# KRISTIAN M. O'CONNOR, Ph.D.

**Associate Vice Provost for Research**
**Professor – Joseph J. Zilber College of Public Health**
**University of Wisconsin-Milwaukee (UWM)**

## UWM OFFICE OF RESEARCH

The Office of Research at UWM is responsible for oversight of the University's research enterprise and establishes university-wide research policies and initiatives to extend and enhance UWM's research portfolio, which in FY25 reported $68M in research expenditures. The office coordinates all aspects of research infrastructure, including the complete cycle of research funding, acquisition, and administration, and provides support for developing budgets and complying with federal and state regulations. The Office of Research includes the Sponsored Programs, Undergraduate Research, Research Development Services, and Research Integrity and Compliance offices, as well as several research centers and facilities. The Office of Research has ~25 staff and an annual budget of ~$6M.

**ASSOCIATE VICE PROVOST FOR RESEARCH (AVPR)** **June 2025 – present**
**August 2019 – September 2023**

AVPR portfolio primarily includes direct supervision of the Office of Research's research development, internal awards, research integrity functions, UWM's Prototyping Center, and serving as UWM's point of contact for inter-institutional partnerships. UWM's liaison with the Clinical & Translational Science Institute (CTSI) of Southeast Wisconsin housed at the Medical College of Wisconsin, including chairing the CTSI Pilot Award Committee.

**INTERIM VICE PROVOST FOR RESEARCH (VPR)** **September 2023 – June 2025**

As UWM's Chief Research Officer, responsible for leading UWM's central research administration functions, strategic research initiatives, promoting undergraduate research, and contributing to intra- and inter-university collaboration and public outreach. Included overseeing the Office of Sponsored Programs, Office of Undergraduate Research, Office of Research Development Services, Research Integrity & Compliance, and several centers and facilities. As part of the academic affairs leadership team, actively participated in wide ranging discussions about UWM's academic program array planning, student success initiatives, faculty and staff development, and budgeting processes.

**Key Achievements:**

**Research Expenditures:** Over the past three years, UWM has increased its research expenditures by almost 20% ($56.8M in FY22 to $67.8M in FY25). This increase is due in part to improved internal accounting of research expenditures. The improved accounting practices are a result of my analyses of UWM's budgeting processes, such as the accounting of faculty dedicated research time.

**Research Infrastructure:** Led a two-pronged effort to improve UWM's research administration support for campus. 1) Led a campus task force to broadly consider all aspects of UWM's

research infrastructure. The task force yielded wide ranging recommendations, such as support for the library, faculty mentoring, research administration needs, and promoting collaborative research. 2) Led preparation for an external peer review of UWM's research administration by the National Council of University Research Administrators (NCURA). The peer review yielded critical insights into UWM's current state of research administration infrastructure and provided guidance on areas requiring strategic investment.

**Research Policy Development:** Led the development of eight new and two revised research policies, which represent the majority of UWM's current research policies. Policies address openness in research, authorship principles, and federally-driven accountability, security, and integrity requirements. Efforts required extensive communication with stakeholders, including faculty, staff, and UWM administration.

**Research Integrity and Compliance:** Worked with the Research Integrity Manager to build a robust research integrity and security program, including a full suite of policies and procedures to support university researchers.

**Inter-Institutional Research and Academic Partnerships:** Worked with partners at the Medical College of Wisconsin, Marquette University, and UWM's Joseph J. Zilber College of Public Health to finalize an inter-institutional Graduate Certificate in Health Data Science in support of the educational mission of the Clinical & Translation Science Institute of Southeast Wisconsin.

**Collaboration and Coordination:** Initiated monthly meetings with college associate deans to share research updates and solicit feedback on research initiatives and operations. Meetings resulted in greater collaboration with our office and across academic units.

