*University of Southern California — Spring 2017 — Course Director (Faculty)*

Seminar course reviewing the historical foundations and key areas of scholarship for the discipline of occupational science, with discussion of the relationship of occupational science to occupational therapy practice. Graduate/Professional.

**5. Directed Research Independent Study (OT 490/590/790)**

*University of Southern California — 20 individual students from 2013–current — Course Director (Faculty)*

Directed and mentored independent study in aspects of research related to advancing practice or science through an examination of literature, methods, analysis, and data interpretation. Undergraduate/Graduate/PhD

**6. Functional Anatomy for Occupational Therapists (OT 260)**

*University of Southern California — Fall/Spring Annually, 2011-2016 (10 Times) — Course Director (Faculty)*

Anatomical survey of the human musculoskeletal, nervous, cardiovascular, respiratory, digestive, and urinary systems with functional relevance to the practice of occupational therapy, including lecture and human cadaver lab sessions. Undergraduate/Pre-Professional.

**7. Introduction to Evidence and Careers in Radiologic Sciences and Therapy (RST 200)**

*The Ohio State University — Autumn 2009, Spring and Autumn 2010 — Instructor*

Undergraduate course using brief reviews of timely issues and innovations affecting practice in allied health and radiologic sciences to implement the process of synthesizing evidence and developing scientific writing skills. Undergraduate.

**8. Occupational Therapy in Physical Function I (OT 743)**

*The Ohio State University — Spring 2008 — Graduate Teaching Associate*

Graduate course examining the evaluation, remediation principles, and disability prevention used in occupational therapy practice with a focus on musculoskeletal diagnoses. Developed course syllabus, provided instruction for 2 of 3 units, developed student evaluation materials, assisted with lab sessions, and graded practicum. Graduate/Professional.

**9. Occupational Therapy for Neurological Conditions (OT 747)**

*The Ohio State University — Winter 2008 — Graduate Teaching Associate*

Graduate course examining the performance abilities in persons with central nervous dysfunction. Course also includes principles and strategies for evaluation and treatment. Developed and scored case study assignment, provided instructional lectures. Graduate/Professional.

**10. Occupational Therapy in Physical Function II (OT 744)**

*The Ohio State University — Autumn 2007 — Graduate Teaching Associate*

Graduate course examining the application of assessment techniques and intervention strategies for clients with physical dysfunction. Created evaluations, provided instructional lectures, assisted with lab sessions. Graduate/Professional.

**Guest Lectures and Other Course Presentations****1. “Identifying Funding Opportunities and Targeting Your Grant Writing”**

*University of Southern California Chan Division of OSOT — Annually 2019–current*

**2. “Workers’ Compensation”**

*University of Southern California Chan Division of OSOT — March 30, 2020*

**3. “Exploring Functional Hand Anatomy Using Sonographic Imaging”**

*University of Southern California Chan Division of OSOT — Spring Semester, Annually 2016–2018*

**4. “Work: An Occupational Therapy Perspective”**

*University of Southern California Chan Division of OSOT — Spring and Fall Semesters, Semi-annually 2012–2018*

**5. “Work Related Musculoskeletal Disorders and Ergonomics in the Sonography Lab”**

*The Ohio State University Radiologic Sciences — Oct 20, 2009; Oct 19, 2010*

6. **“Anatomy of the Upper Arm: A Primer for Vascular Sonographers”**  
*The Ohio State University Radiologic Sciences — Oct 22, 2008*
7. **“An Introduction to Job Analysis”**  
*The Ohio State University Occupational Therapy — Mar 6, 2007; Feb 28, 2008; Mar 2, 2009*
8. **“Work: An Occupational Therapy Perspective”**  
*The Ohio State University Occupational Therapy — Nov 16, 2005; Nov 28, 2006; Dec 1, 2008; Nov 30, 2009*
9. **“Low Back Injury: Implication and Intervention”**  
*The Ohio State University Occupational Therapy — May 12, 2003; Oct 26, 2004*
10. **“The Industrial Occupational Therapist” / “Industrial Rehabilitation: Evaluation and Treatment”**  
*The Ohio State University Occupational Therapy — May 2, 2003; Feb 4, 2004; Mar 12, 2005*

