

# CURRICULUM VITAE

**Kate Havens, PhD**

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## PERSONAL INFORMATION

**Full name** Kathryn Lynn Havens

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Division of Biokinesiology and Physical Therapy  
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## EDUCATION AND TRAINING

**Graduate**

Division of Biokinesiology and Physical Therapy  
University of Southern California,  
Los Angeles, CA  
Ph.D., Biokinesiology, 2013

Viterbi School of Engineering  
University of Southern California  
Los Angeles, CA  
M.S., Biomedical Engineering, 2006

**Undergraduate**

College of Engineering  
University of Michigan  
Ann Arbor, MI  
B.S.E, Biomedical Engineering, 2004

## PROFESSIONAL EXPERIENCE

### Primary Positions

2015-present Assistant Professor of Clinical Physical Therapy, Division of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles, CA

2013-2015 Adjunct Assistant Professor of Clinical Physical Therapy, Division of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles, CA

2008-2013 Teaching Assistant, Musculoskeletal Anatomy and Analytical Anatomy, Division of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles, CA

2006-2008	Biomechanics Laboratory Researcher & Engineer, Kerlan Jobe Orthopedic Fellowship Research Program, Centinela Freeman Hospital Biomechanics Laboratory, Los Angeles, CA
2005-2006	Research Assistant under Dr. Tishya Wren, John C. Wilson, Jr. Motion Analysis Laboratory at CHLA, Department of Biomedical Engineering, University of Southern California, Los Angeles, CA
2005	Teaching Assistant, Biomedical Computer Simulation Method, Department of Biomedical Engineering, University of Southern California, Los Angeles, CA
2003-2004	Research Assistant under Dr. Daniel Ferris, Human Neuromechanics Laboratory, Department of Biomedical Engineering & School of Kinesiology, University of Michigan, Ann Arbor, MI

### **Additional Teaching Experience**

2020-present	Co-Director, Analytical Anatomy, Division of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles CA
2018-present	Director, Human Anatomy and Pathology, Keck School of Medicine, Master of Science in Pain Medicine Program, University of Southern California, Los Angeles CA
2014-present	Course coordinator, Analytical Anatomy, Division of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles CA
2013-present	Co-Director, Human Musculoskeletal Anatomy, Division of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles CA
2013-2018	Manager, Human Gross Anatomy Laboratory, Division of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles CA
2013-present	Lecturer, Human Functional Anatomy for the Occupational Therapist, Chan Division of Occupational Science and Occupational Therapy, University of Southern California, Los Angeles CA
2010-present	Lecturer, Basic Medical Sciences, Department of Family Medicine Keck School of Medicine, Physician Assistant Program, University of Southern California, Los Angeles CA
2011-present	Lecturer, Human Anatomy, Department of Family Medicine Keck School of Medicine, Department of Anesthesiology, University of Southern California, Los Angeles CA
2016	Director, Human Musculoskeletal Anatomy, Division of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles CA
2015	Director, Human Functional Anatomy for the Occupational Therapist, Chan Division of Occupational Science and Occupational Therapy, University of Southern California, Los Angeles CA
2012	Lecturer, Human Anatomy for Visiting Japanese Scholars, University of Southern California, Los Angeles CA
2012	Continuing Education Course Laboratory Instructor, "Understanding Slip & Fall Events: A Biomechanical Perspective." University of Southern California, Los Angeles, CA

### **AWARDS & HONORS**

- 2017 Commendation for Excellence in Teaching, Division of Biokinesiology and Physical Therapy, University of Southern California, Los Angeles, CA
- 2013 California Physical Therapy Association's 2013 Publication Award for "The influence of Sex and Maturation on Knee Mechanics During Side-step Cutting. *Medicine & Science in Sports & Exercise*. 44(8):1497-503, 2012."
- 2012 Conference Travel Scholarship, Gait and Clinical Movement Analysis Society
- 2004 *Cum Laude*, Award granted with Bachelors of Science in Engineering, University of Michigan, Ann Arbor, MI
- 2002 Marian Sarah Parker Scholar, University of Michigan, College of Engineering, Ann Arbor, MI

