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
KINE 542: Mechanisms of Sports Injury & Rehabilitation
KINE 585: Comprehensive Exam

Educational Credentials:

Doctor of Philosophy	Arizona State University; Tempe, AZ (Kinesiology), 2012
Bachelor of Engineering	Beihang University; Beijing, China (Man-Machine and Environment Engineering), 2004

Teaching Experience:

Assistant Professor	Louisiana Tech University, 2018-present
Graduate Teaching Associate	Arizona State University, 2007-2012

Professional Experience:

Assistant Professor (Kinesiology)	Louisiana Tech University, 2018-present
Post-doctoral Research Associate (Biomedical Engineering)	University of North Carolina at Chapel Hill, 2016-2018
Post-doctoral Research Associate (Kinesiology)	Pennsylvania State University, 2014-2016
Post-doctoral Research Associate (Biomechanics)	University of Nebraska at Omaha, 2012-2014

Selected Publications:

1. M. Qiao*, and Z, Sha, Selection of Gait Parameters during Constrained Walking, *Human Movement Science,* vol. 89, pp. 103086, 2023.
2. R. Lis*, D. J. Szymanski, M. Qiao, and R. L. Crotin, Exploratory Investigation Into the Impact of Bilateral and Unilateral Jump Characteristics on Ground Reaction Force Applications in Baseball Pitching. *Journal of Strength and Conditioning Research*, 2023.
3. M. Sakurai*, D. J. Szymanski, M. Qiao, and R. L. Crotin, Combined Countermovement Jump Testing and Motion Analysis as the Future of Performance Assessment for Baseball Pitchers: A Narrative Review, *Journal of Strength and Conditioning Research*, 2023.
4. M. Qiao, The S-shaped Performance Curve Prevails in Practicing Juggling, *Journal of Motor Learning and Development*, vol. 9, Issue. 2, pp. 230-246, 2021.
5. M. Qiao, Leg Joint Mechanics When Hopping at Different Frequencies, *Journal of Applied Biomechanics*, vol. 37, Issue. 3, pp. 263-271, 2021.
6. M. Qiao., Yang, F*., Leg Joint Stiffness Affects Dynamics of Backward Falling from Standing Height: A Simulation Work, *Journal of Biomechanical Engineering-Transactions of the ASME,* vol. 142, pp. 101007, 2020.
7. M. Qiao., J. T. Richards, J. R. Franz, Visuomotor error augmentation affects mediolateral head and trunk stabilization during walking, *Human Movement Science*, vol. 88, pp. 102525, 2019.
8. 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*, vol. 16, pp. 81, 2019.
9. F. Yang, F. M. Qiao, Bethoux, and X.-G. Su, Relative importance of physical and psychological factors to slowness in people with mild to moderate multiple sclerosis. *Multiple Sclerosis and Related Disorders*, vol. 27, pp. 81-90, 2018.

10. 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.
11. 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.
12. 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.
13. 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. 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.
14. 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.
15. 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.
16. 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.
17. M. Qiao and D. L. Jindrich. Compensations during Unsteady Locomotion, *Integrative and Comparative Biology*. vol. 54, issue A1. pp. 1109-1121, 2014.
18. 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.
19. 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.
20. 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. The Selection of Gait Parameters during Constrained Walking, South Central American Society of Biomechanics Meeting, Fort Worth, TX, 31 March-1 April 2023.
2. 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.
3. 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.
4. 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.
5. 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.
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. 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.
12. 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, Beihang University, 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, 2010-2011
ASB: American Society of Biomechanics, 2009-present
SfN: Society for Neuroscience, 2009-2010