### MENTORING

#### Faculty and Post-Doctoral Scholars

Name	Level	University	Mentoring Year(s)	Mentoring Role	Mentored Co-Authored Publications	Mentored Co-Authored Presentations
Sook-Lei Liew	Jr. Faculty	USC	2019–2021	Mentoring Committee	N/A	N/A
Stefanie Bodison	Jr. Faculty	USC	2017–2018	Mentoring Chair	N/A	N/A
Ryan Walsh	Post-Doc	USC	2023–	Lead Mentor	-	-
Kryztopher Tung	Post-Doc	USC	2018–2020	Lead Mentor	3	4
<b>2020–Current (First Position):</b> Biomechanical Consultant, Rimkus Consulting Group						
Manku (Rana) Dasaur	Post-Doc	USC	2012–2015	Ad Hoc Advising	1	2
<b>2015–2020 (First Position):</b> Healthcare Economics Consultant, UnitedHealth Group						
<b>2020–Current:</b> Associate Healthcare Economics Director, Optum						

Notes: USC, University of Southern California

#### Doctoral Students (Lead Mentor and Committee Chair)

Name	Program	University	Mentoring Year(s)	Mentoring Role	Mentored Co-Authored Publications	Mentored Co-Authored Presentations
Madeline Parga	PhD (OS)	USC	2022–	Lead Mentor, Chair	-	2
Yiyang Fang	PhD (OS)	USC	2021–	Lead Mentor, Chair	-	7
Kathrine J. Loomis	PhD (OS)	USC	2020–	Lead Mentor, Chair	1	8
<b>Awards:</b> First Time Researcher Award, American Society of Hand Therapists						
Yoko E. Fukumura	PhD (OS)	USC	2019–	Lead Mentor, Chair	6	18
Buwen Yao	PhD (OS)	USC	2018–2022	Lead Mentor, Chair	7	15
<b>Dissertation:</b> Effects of occupation on physiologic biomarkers: Doppler sonographic evaluation of intraneural blood flow						
<b>Grants:</b> Research Grant, Society for Diagnostic Medical Sonography Foundation, 2021-22, \$4,000						
<b>Awards:</b> Elizabeth June Yerxa Award, Chan Division of Occupational Science and Occupational Therapy; 2022						
Finalist, New Investigator Award, American Institute of Ultrasound in Medicine (AIUM), 2021						
<b>2023–Current (First Position):</b> Medical Research Resident, Third Hospital Peking University, Beijing, China						
Sandy C. Takata	PhD (OS)	USC	2016–2023	Lead Mentor, Chair	7	27
<b>Dissertation:</b> Precision care to optimize safe return to function following surgical flexor tendon repair						
<b>Grants:</b> F31 Predoctoral Fellowship, NIH/NIAMS, 2019–21, \$90,032						
Grab the Evidence Grant, American Hand Therapy Foundation, 2019-20, \$6,350						
Research Grant, Society for Diagnostic Medical Sonography Foundation, 2019–20, \$5,000						
<b>Awards:</b> First Time Author Award, Journal of Hand Therapy, 2019						
Finalist, New Investigator Award, AIUM, 2019						
Student Scholar Award, OT Summit of Scholars, AOTA/AOTF, 2017						

<b>Mark E. Hardison</b>	PhD (OS)	USC	2014–2019	Lead Mentor, Chair	8	20
<b>Dissertation:</b> Exploring the effects of mindfulness on psychosocial factors for patients receiving hand therapy						
<b>Grant:</b> Research Grant, California Foundation for Occupational Therapy, 2018-19, \$3,000						
<b>Awards:</b> Elizabeth June Yerxa Award, Chan Division of Occupational Science & Occupational Therapy; 2019 1 <sup>st</sup> Place Poster Presentation, School of Dentistry Research Day, 2015						
<b>2019–Current (First Position):</b> Assistant Professor (Tenure-Track), University of New Mexico						

