

## Saori Hanaki, Ph.D., A.T.C.

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### EDUCATION

University of Kentucky, Lexington, KY

**Ph.D. in Exercise Science – Biomechanics**

**2012**

Dissertation: “The effects seat post angle on cycling performance”

Illinois State University, Normal, IL

**M.S. in Kinesiology and Recreation - Biomechanics**

**2005**

Thesis: “Kinematic differences between one- and two-leg drop landings”

University of Montana, Missoula, MT

**B.S. Honors in Health and Human Performance**

**2000**

Area of Concentration: Athletic Training

### TEACHING & PEDAGOGY DEVELOPMENT

Weber State University, Ogden, UT

**Assistant Professor and Program Director of Exercise and Sport Science**

**2017 - Present**

- Exercise and Sport Science courses taught:
  - Exploring Exercise Science Professions
    - Designed a course contents and assignments to engage students in: 1) evidence-based decision making; 2) critical reading of scientific literature; and 3) summarizing scientific literature by writing annotated bibliographies
  - Structural Kinesiology
    - Developed a curriculum aiming to facilitate: 1) critical thinking-, activity-based learning of musculoskeletal system and 2) practically relevant project benefitting community
  - Biomechanics
    - Designed a course to examine human movement using mechanical principles and quantitative reasoning
  - Senior Seminar in Exercise and Sport Science
    - Developed a class activities and assignments to facilitate deep reflections on the students’ academic careers as well as to develop professional profile documents

## **TEACHING & PEDAGOGY DEVELOPMENT (CONTINUED)**

### Weber State University, Ogden, UT

- Exercise and Sport Science courses taught:
  - Measurement and Statistics in Exercise Science
    - Developed a course to understand and to practice skills in performing testing, evaluations, and interpretation of human performance/physical activity measures in exercise science
  
- Additional courses taught:
  - Research Methods (Athletic Training Masters Program)
    - Mentored students in development and completion of Athletic Training research (thesis) projects.
  
- Pedagogy Development
  - Actively participating in the Communities of Practice –
    - Scholarship of Teaching and Learning (SoTL) to conduct a research project concerning effectiveness of teaching in the classroom (2017 – 18)
    - Process Oriented Guided Inquiry Learning (POGIL) to facilitate active learning environment (2018 – present)
  - Participated in numerous other workshops and lectures concerning effective teaching
    - Transparency in Teaching & Learning for Student Success
    - Current State of Engagement in Higher Education

**TEACHING & PEDAGOGY DEVELOPMENT (Continued)**

Transylvania University, Lexington, KY

**Assistant Professor of Exercise Science****2013 - 2017**

- Exercise Science courses taught:
  - Introduction to Exercise Science
    - Developed a curriculum aiming to facilitate: 1) comprehensive understanding the disciplines and professions under exercise science and other related fields of study; 2) critical self-examination of students' career goals and objectives; 3) careful Interpretation of literatures
  - Anatomy & Physiology I
    - Constructed lectures discussing several body systems integrating practical, medical, and exercise-related examples
  - Injury Biomechanics [Special topic course]
    - Designed a course addressing current research in common sport-related musculoskeletal injuries and their mechanisms
  - Measurement and Assessment in Exercise Science [Special topics course]
    - Developed a practicum-based course to critically examine commonly used tests and measurements in exercise science. Students developed evidence-based proposals for fitness testing procedures used for *Lifetime Fitness & Wellness* course (part of this has been actually implemented)
  - Biomechanics
    - Created a course to foster integration of anatomical and biomechanical principles to analyze human movements for the purpose of performance enhancement and injury prevention through reading, discussions, activities, laboratory projects, and a community-based assessment/intervention project
  - Athletic Injuries and Rehabilitation
    - Designed a curriculum to critically examine the factors related to athletic injury prevention and rehabilitation. Students developed injury prevention programs for common musculoskeletal injuries experienced by athletes at Transylvania. These prevention programs are currently used as resources at the Athletic Training Room
  - Internship
    - Facilitated critical thinking, practical applications of content knowledge, and deep reflection through a series of writing assignments and a presentation

