He Wang, PhD

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Education

•	1997-2002	Athens, GA
	University of Georgia	
	Doctor of Philosophy	
	Major: Exercise Science	
•	1994-1997	Beijing, China
	National Institute of Sports Science	
	Master of Science	
	Major: Biomechanics	
•	1989-1994	Chengdu, China
	Chengdu Institute of Physical Culture	

Professional Experience

Bachelor of Medicine Major: Orthopedics

- August 2007-Present Ball State Biomechanics Lab
 Muncie, IN
 Position: Assistant Professor at School of Physical Education, Sport, and Exercise Science
- September 2002-August 2007 Queens College City University New York, NY Position: Assistant Professor at Department of Family, Nutrition, and Exercise Science

Publications

Full manuscripts

- <u>H. Wang</u>, K. Simpson, S. Chamnongkich, T. Kinsey, and O.M. Mahoney. Biomechanical influence of TKA designs with varying radii on bilateral TKA patients during sit-to-stand. *Dynamic Medicine*. 2008, 7:12
- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, T. Kinsey, and O.M. Mahoney. Biomechanical differences exhibited during sit-to-stand between total knee arthroplasty designs of varying radii. *Journal of Arthroplasty*. 2006. 21(8), p. 1193-1199
- <u>H. Wang</u>, K. Simpson, S. Chamnongkich, T. Kinsey, and O.M. Mahoney. A biomechanical comparison between the single-axis and multi-axis total knee arthroplasty systems for the stand-to-sit movement. *Clinical Biomechanics*. 2005. (20), p. 428-433
- <u>H. Wang</u>. Strength characteristics of young adults' shoulder flexor and extensor muscle groups, Part II: Isokinetic eccentric strength. *Journal of Chengdu Physical Education Institute*. 2000. 26(3), p. 57-62
- <u>H. Wang</u>. Strength characteristics of young adults' shoulder flexor and extensor muscle groups, Part I: Isometric and isokinetic concentric strength. *Journal of Chengdu Physical Education Institute*. 2000. 26(2), p. 46-52
- K. J. Simpson, T. Ciapponi, <u>H. Wang</u>. Biomechanics of landing. In: W. Garrett (Ed.). *Exercise and Sports Science*. New York: Lippincott, Williams & Wilkins. 1999. p. 539-550

Work in progress

- A.B. Lanier, S.W. Stevenson, C. Gregory, <u>H. Wang</u>, G. Dudley, and K. Simpson. Exerciseinduced muscle injury and influence of non-steroidal anti-inflammatory therapy on kinematics of downhill gait in older adults. *Gait and posture*. (Submitted)
- <u>H. Wang</u>, M. Toner, T. Lemonda, and M. Zohar. Effect of cold-water immersion on the biomechanics of drop-landing movement. *Research Quarterly of Exercise and Sport*. (In revision)
- K. Simpson, M. Ferrara, <u>H. Wang</u>, S. Chamnongkich, and O.M. Mahoney. Biomechanical outcomes of differing knee flexion axis arthroplasty systems. *Journal of Orthopedic Research*. (Submitted)