Notes: OS, Occupational Science; USC, University of Southern California

#### Doctoral Students (Committee Member)

Name	Program	University	Mentoring Year(s)	Mentoring Role	Mentored Co-Authored Publications	Mentored Co-Authored Presentations
Loree Pham	PhD (OS)	USC	2022–	Advisory Committee	-	-
Gillian Fennell	PhD (Gero)	USC	2021–	Dissertation Committee	-	-
Mohamad Awada	PhD (CEE)	USC	2021–	Dissertation Committee	8	2
Linah AlShaalan	PhD (OS)	USC	2020–2021	Advisory Committee	-	-
Raymond Hernandez	PhD (OS)	USC	2019–2021	Dissertation Committee	4	-
Yijing Xiao	PhD (CEE)	USC	2019–2021	Advisory Committee	4	5
Ashrant Aryal	PhD (CEE)	USC	2019–2020	Dissertation Committee	2	4
<b>Dissertation:</b> Intelligent agents for personalizing indoor environment and improving occupant comfort in offices						
Kaori Ito	PhD (OS)	USC	2018–2021	Dissertation Committee	-	-
<b>Dissertation:</b> Neural and psychosocial correlates of age differences in goal-directed and habitual decision-making						
Donnamarie Krause	PhD (RS)	LLU	2017–2019	Dissertation Committee	3	2
<b>Dissertation:</b> Effects on occupational performance of dorsal application of Kinesiotape for carpal tunnel syndrome						
Kristine Carandang	PhD (OS)	USC	2017–2018	Dissertation Committee	-	-
<b>Dissertation:</b> Activity engagement of young adults with autoimmune arthritis: A multi-method approach						

Notes: CEE, Civil and Environmental Engineering; Gero, Gerontology; LLU, Loma Linda University; OS, Occupational Science; RS, Rehabilitation Science; USC, University of Southern California

#### Post-Professional Occupational Therapy Doctoral and Master's Students (Thesis/Capstone/Independent Research Mentor)

Name	Program	University	Mentoring Year(s)	Mentoring Role	Mentored Co-Authored Publications	Mentored Co-Authored Presentations
Michelle Plevack	OTD	USC	2022-	Lead Mentor, Chair	-	1
Qian Xu	OTD	USC	2022-	Lead Mentor, Chair	-	-
Hongying Zhong	OTD	USC	2022-	Lead Mentor, Chair	-	-
Samantha Yo	OTD	USC	2021–2022	Lead Mentor, Chair	1	1
<b>Capstone:</b> The examination of novel approaches for musculoskeletal care						
Luming Yang	OTD	USC	2021–2022	Co-Mentor	-	1
<b>Capstone:</b> Becoming an occupational therapy educator: Merging knowledge in pedagogy, research, and clinical practice						
Chen Gong	OTD	USC	2021–2022	Co-Mentor	-	-
<b>Capstone:</b> Research and evidence-based practice in musculoskeletal disorders of the upper extremity: A clinical pathway of OT intervention for scleroderma						
Mulubhran Woldmariam	MS (RS)	OSU	2021–2022	Thesis Committee	-	-
<b>Thesis:</b> Testing the validity and reliability of the Expain® biofeedback device: The acquisition capabilities and risk reduction for sonographers wearing an ergometer.						
Yiyang Fang	OTD	USC	2020–2021	Lead Mentor, Chair	2	3
<b>Capstone:</b> Building a foundation of becoming a career scientist in the realm of musculoskeletal injury prevention						
<b>Award:</b> First Place Poster, Ostrow School of Dentistry Research Day, University of Southern California						
Jody Liu	OTD	USC	2019–2020	Lead Mentor, Chair	-	1
<b>Capstone:</b> Building evidence for OT in work and industry: Exploring assessments and identifying practitioner needs						
John Williams	MA (OT)	USC	2020	Level II Fieldwork	-	-
Joseph Schott	MA (OT)	USC	2020	Level II Fieldwork	1	1
Annie Ting	OTD	USC	2017–2018	Residency Advisor	-	-
<b>Capstone:</b> Musicians and hypermobility: enhancing care with hand rehabilitation						
Daniel Luo	MA (OT)	USC	2017	Independent Study	-	-

<b>Cassie Tseng</b>	MA (OT)	USC	2017	Independent Study	-	-
<b>Nikki Colclazier</b>	MS (DH)	USC	2016	Capstone Advisor	1	5
<b>Capstone:</b> Developing a video analysis method to assess dental hygiene students' risk for developing musculoskeletal disorders						
<b>Sarah Chang</b>	MA (OT)	USC	2016	Independent Study	-	-
<b>Katharine Saley</b>	MA (OT)	USC	2016	Independent Study	-	-
<b>Heather Van Buren</b>	MA (OT)	USC	2016	Independent Study	-	-
<b>Emily Wade</b>	OTD	USC	2015–2016	Residency Advisor	1	2
<b>Capstone:</b> Evidence-based hand therapy in literature and practice						
<b>Delila Newman</b>	MA (OT)	USC	2014	Independent Study	-	-
<b>Monique Wolkoff</b>	OTD	USC	2012–2013	Independent Study	1	1
<b>Capstone:</b> Implementation and utility of sonographic imaging in hand therapy practice						
<b>Julieann Tsai</b>	MA (OT)	USC	2012–2013	Independent Study	1	1