## PUBLICATION

### Publications in Refereed Journals

1. **Havens KL**, Severin AC, Bumpass DB, Mannen EM. Infant carrying method impacts caregiver posture and loading during gait and item retrieval. *Gait Posture*. 2020; 80: 117-123.
2. Mannen EM, **Havens KL**, Kahney A, Nelson-Wong, E. Baby-Carrying Method Impacts Caregiver Postural Sway and Pain During Prolonged Standing. *Journal of Women's Health Physical Therapy*. 2020; 44(2), 47-53.
3. **Havens KL**, Saulovich NA, Saric KJ. A case report about anatomy applications for a physical therapy hybrid online curriculum. *Journal of the Medical Library Association*. 2020; 108(2): 295.
4. **Havens KL**, Cohen SC, Pratt KA, Sigward SM. Accelerations from wearable accelerometers reflect knee loading after anterior cruciate ligament reconstruction. *Clinical Biomechanics*. 2018; 58: 57-61.
5. **Havens KL**, Mukherjee T, Finley JM. Analyses of biases in dynamic margins of stability introduced by the use of simplified center of mass estimates during walking and turning. *Gait Posture*. 2018; 59: 162-167.
6. **Havens KL**, Sigward SM. Whole body mechanics differ among running and cutting turn maneuvers in skilled athletes. *Gait Posture*. 2015; 42(3): 240-245.
7. **Havens KL**, Sigward SM. Joint and segmental mechanics differ between cutting maneuvers in skilled athletes. *Gait Posture*. 2015; 41(1): 33-38.
8. **Havens KL**, Sigward SM. Cutting mechanics: Relation to performance and ACL injury risk. *Med Sci Sport Exerc*. 2015; 27 (4): 818-824.
9. Sigward SM, Cesar G, **Havens KL**. Predictors of frontal plane knee moments during side-step cutting to 45° and 110° in men and women: Implications for ACL injury. *Clin J Sport Med*. 2015; 25: 529-534.
10. Sigward, SM, Pollard CD, **Havens KL**, Powers, CM. Influence of Sex and Maturation on Knee Mechanics during Side-Step Cutting. *Med Sci Sports Exerc*, 2012; 44(8):1497-1503.

11. Sigward SM, **Havens KL**, Powers CM. Knee Separation Distance and Lower Extremity Kinematics during a Drop Land: Implications for Clinical Screening. *J Athl Train*. 2011; 46(5):471-5.

#### Manuscripts submitted and pending

1. Sargent B, Havens KL, Kubo M, Wisnowski JL, Wu TW, Fetters L. Motivating selective motor control of infants at high risk for cerebral palsy. Manuscript submitted. *Neurorehabilitation Neural Repair*
2. Sargent B, **Havens KL**, Wisnowski JL, Wu TW, Kubo M, Fetters L. An In-Home Kicking-Activated Mobile Task to Motivate Selective Motor Control of Infants at High Risk for Cerebral Palsy: A Feasibility Study. In review. *Physical Therapy*
3. Kim JA, Fetters L, Kubo M, **Havens KL**, Eckel S, Sargent B. Infants born Preterm and Infants born Full-term Generate More Selective Leg Joint Movement during the Scaffolded Mobile Task. Manuscript submitted. *Developmental Medicine & Child Neurology*
4. **Havens KL**. Johnson E, Starnes C. Babywearing Practices Demonstrate Distal Care Practices: Results from Survey. Manuscript in preparation.

#### Abstracts

1. **Havens KL**, Zerega R. Infant Transportation: Ground Reaction Forces during Gait. Poster Presentation. *Proceedings for the American Society of Biomechanics Conference*. Virtual event. August 2020.
2. **Havens KL**, Vilanueva Johnson E, Starnes C. Back Pain and Pelvic Floor Dysfunction Amongst Babywearing Caregivers: Results of a Survey. Poster Presentation. *Combined Sections Meeting. American Physical Therapy Association*. Denver, CO, February 15, 2020. Abstract published in *Journal of Women's Health Physical Therapy* 44(1): E8, January/March 2020.
3. Andersen MA, **Havens KL**, Kirages DJ, Nelsen M, Robertson EK, Tilson JK, Sebelski CA. DPT Student Self-Efficacy on Psychomotor Skill Performance: A Comparison of Hybrid and Traditional Learning Models. Platform Presentation. *Academy of Physical Therapy Education: Educational Leadership Conference*. Bellevue, WA. October 18-20, 2019.
4. **Havens KL**. Translation to Online Anatomy Education: Choosing and Integrating a 3D Anatomy Application. Workshop Presentation. *Human Anatomy and Physiology Society Conference*. Portland, OR. May 25, 2019.
5. Sargent B, **Havens K**, Winstein C, Fetters L. Increasing selective hip-knee control of infants at high risk for cerebral palsy: a feasibility study. Poster Presentation. *American Academy of Cerebral Palsy and Developmental Medicine 72<sup>nd</sup> Annual Meeting*. Cincinnati, Ohio. October 13, 2018.