* Abstracts and Presentations

- <u>H. Wang</u>, M. Toner, T. Lemonda, and M. Zohar. Influence of Cold-water Immersion on Biomechanics of Drop-landing. *Medicine & Science in Sports & Exercise*. 2008. V. 40, No. 5 Supplement, S215
- P.S. Fardy, M. Briks, A. Dunat, <u>H. Wang</u>, A. Azzollini, and J. Magel. The effects of fitness and fatness on cardiovascular disease risk factors and self-perception of health in urban teenagers: The PATH Program. *Research Quarterly of Exercise and Sport*. February, 2007. V. 78, No. 1, A-27
- <u>H. Wang</u>, M. Toner, T. Lemonda, and M. Zohar. Effect of cold-water immersion on the biomechanics of drop-landing movement. *The 30th Annual Meeting of the American Society of Biomechanics*. Blacksburg, VA. September 6-9, 2006
- P.S. Fardy, A. Azzollini, <u>H. Wang</u>, and J. Magel. Fitness, fatness and risk factors for cardiovascular disease in urban teenage girls: The PATH Program. *Recherches actuelles en sciences du sport*. N. Benguigui, P. Fontayne, M. Desbordes and B. Bardy (Eds). EDP Sciences. 2005. p. 137-138
- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, T. Kinsey, and O.M. Mahoney. Biomechanical analysis of the sit-to-stand after bilateral total knee replacement. *Proceedings of* the 20th International Society of Biomechanics Congress and 29th Annual Meeting of the American Society of Biomechanics. Cleveland, OH. August, 2005. p. 709
- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, T. Kinsey, and O.M. Mahoney. The Effect of femoral component design on ground reaction force analysis of chair rise movement. *Proceedings of the 71th Annual Meeting of the American Academy of Orthopedic Surgeons*. San Francisco, Ca. March, 2004. p. 440
- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, T. Kinsey, and O.M. Mahoney. Ground reaction force pattern of patients with bilateral total knee arthroplasty systems during chair rise. *Proceedings of the 27th Annual Meeting of the American Society of Biomechanics*. Toledo, OH. September, 2003
- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, T. Kinsey, and O.M. Mahoney. The biomechanical influence of total knee arthroplasty design on sit-to-stand performance. *Proceedings of the 70th Annual Meeting of the American Academy of Orthopedic Surgeons*. New Orleans, LA. February, 2003. p. 402
- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, T. Kinsey, and O.M. Mahoney. The biomechanical comparison between the single-radius and multi-radius total knee arthroplasty designs for the stand-to-sit movement. *Proceedings of the 49th Annual Meeting of the Orthopedic Research Society*. New Orleans, LA. February, 2003. p. 1326
- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, T. Kinsey, and O.M. Mahoney. A comparison between single-radius and multi-radius total knee arthroplasties for stand-to-sit (An EMG and kinematic study). *Proceedings of the IVth World Congress of Biomechanics*, Calgary, Canada. August, 2002
- O. M. Mahoney, T. L. Kinsey, S. Casto, S. Chamnongkich, M. S. Ferrara, K. J. Simpson, and <u>H. Wang</u>. Laboratory demonstration of mechanical and functional advantages of a single-radius TKA design. *Proceedings of the 69th Annual Meeting of the American Academy of Orthopedic Surgeons*, Dallas, TX. February, 2002. p. 442

- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, and O.M. Mahoney. Does a multiradius total knee arthroplasty knee function similar to a healthy knee? *Proceedings of the XVIII*th *International Society of Biomechanics Congress*, Zurich, Switzerland. July, 2001. p. 309-310
- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, and O.M. Mahoney. Strength evaluation of single radius total knee replacement (A case study). *Proceedings of the 24th American Society of Biomechanics*. Chicago, IL. August, 2000. p. 163-164
- <u>H. Wang</u>, K. J. Simpson, T. Ciapponi, and E. McKee. Running characteristics of 100 m lower extremity amputee female runners. *Proceedings of the XVIIth International Society of Biomechanics Congress*. Calgary, Canada. August, 1999. p. 669
- T. Ciapponi, K. Simpson, <u>H. Wang</u>, and E. McKee. Kinematic characteristics of transtibial and transfemoral male amputee 100 m sprinters. *Proceedings of the XVIIth International Society of Biomechanics Congress*. Calgary, Canada. August, 1999. p. 261
- <u>H. Wang</u>, D. M. Lu, Z. C. Huang, and Y. Q. Shi. A study of the isokinetic concentric, eccentric and isometric strength of young adult's shoulder flexor and extensor. *Proceedings of the Vth National Sports Science Congress*. Beijing, China. October, 1997. p. 227-228