Notes: DH, dental hygiene; eOTD, entry-level occupational therapy doctorate; OT, occupational therapy; OTD, post-professional occupational therapy doctorate; OSU, Ohio State University; RS, Rehabilitation Sciences; USC, University of Southern California

#### Undergraduate Students (Thesis/Research Project Mentor)

Name	Program	University	Mentoring Year(s)	Mentoring Role	Mentored Co-Authored Publications	Mentored Co-Authored Presentations
<b>Arianna Lopez</b>	BS	USC	2020–2022	URAP Researcher	-	1
<b>Leiyenne Roldan</b>	BS	USC	2020–2022	URAP Researcher	-	1
<b>Trisha Willie</b>	BS	USC	2019–2022	URAP Researcher	-	1
<b>Award:</b> Distinguished Contributions to Research and Scientific Writing, Chan Division Commencement Award <b>Grant:</b> Provost's Research Fellowship, University of Southern California (\$5,000)						
<b>Yoojin Chung</b>	BS	USC	2019–2021	URAP Researcher	-	1
<b>Kayla Gan</b>	BS	USC	2018–2019	URAP Researcher	1	1
<b>Annie Lee</b>	BS	USC	2018–2019	URAP Researcher	1	1
<b>Yiyang (Sunny) Fang</b>	BS	USC	2017–2019	URAP Researcher	1	3
<b>Award:</b> Distinguished Contributions to Research and Scientific Writing, Chan Division Commencement Award						
<b>Samantha Randolph</b>	BS	USC	2017–2021	URAP Researcher	1	2
<b>Grant:</b> Provost's Research Fellowship, University of Southern California (\$1,000)						
<b>Rachel Eckerling</b>	BS	USC	2017–2018	URAP Researcher	-	2
<b>Ariana Cristino</b>	BS	USC	2016–2017	Independent Study	-	1
<b>Award:</b> Discovery Scholar, University of Southern California						
<b>Heng (Hannah) Chang</b>	BS	USC	2014	Independent Study	1	-
<b>Christina Fahy</b>	BS	OSU	2011–2012	Thesis Committee	1	-
<b>Thesis:</b> Utilizing multi-sonographic measures in the detection of clinically diagnosed carpal tunnel syndrome compared to nerve conduction studies: A pilot study.						
<b>Lauren Selhorst</b>	BS	OSU	2010–2011	Thesis Committee	1	1
<b>Thesis:</b> Direct measures of physical factors contributing to work-related musculoskeletal pain among diagnostic medical sonographers: A pilot study.						
<b>Kathryn Zale</b>	BS	OSU	2009–2010	Thesis Committee	-	2
<b>Thesis:</b> Utilizing Doppler ultrasound to detect arteriole blood flow within the median nerve sheath.						

Notes: OSU, Ohio State University; USC, University of Southern California; URAP, Undergraduate Research Associates Program

#### Graduate and Undergraduate Student Research Assistants

Name	Program	University	Mentoring Year(s)	Mentoring Role	Mentored Co-Authored Publications	Mentored Co-Authored Presentations
<b>Agatha Handojo</b>	eOTD	USC	2022-	Research Assistant	-	-
<b>Jiwon Shin</b>	MA (OT)	USC	2021–	Research Assistant	-	1
<b>Yeyang Tang</b>	MA (OT)	USC	2021–2022	Research Assistant	-	-
<b>Melanie Kijel</b>	BS	USC	2020–2022	Research Volunteer	-	3
<b>Alyssa Matlosz</b>	MA (OT)	USC	2020–2021	Research Assistant	-	-
<b>Award:</b> Spirit of Occupational Therapy, Chan Division Commencement Award						