**Strategic Leadership:** As interim VPR, tasked with identifying UWM's strategic high-impact areas to inform campus support for its research mission. Developed and led a process to maximize broad campus engagement, which leveraged input from administrative and faculty stakeholders. Led a 29-person task force, primarily comprised of faculty representatives from all UWM schools and colleges. Authored the final report; the identified high-impact research areas are summarized below:

*UWM is a public urban research university whose research impacts:*

- ***Foundational*** *Knowledge in the Sciences and Humanities*
    - *UWM's research delves deep into fundamental questions to transform understanding of the universe, our planet, human biology, and the human condition.*
- ***Equitable*** *Local and Global Urban Communities*
    - *UWM's research promotes social justice by engaging communities to improve outcomes and create opportunity for others.*

- ***Innovative*** *Arts, Industry, and Technologies*
    - *UWM's research transforms our society by engineering solutions to complex problems and creating new forms of art and design.*
- ***Sustainable*** *Environment and Infrastructure*
    - *UWM's research protects our Great Lakes resources and creates sustainability through its strong focus on water, energy systems, and innovative design solutions.*
- ***Healthy*** *People and Populations*
    - *UWM's research enhances quality of life by improving physical and mental health interventions, disease prevention strategies, and public health policies.*

**R1 Monitoring and Planning:** Serve as the point person for tracking research metrics that support UWM's R1 status and identifying strategies to maintain and improve those metrics, which include research expenditures and PhD student production. Identify opportunities to improve UWM's accounting and reporting of research metrics and work with campus stakeholders to implement changes to improve these functions.

## UWM GRADUATE SCHOOL

The Graduate School is responsible for graduate student applications, admissions, registration, and enrollment for more than 150 graduate programs serving ~4,500 students. In addition, the Graduate School monitors academic progress and maintains records of qualifying examinations, candidacy, defense of dissertations, and degree awards. The Graduate School also addresses student complaints and appeals related to programs. The Graduate School has ~25 staff and an annual budget of ~$4M.

**INTERIM GRADUATE SCHOOL DEAN (GSD)** **September 2023 – June 2025**

Served as the chief administrator for all graduate programs within the university. Led the development and implementation of policies on graduate education and responsible for overseeing graduate student admissions, matriculation and graduation administrative efforts, as well as graduate fellowship operations and graduate policy administrative support. Initiated and oversaw the transition to a new student application platform, regularly engaged campus stakeholders to optimally support students encountering difficulty, and advocated for the needs of graduate students and programs with internal and external constituencies.

**Key Achievements:**

**Systems Improvement:** In the fall of 2023, accelerated decision-making regarding the need for the Graduate School to replace its admissions platform. Platform was unstable, expensive to maintain, and burdensome for the office's technical support staff. High risk of a major impact on campus student applications if the office were to lose critical support staff members. Shifted resources to support an existing staff member's additional effort and to pay a consultant to transition the system as quickly as possible. Supervised and supported these efforts and

launched the new application platform in time for the next application cycle (Fall 2025). The transition occurred successfully and the improvements are paying major operational dividends.

**Organizational Structure and Staff Development:** Led a re-examination of position descriptions and duties of several staff positions and worked with unit leadership to re-align duties to maximize efficiency. This resulted in greater clarity on staff roles, improved morale, and more efficient program management.

**Student Success:** In response to inquiries from graduate students encountering challenges with their advisers, initiated a new inter-office approach to address concerns. Convened representatives from Human Resources, the Office of Legal Affairs, the Center for International Education, the Dean of Students, the university ombuds, and Graduate School leadership. Developed a comprehensive and collaborative approach to supporting students and developed guidance on ethical and legal considerations in working with graduate students. Presented the guidance to a unit dealing with advising challenges.

**Strategic Enrollment Management:** In spring 2024, identified a pattern of low application numbers in technical professional master's programs (e.g., MS Information Technology Management). These application drops were almost entirely due to a change in application patterns of students from one country. Convened a series of meetings with stakeholders from the affected programs, along with the Center for International Education and UWM's international recruiter to better understand and address the issue. Put in place targeted efforts to maximize yield and provided critical information to central campus regarding the changing international student enrollment patterns to inform campus enrollment and budget planning.

## UWM "2030" STRATEGIC INITIATIVE

The Chancellor's "2030" strategic initiative involved several rounds of effort to identify and implement campus system improvements across several years. In August 2019, the Chancellor launched a high-profile initiative and charged the "2030+ Think Tank Task Force" with reimagining how UWM operates to meet its teaching, research and public service missions. The task force was comprised of faculty, staff, administrators, and external partners. Over the course of the 2019-2020 academic year, the task force considered all aspects of the university's mission and operations. During the 2020-2021 academic year, several implementation teams addressed specific recommendations made in the original report, including a team to consider UWM's organization of schools and colleges. In the 2021-2022 academic year, action teams were created to further develop plans to achieve the original 2030 goals, including one team focused on optimizing UWM's research infrastructure.