**TEACHING & PEDAGOGY DEVELOPMENT (Continued)**

Transylvania University, Lexington, KY

- General Education course taught:
  - Lifetime Fitness & Wellness
    - Developed a course to utilize students of all majors to mutually learn the complexity of health and wellness by engaging in discussions on current, controversial topics. Different strategies were introduced to facilitate positive changes in the students' physical activity and other lifestyle practices
- Pedagogy Development
  - Actively engaged in interest group-based and book-based discussion sessions on various topics including diversity in higher education
  - Participated in writing center workshops on topics including multilingualism/multiculturalism and writing assignment design
  - Selected to take part in an extensive seminar on the historical and philosophical background of liberal arts and pedagogical strategies to foster holistic learning
- Student Advising
  - Provided academic and career guidance to the Exercise Science majors, non-majors, and pre-health students
  - Prepared letters of recommendations for majors, non-majors, and pre-health students

**TEACHING & PEDAGOGY DEVELOPMENT (Continued)**University of Louisville, Louisville, KY**Assistant Professor of Exercise Science****2012 - 2013**

- Exercise Science courses taught:
  - Biomechanics:
    - Developed course contents and structure, including hallmark assignments on movement analysis integrating critical thinking
  - Structures & Functions (Human Anatomy & Physiology):
    - Organized course contents, structure, and technology used in the course to facilitate understanding of integrated nature of human physiology
  - Exercise Science Undergraduate Internship:
    - Coordinated over 50 students' internship each semester and promoted integration of content knowledge into practice through writing assignments
- Modified teaching strategies to facilitate students' critical thinking and practical application abilities
- Consulted undergraduate students through honor's projects
- Mentored master's and doctoral students through thesis/research projects
- Submitted and awarded an internal grant on critical thinking in teaching: (left at the institution) *Evaluation and Revision of Undergraduate Health and Human Performance Program to Enhance Critical Thinking Ability*

**Undergraduate Program Coordinator – Exercise Science****2012 - 2013**

- Reviewed and reported undergraduate curriculum including student learning outcomes & strategic plans (SACS)
- Collaborated to lead the program to be accredited by the Committee on Accreditation for the Exercise Sciences (CoAES)
- Coordinated advising protocol within Exercise Science Program
- Performed transfer equivalency assessments
- Assisted prospective students at recruiting events and individual visits
- Worked with college's Student Advising and Services Center and the Career Development Center to plan and offer "Successful 2nd year Workshop" to promote critical and proactive planning

**Undergraduate Faculty Advisor****2012 - 2013**

- Provided academic and career guidance to over 200 junior and senior students in Exercise Science Program
- Assisted students who are from Japan or would like to study in Japan

**TEACHING & PEDAGOGY DEVELOPMENT (Continued)**University of Louisville, Louisville, KY**Instructor of Exercise Science****2010 - 2012**

- Courses taught: *Biomechanics, Structures & Functions (Human Anatomy & Physiology)*, and *Exercise Science Undergraduate Internship*.
- Mentored masters students through thesis/research projects

**Participants – Delphi Center for Teaching and Learning**

- Completed training and seminars: Delphi U (teaching pedagogy, technology & critical thinking), i2a Institute (critical thinking and teaching effectiveness), and variety of sessions on teaching-related topics

**Co-Presenter – Delphi Center for Teaching and Learning: i2a Institute 2011**

- Presented a case study on developing and implementing critical-thinking infused hallmark assignments in undergraduate courses

University of Kentucky, Lexington, KY**Graduate Certificate in College Teaching****2009 - 2010**

- Completed the certificate program preparing for future college faculty: topics included teaching techniques, teaching technology, professional service and scholastic responsibilities

**Instructor – Biomechanics of Human Movement/Anatomical and Mechanical Kinesiology** 2009 - 2010

- Developed overall course contents and structure and instructed the lectures

**Teaching Assistant – Biomechanics of Human Movement/Anatomical and Mechanical Kinesiology** 2006 - 2009

- Collaborated in curriculum and laboratory activity development and instructed the weekly laboratory sessions

Illinois State University, Normal, IL**Instructor – Human Anatomy and Physiology****2004 - 2005**