* Presentations

- <u>H. Wang</u>, M. Toner, T. Lemonda, and M. Zohar. Influence of Cold-water Immersion on Biomechanics of Drop-landing. *The* 55th ACSM Annual Meeting. May 28 31, 2008
- P. Fardy, M. Briks, A. Dunat, <u>H. Wang</u>, A. Azzollini, and J. Magel. The effects of fitness on cardiovascular disease risk factors and self-perception of health in urban teenagers: the PATH Program. 2007 National Convention of American Alliance for Health, Physical Education, *Recreation & Dance*. Baltimore, Maryland. March 2007
- P. Fardy, <u>H. Wang</u>, A. Azzolini, J. Magel, and A. Herman. A unique school-based physical education program that promotes wellness in urban teenagers: the PATH Program. 4th Congress of *Exercise Physiology in Children*. Clermont-Ferrand, France. October 2006
- P. Fardy, A. Azzollini, J. Magel, A. Herman, <u>H. Wang</u>, M. Bayne-Smith, J. O'Neill, B. Indig, A. Dunat, and M. Briks. Heart health in teenagers: the PATH Program. University of Porto. Porto, Portugal. May 2006
- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, T. Kinsey, and O.M. Mahoney. Biomechanical analysis of the sit-to-stand after bilateral total knee replacement. *The 20th Sigma XI Research Day at Queens College*. March 30, 2006
- <u>H. Wang.</u> Applications of biomechanical techniques on TKA studies. *The Second International High Performance Knee Meeting*. Athens, GA. August 17-20, 2004
- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, T. Kinsey, and O.M. Mahoney. Ground reaction force pattern of patients with bilateral total knee arthroplasty systems during chair rise. *The 18th Sigma XI Research Day at Queens College*. March 25, 2004
- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, T. Kinsey, and O.M. Mahoney. The biomechanical comparison between the single-radius and multi-radius total knee arthroplasty designs for the stand-to-sit movement. *The 16th Sigma Xi Research Day at Queens College*. March 27, 2003
- <u>H. Wang</u>, K. Simpson, M. Ferrara, S. Chamnongkich, S. Casto, T. Kinsey, and O.M. Mahoney. A biomechanical analysis between the single-radius and multi-radius total knee arthroplasty systems for sit-to-stand. *The First International Deep Flexion Meeting*, Athens, GA. July 23, 2002
- S. Casto, M. Ferrara, K. Simpson S., O.M. Mahoney, <u>H. Wang</u>, Chamnongkich, and T. Kinsey. The effect of femoral component design on balance and muscle strength in bilateral TKA. *The First International Deep Flexion Meeting*, Athens, GA. July 23, 2002
- <u>H. Wang</u> and K. J. Simpson. A biomechanical analysis of differences between the single-radius and multi-radius total knee arthroplasty. *Biomechanics Symposium. The 30th SEACSM*, Atlanta, GA, January 31- February 2, 2002
- K. Simpson, <u>H. Wang</u>, M. Ferrara, S. Chamnongkich, S. Casto, and O. M. Mahoney. Function and strength of physically active individuals with a unilateral, single-axis knee replacement. *The XVIII International Symposium of Biomechanics in Sports. Hong Kong*. June 25 -30, 2000

- <u>H. Wang</u> and K. J. Simpson. The comparisons of the isometric and isokinetic strength between single radius TKR and multiple radius TKR systems. *Biomechanics Symposium. The* 28th *SEACSM*, Charlotte, NC, January 27-29, 2000
- K. J. Simpson, <u>H. Wang</u>, T. Ciapponi, and E. McKee. Sprint mechanics observed at the 1998 FlexSprint Invitational. *Technical Report for Flex-Foot, Inc.* 1999

✤ Grant Activities

- <u>H. Wang</u> (PI). Biomechanical Analysis of a Bi-Compartmental Knee Replacement System during Daily Activities. Ball State University, SEET Fund (2008) (Awarded \$3,000)
- <u>H. Wang</u> (PI). Biomechanical Analysis of the Journey Deuce Knee System. ACSM Research Foundation. (2008) (\$10,000) (Unfunded)
- <u>H. Wang</u> (PI). Influence of joint cooling on landing movement. PSC-CUNY 38 Research Award (#69735-00-38) (2007) (Awarded \$4,376)
- <u>H. Wang</u> (PI). Does cold exposure increase risk of ACL injuries in females a biomechanical study. PSC-CUNY 37 Research Award (#68492-00-37) (2006) (Awarded \$1,700)
- <u>H. Wang</u> (co-PI). Does the NRG TKA improve patients function more quickly than a traditional Scorpio TKA knee? (Proposal was submitted to Stryker Orthopaedics in 2005) (\$567,173) (Other co-PIs: Drs. Kathy Simpson, Michael Ferrara, and Elaine Cress from University of Georgia) (Approved, unfunded)
- <u>H. Wang</u> (PI). Biomechanical characteristics of drop landing after cold exposure. PSC-CUNY 35 Research Award (#66319-00-35) (2004) (Awarded \$4,517)
- <u>H. Wang</u> (PI). Mechanical characteristics and muscular activation patterns of total knee arthroplasty knees displayed during deep kneeling and rising from a kneeling position. (2003) (\$12,750) (Submitted to Stryker Orthopaedics, unfunded)
- <u>H. Wang</u> (PI). The effect of the single-radius and multi-radius total knee arthroplasty designs on the knee strength and functional performance during the sit-to-stand and stand-to-sit. PSC-CUNY 34 Research Award (#60069-33-34) (2003) (Awarded \$4,350)

* Memberships and Associations

- American College of Sports Medicine (ACSM)
- International Society of Biomechanics (ISB)
- American Society of Biomechanics (ASB)
- Full member of Sigma Xi The Scientific Research Society of North America