**CO-LEAD - 2030+ THINK TANK TASK FORCE** **August 2019 – May 2020**

Appointed by the Chancellor to co-lead and collaborated with co-chair to develop and execute a task force action plan that included facilitating weekly task force meetings and extensive background

research into national best practices and UWM benchmarking metrics, including student profile, retention and graduation rates, and research productivity.

**Key Achievement:**

Lead author of the final report delivered to the Chancellor in May 2020 with four overarching goals:

1) Become a first-choice destination university that attracts and graduates the most diverse student body in Wisconsin,
2) Remain a top-tier research university that excels in producing, disseminating, and commercializing leading-edge knowledge and technology, and graduates innovative and entrepreneurial scholars,
3) Design UWM's operational structure and program array to most flexibly and efficiently meet the teaching, research, and outreach missions, and
4) In support of the first three goals, grow the UWM Foundation endowment to $500M by 2030.

**CO-LEAD – 2030 COLLEGE REALIGNMENT IMPLEMENTATION TEAM October 2020 – January 2021**

Appointed by the Chancellor to co-lead a follow up task force to make specific recommendations for restructuring schools and colleges. As part of this process, reviewed external accreditation requirements for several programs to ensure that recommendations would not put program/college accreditations at risk.

**Key Achievement:**

Lead author of the final report (Appendix C), which recommended several potential restructuring options. Many of the recommendations were implemented by UWM administration, resulting in a reduction of independent schools/colleges from 13 to 8.

**LEAD – 2030 RESEARCH INFRASTRUCTURE ACTION TEAM August 2021 – May 2022**

Led a task force examining UWM's research infrastructure which resulted in a final report and an external peer review of UWM's research infrastructure (previously summarized under Office of Research Key Achievements – Research Infrastructure).

## UWM UNIVERSITY COMMITTEE

UWM's University Committee (UC) is the Executive Committee of the Faculty Senate and the primary body representing UWM's faculty with the administration. The UC provides guidance on all aspects of university functions and strategic decisions, including budget, academic planning, and personnel. The UC meets weekly as a body and also holds regular meetings with the Chancellor and the Provost.

**CHAIR** **August 2017 – August 2019**
**MEMBER** **August 2015 – August 2017**

Elected by UWM faculty to serve as a member of the UC and was elected by the UC members to serve as its chair for two years. As UC Chair, served as the liaison between UWM faculty and the university administration. In addition to leading weekly meetings, regularly individually consulted with faculty, department chairs, and administrators on various policy and departmental issues and was included in various administrative task forces related to budget, academic, research, and strategic planning. Served as UWM's faculty representative to UW System, which included participation in monthly UW System representative meetings, attending UW Board of Regents meetings, and participating in discussions related to UW System policies and strategic initiatives.

**Key Achievements:**

**UW-Colleges Reorganization:** In Fall 2017, UW System announced plans to disband UW-Colleges and assign branch campuses to four-year UW institutions. UW-Washington County and UW-Waukesha were assigned to UWM, which was responsible for developing an integration plan to be executed in time for Fall 2018.

- Served as the point person for developing plans to integrate the programs, faculty, and staff into UWM's system of governance and administration, which required learning the culture and practices in UW-Colleges and developing a plan to bring the entities together that minimized disruption for all parties.
- Engaged heavily with the faculty on the branch campuses and consulted with governance groups at UWM to collaboratively develop an integration plan.
- Led the development and approval of a proposal for a new college (College of General Studies), which was successfully approved by UWM's Faculty Senate in May 2018.

**UW System Representation:** Heavily engaged in feedback to proposed changes to the academic program monitoring policy (UWS 102, section 6.3). Proposed changes were withdrawn from further deliberations.

**Policy Development:** As a member of the UC in 2016, participated in the development of UWM's post-tenure review policy. As UC Chair in 2019, led revision of that policy in order to clarify it and improve procedures.

**College/Department/Faculty Dynamics:** Worked closely with the Provost in navigating challenging situations to reduce tensions, find common ground, and identify productive paths forward.