- Developed course contents and structures and instructed laboratory sessions

**Clinical Instructor****2001 - 2004**

- Supervised undergraduate students in Athletic Training Education Program

**RESEARCH EXPERIENCE**Weber State University, UT**Investigator/Co-Investigator: Exercise and Sport Science & Athletic Training****2017 - Present**

- Currently engaging in both exercise science-related and classroom/pedagogy-based (SoTL) research projects
  - *Comparison of exercises performed on different stability settings using electromyography*
  - *Effects of stationary dry cupping on quadriceps function following a fatigue protocol*
  - *Quantitative analysis of yoga postures among experienced and novice practitioners*
  - *Assessment of student learning outcomes using different pedagogical strategies in biomechanics course*
- Moyes Academic Support and Technology Endowment (ASTEC) grant (\$14,795) to purchase Visual 3D Motion Analysis Modeling Software

Transylvania University, KY**Investigator: Exercise Science****2013 – 2017**

- Conducted community-based research projects related to physical activity, sport-related injuries/conditions and ergonomics
  - *Critical examination of strategies used by Boston Marathon medical team*
  - *Examination of muscle activation patterns among wheelchair basketball players*
  - *Workstation (Ergonomic) Analysis*
  - *Knowledge-base on female athlete triad among collegiate athletes*
  - *The validity of wrist- and torso-worn acceleratory-based physical activity trackers during physical activity tasks*
- Developed pedagogy-related project ideas assessing teaching effectiveness in exercise science courses
  - *Using Paul-Elder critical thinking framework in assessing student learning in biomechanics course*

University of Louisville, Louisville, KY**Co-investigator****2005 – 2010**

- Assisted in numerous research projects related to exercise science and physical activity
  - *Topics: Effects of school-based wellness and fitness interventions on children's cardiovascular fitness; Effects of topical menthol agents on strength and aerobic performance; Community-based interventions to facilitate regular physical activity among underserved women*
  - *Skills: Knowledge of fitness and physical activity program planning and assessment; Matlab (technical mathematical programming) and SPSS (statistical analysis) programs*

**RESEARCH EXPERIENCE (CONTINUED)**University of Kentucky, Lexington, KY**Investigator, Laboratory Manager & Research Assistant****2005 – 2010**

- Conducted and assisted in various research projects and maintained instruments at the Biodynamic Laboratory
  - *Topics: Cycling Biomechanics, Biomechanics of Different Landing Techniques, Effects of Osteoarthritis Unloading Brace, Human Gait Analysis*
  - *Skills: Extensive knowledge of 3D Motion Analysis kinematics, kinetics (including force plate data), electromyography system, Visual3D (3D movement modeling/analysis) and Matlab (technical mathematical programming), SPSS (statistical analysis) programs*

Drayer Physical Therapy Institute, Lexington, KY**Research Coordinator****2006 – 2008**

- Moderated journal club sessions to clinicians and provided tools for reference searches and critical reading of scientific literature for clinicians

**Conference Co-coordinator****2006**

- Planned “ACL Research Retreat,” including scientific sessions, sponsorships, and venue location arrangements

Illinois State University, Normal, IL**Research Assistant****2003 – 2004**

- Assisted in research projects conducted at the Biomechanics Laboratory
  - *Topics: Comparison between One- and Two-leg Landing, Difference between High School and College Female during Landing*
  - *Skills: Peak Motus 3D movement analysis and ground reaction force plate system*

**CLINICAL EXPERIENCE**

Boston Athletic Association, Boston MA

**Certified Athletic Trainer****2017 - 2018**

- Provided care for runners at the finish line medical tent in collaboration with other healthcare providers.

