

## Curriculum Vitae

Huaqing (Virginia) Liang, MD, PhD  
Assistant Professor  
School of Physical Therapy  
Marshall University  
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Huntington, WV 25702  
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### **Education:**

Post-Doctoral Research Training  
University of Illinois at Chicago  
Chicago, IL, USA  
Rehabilitation Sciences  
October 2018 – August 2020

Doctor of Philosophy  
Georgia State University  
Atlanta, GA, USA  
Kinesiology / Biomechanics and Physical Rehabilitation  
August 2013 – July 2018

Doctor of Medicine  
Shanghai Medical College at Fudan University  
Shanghai, China  
Clinical Medicine  
September 2008 – July 2013

**Licensure / Certification:** none

### **Professional Experience / Employment History:**

Assistant Professor  
Tenure Track  
School of Physical Therapy  
Marshall University  
Huntington, WV, USA  
August 2020 – present

Lecturer  
Department of Physical Therapy  
University of Illinois at Chicago  
Chicago, IL, USA  
December 2018 – January 2020

Postdoctoral Research Associate  
Department of Physical Therapy  
University of Illinois at Chicago  
Chicago, IL, USA  
October 2018 – August 2020

Graduate Teaching Assistant  
Department of Kinesiology and Health  
Georgia State University  
Atlanta, GA, USA  
January 2014 – July 2018

Graduate Research Assistant  
Department of Kinesiology and Health  
Georgia State University  
Atlanta, GA, USA  
August 2013 – August 2018

Medical Intern  
Zhongshan Hospital of Fudan University  
Shanghai, China  
July 2012 – June 2013

#### **Peer Reviewed Publications (student trainees are underlined)**

1. Kaewmanee, T, **Liang, H** & Aruin, AS. Effect of predictability of the magnitude of a perturbation on anticipatory and compensatory postural adjustments. *Exp Brain Res*. 2020; In Press.
2. **Liang H**, Kaewmanee T, & Aruin AS. The role of an auditory cue in generating anticipatory postural adjustments in response to an external perturbation. *Exp Brain Res*. 2020; 238(3):631-641.
3. Henderson G, Beerse M, **Liang H**, Ferreira D, & Wu J. Improvement in Overground Walking After Treadmill-Based Gait Training in a Child With Agenesis of the Corpus Callosum. *Phys Ther*. 2020 Jan 23; 100(1):157-167.
4. Alwadani FA, **Liang H**, & Aruin AS. Effects of Ankle Angular Position and Standing Surface on Postural Control of Upright Stance. *Motor Control*. 2020 Jan 23; 1-13.
5. Ferreira DM, **Liang H**, & Wu J. Knee joint kinematics of the pendulum test in children with and without Down syndrome. *Gait Posture*. 2020; 76:311-7.
6. Beerse M, Henderson G, **Liang H**, Ajisafe T, & Wu J. Variability of spatiotemporal gait parameters in children with and without Down syndrome during treadmill walking. *Gait Posture*. 2019; 68, 207-212.

7. **Liang H**, Ke X, & Wu J. Transitioning from the level surface to stairs in children with and without Down syndrome: Motor strategy and anticipatory locomotor adjustments. *Gait Posture*. 2018; 66, 260-266.
8. **Liang H**, Ke X, & Wu J. Transitioning from level surface to stairs in children with and without Down syndrome: Locomotor adjustments during stair ascent. *Gait Posture*. 2018; 63, 46-51.
9. **Liang H**, Beerse M, Ke X, & Wu J. Effect of whole-body vibration on center-of-mass movement during standing in children and young adults. *Gait Posture*. 2017; 54, 148-153.
10. Wu J, Beerse M, Ajisafe T, & **Liang H**. Walking Dynamics in Preadolescents with and without Down Syndrome. *Phys Ther*. 2015; 95 (5), 740-749.