## UWM DEPARTMENT OF KINESIOLOGY

The Department of Kinesiology was a relatively large department in the College of Health Sciences with approximately 25 faculty and staff and a complex program array that included three undergraduate (BS Kinesiology, BS Nutritional Science, BS Athletic Training) and three graduate (MS Kinesiology, PhD Kinesiology, Doctor of Physical Therapy) degree programs. Two of these programs (BSAT and DPT) were subject to external accreditation requirements. Kinesiology is a unique applied academic discipline, with

faculty and staff from a wide range of scholarly and professional backgrounds, including social and natural scientists, clinically-focused scholars and instructional staff. The Department has since been split and absorbed by other units as part of a 2022 university school/college restructuring effort that eliminated the College of Health Sciences.

**DEPARTMENT CHAIR** **January 2019 – August 2019**
**August 2011 – January 2016**

Provided strategic leadership to the department and managed department workload, supplies & expense budget, and personnel issues in collaboration with the Department Executive Committee. Served as liaison between the department and the dean's office and advocated for resources.

**Key Achievements:**

**Academic Program Development, Planning, and Accreditation:** Worked with program directors and faculty to launch new academic programs and optimize delivery and student success of all programs.

- *BS Kinesiology* – In an effort to optimize resource utilization and reduce barriers to student success, substantially modified pre-requisite and major requirements and adjusted the minimum graduation GPA requirements to meet the university's 2.0 minimum. As a result of these changes, graduation rates have increased by over 10 percentage points, and the average time to degree has dropped from 4.8 to 4.1 years.
- *BS Nutritional Sciences* – Launched joint program with the UWM's Department of Biomedical Sciences (BMS). Successfully advocated for critical hires to deliver the core curriculum and worked with BMS leadership to effectively govern the program's curriculum, staffing, and budget.
- *BS/MS Athletic Training* – Successfully navigated the transition of the accredited Athletic Training program from the bachelor's to the master's level.
- *MS and PhD Kinesiology* – Received authorization to implement and launched the PhD program, while also revamping the MS program curriculum to coordinate with the PhD program and provide greater programmatic and capstone flexibility for students.
- *Doctor of Physical Therapy* – Successfully graduated the first class of the jointly offered program with UW-La Crosse and achieved the program's initial accreditation from their accrediting body (CAPTE).

**Resource Development:** Utilized a data-based approach to successfully advocate for resources to support the department mission. This included gaining approval for several faculty and staff positions and teaching assistant support.

**Faculty/Staff Development:** Supervised the hiring of several faculty and academic staff and successfully guided many through the promotion and tenure/indefinite status processes (indefinite status is essentially a staff equivalent to tenure).

**Strategic Leadership:** Department was challenged by internal dynamics related to the complex mix of pre-professional, professional, and research focused academic programs. After working with all constituencies to find a common vision, proposed a novel departmental structure to reduce tensions and better support program success, which split the department into two subunits. Structure was adopted by the department and improved operations and morale until college reorganization fully separated the department in 2022.

## ACADEMIC ACTIVITY, TRAINING, AND SERVICE

### EDUCATION

2002 Ph.D. Exercise Science, University of Massachusetts Amherst
Dissertation: *The role of extrinsic foot muscles during running*

1998 M.S. Exercise Science, Arizona State University
Thesis*: Effect of an induced mild leg length inequality on gait mechanics during walking and running*

1994 B.A. Physics, Colorado College

### ACADEMIC POSITIONS HELD

2023-present Professor, Zilber College of Public Health, University of Wisconsin-Milwaukee

2017-2023 Professor, Dept. of Kinesiology, University of Wisconsin-Milwaukee

2008-2017 Associate Professor, Dept. of Kinesiology, University of Wisconsin-Milwaukee

2002-2008 Assistant Professor, Dept. of Human Movement Sciences, University of Wisconsin-Milwaukee

### LEADERSHIP TRAINING

Research Leaders Fellow – APLU Council on Research (August 2023 - present)

- Selected as a member of the 6th cohort in the COR Research Leader Fellowship Program.
- Program selection is competitive. Part of a cohort of eight, although a core component of the Fellows program is bi-weekly calls with all current and previous Fellows (~50 Fellows total). Led a discussion of the details of the NSF Higher Education Research & Development (HERD) survey.
- Participated in site visits to learn about practices at a range of universities in California and Virginia

### UNIVERSITY SERVICE

**University Administrative Task Forces**

2030+ Think tank, Co-lead, 2019-2020
2030+ School/College Realignment Implementation Team, Co-lead, 2020-2021
2030+ Research Infrastructure Action Team, Lead, 2021-2022
2030+ Graduate Student Support Action Team, Member, 2021-2022
Graduate Student Handbook Task Force, Member, 2021-2022