Drayer Physical Therapy Institute, Lexington, KY

**Certified Athletic Trainer****2007 - 2009**

- Planned and provided physical therapy treatments to patients at an outpatient physical therapy clinic

Illinois State University, Normal, IL

**Certified Athletic Trainer – Gamma Phi Circus****2003 - 2005**

- Planned and provided treatments and exercise/rehabilitation programs to the member of the circus squad
- Provided care for summer circus camp participants

**Certified Athletic Trainer – Department of Athletics****2001 - 2005**

- Provided care for participants in women's volleyball, basketball, and softball, men's basketball camps

Normal Community High School, Normal, IL

**Certified Athletic Trainer****2001 - 2005**

- Planned and provided treatments and exercise programs to prevent and to treat athletic injuries

New Hampshire Musculoskeletal Institute, Manchester, NH

**Athletic Training Fellow/Resident****2000 - 2001**

- Provided care and rehabilitation programs at an outpatient physical therapy clinic
- Served as a head athletic trainer at Trinity High School, Manchester, NH
- Worked with numerous medical and allied health professionals including physicians, surgeons, physical and occupational therapists, EMTs, fitness specialists, prosthetists

**PROFESSIONAL SERVICE & DEVELOPMENT**Weber State University

<b>Moyes Academic Support and Technology Endowment Committee (ASTEC)</b>	<b>2018 - Present</b>
<b>Heath Promotion &amp; Human Performance Website Review Committee</b>	<b>2017 - Present</b>
<b>Heath Promotion &amp; Human Performance Administrative Assistant Search Committee</b>	<b>Spring - Summer 2018</b>
<b>Athletic Training and Nutrition Faculty Search Committee</b>	<b>Spring- Summer 2018</b>
<b>Exercise and Sport Science Faculty Search Committee</b>	<b>2017 - 2018</b>
<b>Campus Rec Fitness Director Search Committee</b>	<b>2017 - 2018</b>

Transylvania University

<b>Grant Allocation Committee</b>	<b>2014 - 2017</b>
<b>Judicial Council</b>	<b>2014 - 2017</b>
<b>Wellness Works Committee</b>	<b>2013 - 2017</b>
<b>Pre-Health Committee</b>	<b>2013 - 2016</b>

Journal of Sports Rehabilitation

<b>Reviewer</b>	<b>2009 - Present</b>
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University of Louisville

<b>Conceptual Framework Revision Committee</b>	<b>2012 – 2013</b>
<b>Faculty Advisor Development Advisory Committee</b>	<b>2012 – 2013</b>
<b>Organization Effectiveness and HHP Program Evaluation Committee</b>	<b>2012 – 2013</b>
<b>Idea to Action (Quality Enhancement Plan): Delphi Center for Teaching &amp; Learning</b>	<b>2012 – 2013</b>
<b>Honors and Scholarship Committee</b>	<b>2011 - 2013</b>
<b>Idea to Action (Quality Enhancement Plan) Ad Hoc Committee: College of Education</b>	<b>2010 – 2011</b>
<b>Statistical Consultant: Marshall Center – Dept. of Athletics</b>	<b>2011</b>

International Society of Biomechanics in Sports Annual Meeting Pre-Conference

<b>Session Chair</b>	<b>2010</b>
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**PUBLISHED ARTICLES**

Vidoni, C, **Hanaki, S.**, Carter, K., Terson de Paleville, D. (2014). Incorporating a Movement Skill Program into a Preschool Daily Schedule. *Research quarterly for exercise and sport*. 85:88-89.

**Hanaki-Martin, S.**, Swank, A.M. (2013). Injury Prevention: Biomechanics 101 for the Clinician. *ACSM's Health and Fitness Journal*. 17(6) 43-44.

Davis, I., Ireland, M.L., **Hanaki, S.** (2007). ACL Injury – Gender Bias. *Journal of Orthopaedic & Sports Physical Therapy*. 37 (2) A2-A7.

**Hanaki, S.** & McCaw, S.T. (2005). A Comparison of Lower Extremity Kinematics of One- and Two-Leg Landings. *Medicine, Science in Sports and Exercise*. 37(5) S66.

McCaw, S.T. & **Hanaki, S.** (2005). Joint Contributions to Energy Absorption Differ between Drop Landings onto One or Two Legs. *Medicine, Science in Sports and Exercise*. 37(5) S66-S67.

Adolph, J.T., McCaw, S.T., Hopkins, J.T., **Hanaki, S.** (2004). Lower extremity joint kinematics differ between high school and college female athletes during drop landings. *Journal of Athletic Training*. 39 (2) S69.