6. **Havens KL**, Kahney A, Mannen EM. Asymmetrical stance during child carrying: Implications for back pain. Platform Presentation. *Proceedings for the American Society of Biomechanics Conference*. Rochester, MN. August 2018.
7. **Havens KL**, Kahney A, Mannen EM. Biomechanical considerations for the baby wearer. Platform Presentation. *International Babywearing Conference*. Des Moines, IA. July 2018.
8. Sargent B, **Havens K**, Marcione N, Winstein C, Feters L. Increasing selective hip-knee control of infants at high risk for cerebral palsy: a feasibility study. Platform Presentation. *Combined Sections Meeting, American Physical Therapy Association*. February 22, 2018. New Orleans, LA. Abstract published in *Pediatric Physical Therapy*. 2018:30(1):E1-8.
9. Tilson JK, Gordon J, Aguilar S, Andersen MA, Dominguez J, **Havens KL**, Hershberg J, Kirages D, Landel R, Robertson E, Sebelski C, Stevenson J, Simpson M. Implementing a Hybrid Online-On-Campus DPT Program at a Research-Intensive Institution: A Protocol for Comparing Learning Outcomes with an Existing Residential Program. Poster Presentation. *Combined Sections Meeting, American Physical Therapy Association*. New Orleans, LA. February 2018.
10. Sargent B, **Havens K**, Marcione N, Winstein C, Feters L. Increasing selective hip-knee control of infants at high risk for cerebral palsy: a feasibility study. Poster Presentation. *American Society of Neurorehabilitation Annual Meeting*. Baltimore, MD. Nov 2017.
11. Sargent B, **Havens K**, Marcione N, Winstein C, Feters L. Increasing selective hip-knee control of infants at high risk for cerebral palsy: a feasibility study. Poster Presentation. *Neuroscience 2017, Society for Neuroscience*. Washington, DC. Nov 2017.
12. **Havens KL**, Mukherjee T, Finley JM. Errors in Margins of Stability Associated with the Use of Simplified Body Models during Walking and Turning. Poster Presentation. *Proceedings for the American Society of Biomechanics Conference*. Boulder, CO. August 2017.
13. Ebner SC, Sigward SM, **Havens KL**. Identifying Predictors of Thigh Axial Acceleration during Running after ACL Reconstruction. Poster Presentation. *Proceedings for the American Society of Biomechanics Conference*. Raleigh, NC. August 2016.
14. Ebner SC, **Havens KL**, Pratt KA, Chan M-S, Lin PE, Nascimento DP, Sigward SM. Can Thigh and Shank Accelerations Detect Between Limb Deficits during Running after ACL Reconstruction? Poster Presentation. *American College of Sports Medicine Annual Meeting*. Boston, MA. May 2016.
15. Sargent B, **Havens K**, Winstein C, Feters L, Peterson B, Lepore N. Increasing selective leg control of infants at high risk for cerebral palsy: a feasibility study. Poster Presentation. *Translational Science 2016, Association for Clinical and Translational Science*. Washington, DC. April 2016.
16. **Havens KL**, Sigward SM. Performance biomechanics associated with running and cutting tasks. Poster Presentation. *Proceedings for the American Society of Biomechanics Conference*. Columbus, OH. August 2015.
17. Nandi T, DuBois A, Runkle N, **Havens KL**, Salem GJ. Biomechanics of the functional research test. Poster Presentation. *Proceedings for the American Society of Biomechanics Conference*. Columbus, OH. August 2015.