**University Faculty Service**

Faculty Senate, 2007-13, 2015-2019 (President Pro-Tem 2015-2016)
Kenwood Interdisciplinary Research Building Pre-planning Committee, Member, 2009
Division of Professions Executive Committee
Member, 2010-12
Chair, 2012-13
Academic Planning and Budget Committee, Member, 2014-2015

Faculty Senate Rules Committee, Chair, 2015-2016
University Committee
Member, 2015-2016, Spring 2017
Chair, 2017-2019
Senate Subcommittee for the Evaluation of Administrators, Member, 2016-2019
UWM IRB, Backup Reviewer, 2015-present
UWM College of Nursing Dean S&S, Chair, 2016-2017
UWM Lubar School of Business Dean S&S, Member, 2017-2019
UWM Data Science Faculty Oversight Committee, Member, 2025-present

**College of Health Sciences Service**
Information Technology Policy Committee, 2003-2005 (Chair, Spring 2005)
CHS open search Faculty S&S Committee, 2004-2005
PhD Steering Committee, Fall 2006
Course & Curriculum Committee, 2007-2009
OSS Search S&S Committee, 2008
CHS Dean S&S Committee, 2008-2009
CHS Associate Dean S&S Committee, 2013-2014
CHS Steering Committee, 2010-2012, 2016-2019

**Department of Kinesiology Service**
Graduate Faculty Committee, 2002-present
Travel Committee, 2002-2003
Assistant Researcher S & S Committee, 2002, 2003 (Chair), 2006-2007 (Chair)
Physical Therapy Faculty S & S Committee, 2002-2006
Course & Curriculum Committee, 2003-2005, 2007-2009
Planning Committee, 2004-2007
Athletic Training Education Program Faculty S & S Committee, 2006
Physical Therapy Course & Curriculum Committee, 2006-2010
Motor Behavior Faculty S & S Committee, Chair, 2007-2008
Facilities Committee, Chair, 2008-2010
Nutritional Sciences Academic Staff S&S Committee, 2016

**RESEARCH GRANTS AND INDUSTRY CONTRACTS (in chronological order)**

**O'Connor, K.M.** "The role of extrinsic foot muscles during running." International Society of Biomechanics, Matching Dissertation Grant. 2001-2002 ($2,000).

**O'Connor, K.M.** "The role of extrinsic foot muscles during running." Life Fitness Academy, Michael L. Pollock Memorial Research Grant. 2001-2002 ($2,500)

Earl, J.E. & **O'Connor, K.M. (co-PI)** "Does foot pronation contribute to known risk factors for non-contact ACL injuries?" College of Health Sciences SEED Grant, 2002 ($5,400)

**O'Connor, K.M.** "The efficacy of a new midsole prototype." Red Wing Shoe Company, Inc. 2003 ($23,666)

**O'Connor, K.M.** "The efficacy of a new midsole prototype (phase 2)" Red Wing Shoe Company, Inc. 2004 ($13,395)

**O'Connor, K.M.** "The efficacy of a new midsole prototype (phase 3)" Red Wing Shoe Company, Inc. 2004 ($13,538)

**O'Connor, K.M.** "Do clinical functional tests predict knee joint mechanics during play?" UWM Graduate School Research Committee Award, 2005 ($14,897)

**O'Connor, K.M. (PI)** & Armstrong, B.S.R. "An innovative diagnostic tool for reducing traumatic knee injuries" UWM Research Growth Initiative Principal Investigator, (FY 2006 - $168,677, FY 2007 - $123,619)

**O'Connor, K.M.** "Functional characteristics and comfort of industrial work boots", Red Wing Shoe Company, Inc. 2006 ($28,294)

**O'Connor, K.M.** "Functional characteristics and comfort of industrial work boot prototypes", Red Wing Shoe Company, Inc. 2006 ($28,973)

**O'Connor, K.M.** "Functional pilot testing the use of motion capture technology to assess freedom of movement of a new garment material", Kimberly Clark Corporation 2007 ($7,500)

**O'Connor, K.M. (PI),** Armstrong, B.S., & Earl, J.E. "An innovative diagnostic tool for reducing traumatic knee injuries: preparing for clinical trials" National Institutes of Health 1R15AR056117-01. 2008-2010 ($213,533).