<b>Julianna Dole</b>	MA (OT)	USC	2019–2020	Research Assistant	1	2
<b>Nina Wakayama</b>	MA (OT)	USC	2018–2019	Research Assistant	-	-
<b>Yoko Fukumura</b>	MA (OT)	USC	2017–2019	Research Assistant	1	1
<b>Joyce Ho</b>	MA (OT)	USC	2017–2018	Research Assistant	-	-
<b>Hsien-Chih Chiu</b>	MA (OT)	USC	2016–2017	Research Assistant	-	-
<b>Tiffany Tung</b>	BS	USC	2016	Research Volunteer	-	-
<b>Tina Sehremelis</b>	MA (OT)	USC	2015–2016	Research Volunteer	1	-
<b>Justina Wong</b>	MA (OT)	USC	2015–2016	Research Assistant	-	-
<b>Naoya (Nick) Ogura</b>	MA (OT)	USC	2014–2015	Research Assistant	-	-
<b>Phillip Lin</b>	MA (OT)	USC	2013–2014	Research Assistant	-	-
<b>Gabriel Messenger</b>	MA (OT)	USC	2012–2014	Research Assistant	-	-

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## CLINICAL EXPERIENCE

### **WorkLife, Fairfield Medical Center, Lancaster, OH**

*Program Coordinator/Occupational Therapist (2003 – 2011)*

Coordinated referral, intake, evaluation, treatment, and discharge of clients in a CARF-accredited occupational rehabilitation program; provided industrial rehabilitation services: functional capacity evaluations, transitional work, ergonomic assessments, and job site analyses. Assessed, planned, and applied acute and outpatient OT for adults with neurological, orthopedic, and mental health diagnoses.

## PROFESSIONAL SERVICE

### Association Membership

**American Occupational Therapy Association (2002–current)**  
**American Institute of Ultrasound in Medicine (2011–current)**  
**American Society of Hand Therapists (2012–current)**  
**Association of Rheumatology Professionals (2018–2020)**  
**Ohio Association of Rehabilitation Facilities (2003–2011)**  
**Ohio Occupational Therapy Association (2001–2011)**  
**Occupational Therapy Association of California (2012–current)**  
**Society of Diagnostic Medical Sonography (2009–current)**  
**Society for the Study of Occupation: USA (2017, 2019–current)**  
**Student Occupational Therapy Association, The Ohio State University (2000–2002)**

### Elected Positions

#### **Ohio Association of Rehabilitation Facilities**

*Member, Board of Directors (2010–2011)*

*Chair, Industrial Division (2006–2008)*

#### **Student Occupational Therapy Association, The Ohio State University**

*President (2001–2002)*

### Committees and Other Service

#### **American Institute for Ultrasound in Medicine**

*Panelist, Work-Related Musculoskeletal Disorder Prevention Task Force, Clinical Standards Committee (2020–2022)*

#### **American College of Occupational and Environmental Medicine**

*Panelist, Practice-Based Shoulder Disorder Guidelines (2020–current)*

*Panelist, Practice-Based Hand, Wrist, and Forearm Disorders Guidelines (2014–2016)*



**American Occupational Therapy Association**

*Co-Chair, Specialty Conference: Adult Rehabilitation (2017–2018)*  
*Peer-Reviewer, Occupational Therapy Practice Guidelines for Adults with Musculoskeletal Conditions (2017)*  
*Member, Evidence-Based Practice Review Committee, Upper Extremity Musculoskeletal Disorders (2014–2016)*  
*Reviewer, Annual Conference Research Abstracts (2012–current)*  
*Member, Work and Industry SIS Nomination Committee (2010)*

**American Registry for Diagnostic Medical Sonography**

*Methodologist, Measurement Committee, Grand Challenge to Reduce Work-Related Injuries in Sonography (2020–2022)*

**Ohio Association of Rehabilitation Facilities**

*Outcomes Coordinator (2005–2011)*

**Occupational Therapy Association of California**

*Member, Centennial Vision Float Ad-Hoc Committee (2013–2016)*  
*Volunteer, Conference Committee (2015)*

**Ohio Bureau of Workers' Compensation**

*Ohio Legislature: Labor, Management, Government Council - Nominated for Rehabilitation Provider Seat (2009)*  
*Clinician Panelist, S.M.A.R.T. Provider Credentials and Outcomes Workgroup (June 2008–August 2008)*  
*Member, Vocational Rehabilitation Redesign/LMG Council (September 2007–March 2008)*  
*Member, Vocational Rehabilitation/MCO Outcome Measures (February 2005–July 2005)*

**Other Professional Activities**

**Musculoskeletal Occupational Therapy Research Network (MOTR-Net):** <https://sites.google.com/view/motr-net>

*Founding Member and Director (2018–current)*

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**GRANT and JOURNAL PEER-REVIEW**


