

Mu Qiao



Courses Taught:

KINE 333: Motor Learning
KINE 423: Biomechanics
KINE 520: Motor Development & Learning
KINE 532: Lab Techniques in Sports Performance
KINE 534: Advanced Biomechanics

Educational Credentials:

Doctorate of Philosophy
Bachelor of Engineering

Arizona State University; Tempe, AZ (Kinesiology), 2012
Beijing University of Aeronautics and Astronautics; Beijing, China
(Man-Machine and Environment Engineering), 2004

Teaching Experience:

Assistant Professor
Graduate Teaching Associate

Louisiana Tech University, 2005-2010
Arizona State University, 2007-2012

Professional Experience:

Assistant Professor (Kinesiology)
Post-doctoral Research Associate
(Biomedical Engineering)
Post-doctoral Scholar (Kinesiology)
Post-doctoral Research Associate (Biomechanics)

Louisiana Tech University, 2018-present
University of North Carolina at Chapel Hill, 2016-2018
Pennsylvania State University, 2014-2016
University of Nebraska at Omaha, 2012-2014

Selected Publications:

1. J. T. Richards, B. P. Selgrade, **M. Qiao**, P. Plummer, E. A. Wikstrom, and J. R. Franz. Time-dependent Tuning of Balance Control and Aftereffects Following Optical Flow Perturbation Training in Older Adults, *Journal of Neuroengineering and Rehabilitation*, In preparation.
2. F. Yang, F. Saucedo, and **M. Qiao**. Effects of stance-slip perturbation training on reducing risk of slip-related falls. *Journal of Biomechanics*, vol. 72, pp. 1-6, 2018.
3. F. Yang, P. Cereceres, and **M. Qiao**. Treadmill-based gait-slip training with reduced training volume could still prevent slip-related falls. *Gait & Posture*, vol. 64, pp. 160-165, 2018.
4. **M. Qiao**, K. N. Truong, and J. R. Franz. Does local dynamic stability during unperturbed walking predict the response to balance perturbations? An examination across age and falls history, *Gait & Posture*, vol. 62, pp. 80-85, 2018.
5. S. Solnik, **M. Qiao**, and M. L. Latash. Effects of Visual Feedback and Memory on Unintentional Drifts in Performance during Finger-Pressing Tasks, *Experimental Brain Research*, vol. 235, issue 4. pp. 1149-1162, 2017.
6. **M. Qiao**, J. A. Feld, and J. R. Franz. Aging effects on leg joint variability during walking with balance perturbations, *Gait & Posture*, vol. 62, pp. 27-33, 2018.
7. **M. Qiao**, T. Zhou, and M. L. Latash. Positional Errors Introduced by Transient Perturbations Applied to a Multi-Joint Limb, *Neuroscience Letters*, vol. 595, pp. 104-107, 2015.
8. **M. Qiao** and D. L. Jindrich. Leg Joint Function during Walking Acceleration and Deceleration, *Journal of Biomechanics*. vol. 49, issue 1. pp. 66-72, 2016.

9. **M. Qiao**, J. J. Abbas, and D. L. Jindrich. A Model for Differential Leg Joint Function During Human Running, *Bioinspiration & Biomimetics*. vol. 12, issue 1. pp. 016015, 2017.
10. **M. Qiao** and D. L. Jindrich. Compensations during Unsteady Locomotion, *Integrative and Comparative Biology*. vol. 54, issue A1. pp. 1109-1121, 2014.
11. **M. Qiao**, B. Brown, and D. L. Jindrich. Compensations for Increased Rotational Inertia during Human Cutting Turns, *Journal of Experimental Biology*. vol. 217, issue Pt 3. pp. 432-443, 2014.
12. **M. Qiao** and D. L. Jindrich. Task-level Strategies for Human Sagittal-Plane Running Maneuvers are Consistent with Robotic Control Policies, *PLoS ONE*, vol. 7, issue 12. pp. e51888, 2013.
13. D. L. Jindrich and **M. Qiao**. Maneuvers during Legged Locomotion, *Chaos: An Interdisciplinary Journal of Nonlinear Science*, vol. 19, issue 2. pp. 026105, 2009.

Selected Presentations:

1. Does local dynamic stability during unperturbed walking predict the response to balance perturbations? 42nd American Society of Biomechanics, Annual Meeting. Rochester, MN, 8-11 August 2018.
2. Dynamic Stability during Walking under Perturbed Optical Flow, Rehab Engr Seminar in University of North Carolina at Chapel Hill. Chapel Hill, NC, 15 Sept 2017.
3. Aging Effects on Leg Joint Variability during Walking in the Presence of Optical Flow Perturbations, 41st American Society of Biomechanics, Annual Meeting. Boulder, CO, 8-11 August 2017.
4. Aging Effects on Leg Joint Variability during Walking in the Presence of Optical Flow Perturbations, Human Movement Science and Biomechanics Symposium, Chapel Hill, NC, 31 March 2017.
5. The control of stability by humans during locomotion, 1st International Young Scholar Forum, Northeastern University, Shenyang, China, 25-27 Dec 2016.
6. Compensation during Unsteady Locomotion, Rehab Engr Seminar in University of North Carolina at Chapel Hill. Chapel Hill, NC, 28 Oct 2016.
7. Developing a Trunk Reflex Examination Device to Assess Reflex Responses in Individuals with Recurrent Low Back Pain, Aging with Passion & Purpose: Aging well in the Age of Technology. Omaha, NE, 20-21 Oct 2013.
8. Effects of Visual Flow Speed and Medio-Lateral Restriction on the Variability during Walking, 37th American Society of Biomechanics, Annual Meeting. Omaha, NE, 7 Sept 2013.
9. Effect of Tactile Stimuli on Locomotor Rhythm, Aeronautics and Space Science Section of the Nebraska Academy of Sciences Annual Meeting, Lincoln, NE, 19 Apr 2013.
10. Control Stability of Human during Locomotion, Journal Club of School of Health, Physical Education & Recreation, University of Nebraska at Omaha, Omaha, NE, 24 Aug 2014.
11. Control of Maneuverability in Human Running: from Entire Leg to Individual Joints, keynote presenter in Kinesiology Department seminars in Auburn University, Auburn, AL, 17 Feb 2012.
12. Comparing Stride Local Stability during Walking and Running, Society for Integrative and Comparative Biology. 2011 Annual Meeting, Salt Lake City, UT, 3-7 Jan 2011.

13. Do Humans Stabilize Running like Robots? 33rd American Society of Biomechanics, 2009 Annual Meeting, College Station, PA, 19-22 Aug 2009.

Academic Honors & Awards:

Douglas L. Conley Memorial Scholarship, Arizona State University, 2008, 2010
Rolls-Royce Scholarship, Beijing University of Aeronautics and Astronautics, 2002

Certifications:

Certified LabVIEW Associate Developer (CLAD), LabVIEW Boot Cam, Aug 2014
American Red Cross CPR Professional Rescuer, Nov 2013

Professional Memberships:

SICB: The Society for Integrative Comparative Biology, 2010-present
ASB: American Society of Biomechanics, 2009-present
SfN: Society for Neuroscience, 2009-present