Complete List of Published Work in MyBibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/1BYjupRG403kf/bibliography/public/>

### **Peer Reviewed Scientific and Professional Presentations**

1. **Liang H**, Kaewmanee T, & Aruin AS. Older adults retain the ability to predict external perturbations using auditory cues only. Virtual poster presentation at the 44th American Society of Biomechanics annual meeting (physical conference cancelled due to the COVID-19 pandemic), August 4-7, 2020.
2. **Liang H**, Kaewmanee T, & Aruin AS. Young adults can learn to predict unexpected posterior perturbations using an auditory cue. Virtual poster presentation at the 44th American Society of Biomechanics annual meeting (physical conference cancelled due to the COVID-19 pandemic), August 4-7, 2020.
3. **Liang H**, Henderson, G, & Wu, J. Neuromuscular response to a single session of whole-body vibration in children with cerebral palsy. Virtual presentation at the 53rd North American Society for the Psychology of Sport and Physical Activity annual meeting (physical conference cancelled due to the COVID-19 pandemic), June 11-12, 2020.
4. **Liang H** & Wu J. Locomotor adjustments during stair ascent in children with Down syndrome: Comparison between walking and crawling strategies. Oral presentation at the 51st North American Society for the Psychology of Sport and Physical Activity annual meeting, Denver, CO, June 21-23, 2018.
5. Ferreira D, **Liang H**, & Wu J. Knee joint kinematics of the pendulum test in children with and without Down syndrome. Oral presentation at the 51st North American Society for the Psychology of Sport and Physical Activity annual meeting, Denver, CO, June 21-23, 2018.

6. **Liang H**, Ke X, & Wu J. Motor strategy and locomotor adjustments in children with and without Down syndrome while negotiating stairs. Poster presentation at the 41th American Society of Biomechanics annual meeting, Boulder, CO, August 8-11, 2017.
7. **Liang H** & Wu J. Center of mass control and multi-segment coordination in children during and after whole-body vibration. Poster presentation at the 41th American Society of Biomechanics annual meeting, Boulder, CO, August 8-11, 2017.
8. **Liang H**, Ke X, & Wu J. Motor strategy and locomotor adjustments in children with and without Down syndrome. Poster presentation at the 7th Southeastern Pediatric Research Conference, Atlanta, GA, June 9, 2017.
9. **Liang H**, Ke X, & Wu J. Effect of whole body vibration on center of mass movement in children and young adults. Poster presentation at the 40th American Society of Biomechanics annual meeting, Raleigh, NC, August 2-5, 2016.
10. **Liang H**, Ke X, & Wu J. Spatiotemporal gait pattern in children with and without Down Syndrome while walking from level surface to stairs. Poster presentation at the 40th American Society of Biomechanics annual meeting, Raleigh, NC, August 2-5, 2016.
11. **Liang H** & Wu J. Effect of whole-body vibration on postural control in young adults. Poster presentation at the 39th American Society of Biomechanics annual meeting, Columbus, OH, August 5-8, 2015.
12. Wu J, Beerse M, Ajisafe T, & **Liang H**. Walking pattern in children with and without Down syndrome via a force-driven harmonic oscillator model. Poster presentation at the 39th American Society of Biomechanics annual meeting, Columbus, OH, August 5-8, 2015.
13. Wu J, Ajisafe T, Beerse M, & **Liang H**. Children display adult-like kinetic pattern in the time domain but not in the frequency domain while walking with ankle load. Poster presentation at the 39th American Society of Biomechanics annual meeting, Columbus, OH, August 5-8, 2015.
14. Wu J, Beerse M, Ajisafe T, & **Liang H**. Walking dynamics in preadolescents with and without Down syndrome. Poster presentation at the Society for Neuroscience annual meeting, Washington DC, November 15-19, 2014.

**Non-Peer Reviewed Presentations (student trainees are underlined)**

1. Kaewmanee T, **Liang H**, & Aruin AS. The effect of predictability of a perturbation magnitude on anticipatory and compensatory postural adjustments. Poster presentation at the AHS Research Day, Chicago, IL, November 6, 2019.