18. **Havens KL**, Sigward SM. Current ACL injury prevention recommendations may not be appropriate for all cutting tasks or sexes. Platform Presentation. *ACL Research Retreat*. Greensboro, NC. March 2015. Abstract published in *Journal of Athletic Training*. 50(10): 1111, 2015.
19. **Havens KL**, Peterson RO, Roark DN, Sigward SM. Whole body posture depends on velocity for running change of direction tasks. Poster Presentation. *World Congress of Biomechanics*. Boston, MA. July 2014.
20. **Havens KL**, Sigward SM. Biomechanics associated with cutting performance and ACL injury risk. Platform Presentation. *Combined Sections Meeting of the American Physical Therapy Association*. Las Vegas, NV. February 2014.
21. **Havens KL**, Sigward SM. Whole body posture for running change of direction tasks. Poster Presentation. *Proceedings for the American Society of Biomechanics Conference*. Omaha, NE. September 2013.
22. **Havens KL**, Sigward SM. Biomechanics associated with excessive ankle inversion during a cutting maneuver. Poster Presentation. *American College of Sports Medicine Annual Meeting*. Indianapolis, IN. May 2013.
23. **Havens KL**, Sigward SM. Deceleration: Relationship between Body Position and Velocity. Poster Presentation. *Proceedings for the American Society of Biomechanics Conference*. Gainesville, FL. August 2012.
24. **Havens K**, Cesar G, Sigward S. Center of Mass Position-Velocity Relationship for the Control of Running Gait Termination. Platform Presentation. *Proceedings for the Gait and Clinical Movement Analysis Society Conference*. Grand Rapids, MI. May 2012.
25. **Havens KL**, Sigward SM. Deceleration and Redirection Mechanics During a Cutting Maneuver. Poster Presentation. *Proceedings for the American Society of Biomechanics Conference*. Long Beach, CA. August 2011.
26. Cesar GM, **Havens KL**, Chang YC, Sigward SM. Effects of Cut Angle and Online Processing on Cutting Maneuvers. Poster Presentation. *Proceedings for the American Society of Biomechanics Conference*. Long Beach, CA. August 2011.
27. **Havens KL**, Sigward SM, Cheng WC, Pollard CD, Powers CM. The Relationship Between Knee Separation Distance and Lower Extremity Joint Angles During a Drop Land: Implications for Clinical Screening. Platform Presentation. *ACL Research Retreat*. Greensboro, NC. March 2010. Abstract published in *Journal of Athletic Training*. 54(5): 540, 2010.
28. **Havens KL**, Sigward SM, Cheng WC, Pollard CD, Powers CM. The Relation Between Knee Separation Distance and Lower Extremity Kinematics During a Drop Land: Implications for Clinical Screening. Poster Presentation. *Proceedings for the American Society of Biomechanics Conference*. State College, PA. August 2009.
29. **Havens KL**, Gilsanz V, Kay RM, Wren TAL. Vibration Intervention for Improved Bone Density and Muscle Strength in Children with Cerebral Palsy. Poster Presentation. *11th Annual Poster Session*. Saban Research Institute. Hollywood, CA. June 2006.

30. **Havens KL** & Wren TAL. Applicability of Delp Model to Evaluate Muscle Biomechanics of Children with Cerebral Palsy. Poster Presentation. *Fred S. Grodins Graduate Research Symposium*. April 2006.

## GRANT FUNDING

APTA Academy of Pediatric Physical Therapy Grant Award. Grant # 2018\_RG01.

Sargent B (PI), **Havens K (I)**, Winstein C (I). Understanding selective motor control of infants at high risk for cerebral palsy. 12/01/2018-12/01/2019.

Sargent B (PI), **Havens K (I)**, Winstein C (I). Quantifying selective motor control in infants at high risk for cerebral palsy. PI: Barbara Sargent. Foundation for Physical Therapy Grant Award. 01/01/2019-12/31/2020.

## PROFESSIONAL ACTIVITIES

### Professional organization/position held

Member	American Physical Therapy Association
Member	American Society of Biomechanics
Member	Gait and Clinical Movement Analysis Society

### Presentations

1. **Havens KL**. Teaching during COVID: Tips for Translating Your Course to Hybrid Online Learning. *American Society of Biomechanics Teaching Tutorial*. 8/4/20
2. Tilson J, Andersen A, **Havens KL**, Krauss L, Matthews D, Yamaguchi N. Transitioning to a Hybrid Format: Lessons Learned from Developing Physical Skills. *American Council of Academic Physical Therapy Webinar* 7/24/20 [https://liveclassroom.zoom.us/rec/play/7sEvc-ivqzs3EoHBtwSDCqQtW47sKqqsgXQZ-fYMyErmAnBSY1TyYrYWa7avlcfdyya\\_zpHaF62lPSEw?startTime=1595610226000](https://liveclassroom.zoom.us/rec/play/7sEvc-ivqzs3EoHBtwSDCqQtW47sKqqsgXQZ-fYMyErmAnBSY1TyYrYWa7avlcfdyya_zpHaF62lPSEw?startTime=1595610226000)
3. **Havens KL**. Conducting your Anatomy Class from Home. Complete Anatomy, 3D4Medical from Elsevier Webinar. 3/17/20 <https://3d4medical.com/live>
4. **Havens KL**. How to Digitize Your Course for Distance Learning. Complete Anatomy, 3D4Medical from Elsevier Webinar. 4/11/19 <https://3d4medical.com/live>