**O'Connor, K.M.** "Functional pilot testing the use of motion capture technology to assess freedom of movement of a new garment material", Kimberly Clark Corporation 2008 ($25,238)

**O'Connor, K.M. "**Gait and Muscle Activation Patterns of Skechers Toning Footwear", Sport Biomechanics, Inc. 2010 ($17,673).

**O'Connor, K.M. (PI)**, Armstrong, B.S.R., & Powers, C. "An innovative tool for assessment of gait dysfunction in the clinical setting" National Institutes of Health 1R43HD068147-01, 2011-2012 ($215,411).

**O'Connor, K.M. (PI)**, Armstrong, B.S.R., & Powers, C. "An innovative tool for assessment of gait dysfunction in the clinical setting", National Institutes of Health 9R44AG052199-02A1, 2015-2018 ($1,436,000).

**INSTITUTIONAL GRANT ACTIVITY**

Avdeev, I. (PI), Gutzman, J.H, Silvaggi, J.M., **O'Connor, K.M.** ART: Editing Campus Research DNA by Launching Center for Enabling Research Translation (CERT) at UW-Milwaukee. National Science Foundation ($6,000,000) – Not Funded

**O'Connor, K.M.** (site PI), Harley, A., Huang, C., McRoy, S., Luo, J. Clinical & Translation Science Institute 4.0 subaward. National Institutes of Health ($1,116,759) – Not Funded

Abedi, A. (site PI), **O'Connor, K.M.,** McRoy, S. Clinical & Translation Science Institute 4.0 subaward. National Institutes of Health ($1,835,651) – Under Review

Bilen-Green, C. (PI), **O'Connor, K.M.**, Klein-Tasman, B., Vang, C., Benesh, S., Reisel, J., Kavanaugh, M. MA3 Challenge: Modernizing Academic Appointment and Advancement. Open Research Community Accelerator ($250,000) – Under Review

**PUBLICATIONS**

**O'Connor, K.M.** & Hamill, J. (2002). Does running on a crowned road predispose a runner to injury? Journal of Applied Biomechanics, 18, 3-14.

**O'Connor, K.M.** & Hamill, J. (2004). The role of selected extrinsic foot muscles during running. Clinical Biomechanics, 19, 71-77.

**O'Connor, K.M.** & Hamill, J. (2005). Anatomically-based axes at the ankle provide more functionally relevant information. Journal of Applied Biomechanics, 21, 85-95.

**O'Connor, K.M.,** Price, T., & Hamill, J. (2006). Examination of extrinsic foot muscles during running using mfMRI and EMG. Journal of Electromyography and Kinesiology, 16, 522-530.

Ebersole K.T. **O'Connor, K.M.**, & Wier, A.P. (2006). Mechanomyographic and electromyographic responses to repeated concentric muscle actions of the quadriceps femoris. Journal of Electromyography and Kinesiology, 16, 149-157.

Coventry, E., **O'Connor, K.M.**, Hart, B.A., Earl, J.E., & Ebersole, K.T. (2006). The effect of lower extremity fatigue on shock attenuation during single-leg landing. Clinical Biomechanics, 21, 1090-1097.

Sanna, G. & **O'Connor, K.M.** (2008)**.** Fatigue-related changes in knee mechanics during side-step cutting maneuvers maneuvers. Clinical Biomechanics, 23, 946-954.

**O'Connor, K.M.,** Monteiro, S., & Hoelker, I., (2009). Comparison of selected lateral cutting activities to assess ACL injury risk. Journal Applied Biomechanics, **25, 9-21**.

Snyder, K.R., Earl, J.E., **O'Connor, K.M.**, & Ebersole, K.T. (2009). The effects of a hip strengthening intervention on lower extremity mechanics during running. Clinical Biomechanics, 24, 26-34.

**O'Connor, K.M.** & Bottum, M.C. (2009). Examination of cutting knee mechanics using principal components analysis. Medicine & Science in Sport & Exercise, 41, 867-878.

Geiser, C.F., **O'Connor, K.M.,** & Earl, J.E. (2010). Effect of isolated hip abductor fatigue on frontal plane knee mechanics. Medicine & Science in Sport & Exercise, 42, 535-545.