**REFERRED PRESENTATIONS**

**Hanaki-Martin, S.**, Carter, KA, King, KM. (2013). Effectiveness of Multiple Strategies to Improve Cardiovascular Fitness in Elementary School Children. *American College of Sports Medicine Annual Meeting*, Indianapolis, IN.

Singh, G, **Hanaki-Martin, S.**, Swank, AM. (2013). Effect of 3.5 % Menthol on Knee Extensor Muscle Strength and Perceived pain. *American College of Sports Medicine Annual Meeting*, Indianapolis, IN.

Mullineaux, D.R., Jeon, K., **Hanaki-Martin, S.**, Cunningham, T.J. and Shapiro, R. (2013). Gait kinematics and variability during normal and unweighted treadmill running. *The 31st Conference of the International Society of Biomechanics in Sports*, Taipei, Taiwan.

Webb, J., Hunt, K., **Hanaki-Martin, S.**, Doyle, B., Curry, J., MacDonald, A. (2011). Building Performance-Based Assignments Using the Paul-Elder Critical Thinking Model. *3<sup>rd</sup> Annual i2a Institute*, University of Louisville.

**Hanaki-Martin, S.**, Mullineaux, D.R., Jeon, K., Shapiro, R. (2010). Forward Seat Position Effects on Cycling Kinematics. *The 28<sup>th</sup> Conference of the International Society of Biomechanics in Sports*, Marquette, MI.

**Hanaki-Martin, S.** (2010). General Cycling Mechanics & Factors Associated with Injury. *Kentucky Athletic Trainers' Society Annual Meeting*.

**Hanaki-Martin S.**, Mullineaux, D.R. & Underwood, S.M. (2009). Effects of Independent Crank Arms and Slope on Pedaling Mechanics. *The 27<sup>th</sup> Conference of the International Society of Biomechanics in Sports*, Limerick, Ireland.

Mullineaux, D.R., **Hanaki-Martin, S.**, Jeon, K., Cunningham, T.J., Shapiro, R., Noehren, B.W., Sugimoto, D. (2010). Kinematics to estimate three-dimensional joint kinetics during walking. *World Congress on Biomechanics*, Singapore.

**Hanaki, S.** & McCaw, S.T. (2005). A Comparison of Lower Extremity Kinematics of One- and Two-Leg Landings. *American College of Sports Medicine Annual Meeting*, Nashville, TN.

**Hanaki, S.** & McCaw, S.T. (2005). Quantification of Energy Absorbed by the Lower Extremity Depends on Endpoint of the Impact Phase. *International Society of Biomechanics Congress*, Cleveland, OH.

**Hanaki, S.** (2004). A Comparison of Lower Extremity Kinematics Between One- and Two-Leg Drop Landings. *Illinois Association for Health, Physical Education, Recreation and Dance (IAHPERD)*.

**Hanaki, S.** (2003). Current Concepts in Low Back Exercise. *Illinois Association for Health, Physical Education, Recreation and Dance (IAHPERD)*.

**UNPUBLISHED RESEARCH/TECHNICAL REPORT**

**Hanaki-Martin, S.**, Shapiro, R., Uhl, T., Seeley, M., Johnson, D. (2008). Biomechanical and Cognitive Effects of Unloading Knee Brace in Individuals with Medial Knee Osteoarthritis. *Project sponsored by Don Joy Ortho*.

**AWARDS**

Kenan/Jones Faculty Development Award, Transylvania University	2014, 2016, 2017
Bingham Startup Award, Transylvania University	2013
Provost's Award for Exemplary Advising Nominee, University of Louisville	2012 & 2013
Faculty Mentor Award, Athletic Association, University of Louisville	2012
Visiting Faculty Coach, University of Louisville	2010
Graduate Student Travel Grants, University of Kentucky	2009 & 2010
Jorndt Research Award, Illinois State University	2005
Student-Mentor Award, Illinois Association for Health, Physical Education, Recreation and Dance	2003 & 2004
Athletic Training Fellowship – New Hampshire Musculoskeletal Institute	2000 – 2001
Dean's List, University of Montana - Missoula	1998 – 2000
Academic Scholarship, University of Montana - Missoula	1999