### Extramural Service

2020	Workshop leader, American Society of Biomechanics educators online teaching, Donation supported Black Lives Matter Organization, Color of Change
2013-2016	Contributing writer, Los Angeles Sport & Fitness Magazine
2013	Team co-organizer, 33rd Swim with Mike Fundraiser, Division of Biokinesiology and Physical Therapy team, University of Southern California

2011	Special events organizer, 35 <sup>th</sup> Annual meeting of American Society of Biomechanics for Long Beach conference hosted by USC Musculoskeletal Biomechanics Research Laboratory
2010-2012	Laboratory meeting minutes taker, Musculoskeletal Biomechanics Research Laboratory, University of Southern California
2010-2011	PhD student social chair and activities organizer, Division of Biokinesiology student social chair and activities organizer
2009	Co-producer, Human Performance Laboratory fundraiser, University of Southern California
2005-2006	Graduate student book salon coordinator, University of Southern California

### Peer review for journals

Applied Sciences  
Gait and Posture  
Journal of Biomechanics  
Journal of the Royal Society Interface  
PLOS-One  
Scandinavian Journal of Medicine and Science in Sports  
Sensors  
Sports Biomechanics

### DIVISION COMMITTEES

2017-present	Member, DPT@USC Hybrid Development Team Hybrid admissions application review  Development Team Liaison for courses: <ul style="list-style-type: none"><li>▪ PT 561e: Evidence for Physical Therapy Practice, Director: Yogi Matharu</li><li>▪ PT 569: Fundamentals of Neuroscience, Jason Kutch</li><li>▪ PT 529: Life Span Motor Control, Barbara Sargent</li><li>▪ PT 514L: Musculoskeletal Anatomy</li><li>▪ PT 554L: Analytical Anatomy, Kornelia Kulig</li><li>▪ PT 534L: Neuroanatomy, Nina Bradley</li></ul>
2016-2018	Member, Faculty Affairs Committee

### TEACHING ACTIVITIES

#### Courses Taught at University of Southern California (Physical Therapy Program)

2020-present	Hybrid lead, Co-Director (4 lectures, all labs) PT 544L <i>Analytical Anatomy</i>
2018-present	Hybrid lead, Co-Director (12 lectures) PT 514L <i>Musculoskeletal Anatomy</i>
2017	Co-Director (8 lectures, all labs) PT 514L <i>Musculoskeletal Anatomy</i>
2016	Director (23 lectures) PT 514L <i>Musculoskeletal Anatomy</i>



2013 - 2015 Co-Director (8 lectures, all labs)  
PT 514L *Musculoskeletal Anatomy*  
2014-present Course coordinator (1-3 lectures, all labs)  
PT 554L *Analytical Anatomy*  
2008 - 2012 Lecturer (All labs)  
PT 514L *Musculoskeletal Anatomy*  
2009 - 2012 Lecturer (1 lecture, all labs)  
PT 544L *Analytical Anatomy*

**Courses Taught at University of Southern California (Herman Ostrow School of Dentistry, Occupational Therapy Program)**

2013-present Co-director/ Lecturer (All labs)  
OT 260- *Human Functional Anatomy for the Allied Health Professions*  
2015 Director  
OT 260- *Human Functional Anatomy for the Occupational Therapist*

**Courses Taught at University of Southern California (Keck School of Medicine, Physician Assistant Program)**

2010 - present Lecturer (8 labs)  
PCPA 530- *Basic Medical Sciences*

**Courses Taught at University of Southern California (Keck School of Medicine, Nurse Anesthesia Program)**

2011 - present Lecturer (3 labs)  
ANST 500-*Human Anatomy*

**Courses Taught at University of Southern California (Keck School of Medicine & Herman Ostrow School of Dentistry, Master of Science in Pain Medicine Program)**

2018 - present Director (15 lectures)  
PAIN 706-*Musculoskeletal Anatomy and Pathology*

**Student mentoring: PhD (USC)**

2018-present Weiyang (Wayne) Deng, Committee member

**Student mentoring: MS (USC)**

2014-2016 Sara Ebner, Project advisor

**Student mentoring: DPT (USC)**

2014-present 6 DPT hybrid and residential students, across years of program