2. Alwadani F, **Liang H**, & Aruin AS. Effect of ankle position, standing surface, and vision on postural balance during quiet standing. Poster presentation at the UIC Impact and Research Day event, Chicago, IL, April 10, 2019.
3. Alsayed K, **Liang H**, & Aruin AS. Role of applying finger touch to one's contralateral shoulder on body stability. Poster presentation at the UIC Impact and Research Day event, Chicago, IL, April 10, 2019.
4. **Liang H**. Transitioning from level surface to stairs in children with and without Down syndrome. Poster presentation at the Kinesiology and Health department research symposium, Georgia State University, Atlanta, GA, April 12, 2017.

### **Grant Activity**

Advanced training in translational and community-engaged scholarship to improve community living and participation of people with disabilities – NIILDRR, DHHS. Funded, total amount: \$745,511. 2015-2020. Role: Research Associate (2018-2020), PI: Yolanda Suarez-Balcazar.

Glenn Foundation for medical research postdoctoral fellowships; “The role of an auditory cue in improving postural control in older adults to prevent falls.” Unfunded, \$60,000. 2020. Role: Principal Investigator.

National Institute of Health; “Enhancing gait symmetry in acute stroke.” Unfunded. 2019. Role: Co-PI, PI: Alexander S Aruin.

American Society of Biomechanics graduate student grant-In-aid; “Effects of different frequencies and amplitudes of whole-body vibration on gait of children with cerebral palsy.” Unfunded, \$2000. 2017. Role: Principal Investigator.

### **Major Areas of Research Interest**

Gait analysis of children, older adults, and people with motor disabilities  
 Kinematic, kinetic, and muscle activity assessments during human locomotion  
 Evaluate the effectiveness of rehabilitation protocols

### **Membership in Scientific/ Professional Organizations**

American Society of Biomechanics, 2014 – present  
 North American Society for the Psychology of Sport and Physical Activity, 2018 – present  
 Postdoctoral Association at the University of Illinois at Chicago, Executive Board member, 2019 – 2020

**Consultative and Advisory Positions Held:** none

### **Services to the University / College / School on Committees / Councils / Commissions**

### UIC University Level Service

Poster Judge for UIC Impact and Research Day, 2019 – 2020  
Poster Judge for GEMS 4th Annual Research Symposium, 2019

### GSU Department Level Service

Translator for the Chinese delegation group summer school (coaches and researchers of the Chinese winter Olympic team). Topics: sports nutrition, injury treatment and prevention, strength and conditioning, body composition, sports biomechanics related to winter sports. 2016 – 2017

### Services to the Scientific Publishers

#### Journal Reviewer

Gait and Posture, 2019 – present  
Motor Control, 2019 – present  
Topics in Stroke Rehabilitation, 2019 – present  
Clinical Biomechanics, 2019 – present  
Journal of Biomechanics, 2019 – present  
Physiotherapy Theory and Practice, 2020 – present

### Honors and Awards

Outstanding Doctoral Student Award  
Department of Kinesiology and Health, Georgia State University, Atlanta, GA  
October 2018

ASB Student Travel Award  
American Society of Biomechanics  
August 2017

Doctoral Dissertation Support Award  
College of Education and Human Development, Georgia State University,  
Atlanta, GA  
October 2016

College of Education and Human Development Scholarship  
Doctoral student recipient  
Georgia State University, Atlanta, GA  
September 2016

National scholarship (awarded to top 1% of the students)  
Shanghai Medical School, Fudan University, Shanghai, China  
August 2009

### Continuing Education Workshops Attended

Mentoring Up Workshop, Postdoctoral Association and Center for Clinical & Translational Sciences, University of Illinois at Chicago, a 5-session workshop, February 12 – March 11, 2020

Steps to a Competitive Grant Application (speakers: Joan Lakoski & Robert Milner), University of Illinois at Chicago, May 22, 2019

**Current Teaching Responsibilities in the Entry-Level Program**

Fall 2020

PT 711 Human Movement I: Instructor