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**Grant Review Panels****American Hand Therapy Foundation (AHTF)**

*Bell Grab the Evidence Grant Review Panel (2016)*

**National Science Foundation (NSF)**

*Information and Intelligent Systems Division (June 2023)*

**Patient Centered Outcomes Research Institute (PCORI)**

*Stakeholder Reviewer; Assessment of Diagnosis, Prevention and Treatment Options Review Panel*

*2022: Cycle 3*

*2019: Cycle 2*

*2018: Cycle 1, Cycle 2, Cycle 3*

*2017: Cycle 1*

*2016: Cycle 1*

*2015: Cycle 1, Cycle 3*

*2014: Fall Cycle*

*Stakeholder Reviewer; Preventing Osteoporotic Fractures Review Panel (2021 Cycle 3)*

*Scientist Reviewer; Improving Healthcare Systems Review Panel (2021 Cycle 1)*

**Southern California Clinical and Translational Science Institute (SC-CTSI)**

*Clinical Pilot Program (2016, 2017, 2018)*

*Keck School of Medicine Dean's Pilot Program (2016)*

**Weill Cornell Medicine Clinical and Translational Science Institute (CTSC)**

*Translational Research Funding Program (2022)*

**Editorial Service****American Journal of Occupational Therapy***Editorial Board (2014–2018)***Journal of Diagnostic Medical Sonography***Associate Editor, Original Research and Musculoskeletal Applications (2017–current)**Editorial Board (2016–current)***WORK: A Journal of Prevention, Assessment, and Rehabilitation***Editorial Board (2009–2017)***Ad-Hoc Peer-Review****American Journal of Occupational Therapy** (2014–current)**Archives of Physical Medicine and Rehabilitation** (2015–current)**Arthritis Care & Research** (2013, 2020)**BMJ Open** (2015, 2018)**Ergonomics** (2018)**European Radiology** (2015–2018)**Human Factors** (2016)**Journal of Diagnostic Medical Sonography** (2009–current)**Journal of Hand Therapy** (2019–current)**Journal of Occupational Science** (2017)**Journal of Plastic Surgery and Hand Surgery** (2015)**Journal of Ultrasound in Medicine** (2012–2017)**Muscle & Nerve** (2017)**Occupational Therapy Journal of Research** (2017–current)**PLoS One** (2016, 2018)**Scandinavian Journal of Occupational Therapy** (2017)**Ultrasound in Medicine and Biology** (2011–2016, 2020–current)**WORK: A Journal of Prevention, Assessment, and Rehabilitation** (2007–2017)**UNIVERSITY and COMMUNITY SERVICE****University Committees & Other Service****University of Southern California***Member, Data & Evaluation Subcommittee, Healthy Campus Initiative, USC WorkWell Center (2023–current)**Charter Member, Advisory Committee, Healthy Campus Initiative, USC WorkWell Center (2022–current)**Member, Graduate Deans Council, USC Graduate School (2017–current)**Member, Advisory Board, Edmondson Faculty Center (2014–2015)***Ostrow School of Dentistry***Member, Associate Dean Search Committee (2015–2016)**Judge, Research Day (2013, 2014, 2016, 2021, 2022)***Chan Division of Occupational Science & Occupational Therapy***Member, Faculty Merit Review Committee (2022–current)**Chair, Post-Doctoral Trainee Search Committee (2022–2023)**Chair, Tenure Review Committee (2020, 2023)**Member, Strategic Plan Implementation Team, Goal 1.1 (2019–current)**Member, Assistant Professor Search Committee (2019–2020)**Member, Strategic Planning Steering Committee (2018)**Chair, PhD Curriculum Revision Committee (2016)**Chair, ReHaB Research Core (2015–2017)**Member, Tenure/Tenure-Track (T/TT) Faculty Merit Review Committee (2012–2016)**Member, Renovations Committee (2012–2014)*

**Community Organization Volunteering and Activism**

**Columbus Softball Association**

*Secretary (2007–2011)*

*Delegate, North American Gay Amateur Athletic Alliance (NAGAAA) (2007–2011)*

*Conference Chief (2006)*

*Team Manager (2004–2008)*

**NAGAAA 2010 Softball World Series**

*Secretary (2008–2010)*

*Member, Bid Committee (2008)*