Weinhandl, J.T., Armstrong, B.S.R., Kusik, T., Barrows, R., & **O'Connor, K.M.** (2010)**.** Validation of a single-camera 3D motion tracking system. Journal of Biomechanics, 43, 1437-1440.

Hamill, J., Russell, E., Gruber, A., Miller, R., & **O'Connor, K.M. (2009)** Extrinsic foot muscles forces when running in varus, valgus, and neutral shoes. Footwear Science, 1, 153-161.

Weinhandl, J.T., Joshi, M., & **O'Connor, K.M.** (2010) Gender Comparisons between unilateral and bilateral landings. Journal of Applied Biomechanics, 26, 444-453.

Weinhandl, J.T. & **O'Connor, K.M.** (2010) Assessment of a greater trochanter-based method of locating the hip joint center. Journal of Biomechanics, 43, 1437-1440.
Laughlin, W., Weinhandl, J., Kernozek, T.W., Cobb, S.C., Keenan, K.G., & **O'Connor, K.M.** (2011). The effects of single-leg landing technique on ACL loading. Journal of Biomechanics, 44, 1845-1851.

Seneli, R. M., Ebersole, K. T., **O'Connor, K. M.**, Snyder, A. C., & Hall, E. (2013). Estimated VO2max from the Rockport Walk Test on a non-motorized, curved treadmill. Journal of Strength and Conditioning Research, 27, 3495-3505.

Weinhandl, J. T., Earl-Boehm, J. E., Ebersole, K. T., Huddleston, W. E., Armstrong, B. S. R., & **O'Connor, K. M.** (2013). Anticipatory effects on anterior cruciate ligament loading during sidestep cutting. *Clinical Biomechanics*, 28(6), 655-663.

Bazett-Jones, D. M., Cobb, S.C., Huddleston, W. E., **O'Connor, K. M.**, Armstrong, B. S., & Earl-Boehm (2013). Effect of Patellofemoral Pain on Strength and Mechanics after an Exhaustive Run. Med Sci Sports Exerc, 45 (7), 1331–1339.

Weinhandl, J.T., Earl-Boehm, J.E., Ebersole, K.T., Huddleston, W.E., Armstrong, B.S., **O'Connor, K.M.** (2014). Reduced hamstring strength increases anterior cruciate ligament loading during anticipated sidestep cutting. Clinical Biomechanics, 29(7), 752-9.

Fiedler, G., Slavens, B., **O'Connor, K.M.**, Smith, R.O., Hafner, B.J. (2014). Effects of physical exertion on trans-tibial prosthesis users' ability to accommodate alignment perturbations. Prosthetics & Orthotics International, doi: 10.1177/0309364614545419.

Almonroeder, T.G., Benson, L., & **O'Connor, K.M.** (2015). The effect of a prefabricated foot orthotic on frontal plane joint mechanics during running. Journal of Applied Biomechanics, 31(3), 149-158.

**O'Connor, K.M.**, Johnson, C., Benson, L. (2015). The effect of isolated hamstrings fatigue on landing and cutting mechanics. Journal of Applied Biomechanics, 31(4), 211-220.

Benson, L. & **O'Connor, K.M.** (2015). The effect of exertion on joint kinematics and kinetics during running using a waveform analysis approach. Journal of Applied Biomechanics, 31(4), 250-257.

Almonroeder, T., Benson L., & **O'Connor, K.M.** (2015). Changes in patellofemoral joint stress during running with the application of a prefabricated foot orthotic. International Journal of Sports Physical Therapy. 10(7), 967-975. PMID: 26673987.

Collins, J., Almonroeder, T.G., **O'Connor, K.M.** (2016). The effects of fatigue and anticipation on the mechanics of the knee during cutting in female athletes. Clinical Biomechanics, 35, 62-67.

Almonroeder, T. G., Benson, L. C., & **O'Connor, K. M.** (2016). The effect of a prefabricated foot orthotic on lower extremity mechanics during running in individuals with varying rearfoot dynamics. Journal of Orthopaedic & Sports Physical Therapy, 46, 749-755.

Bazett-Jones, D. M., Cobb, S.C., Huddleston, W. E., **O'Connor, K. M.**, & Earl-Boehm, J.E. (2017). Acute responses of strength and running mechanics to increasing and decreasing pain in patients with patellofemoral pain. Journal of Athletic Training, 52, 411-421.

Benson, L. C., Almonroeder, T.G., & **O'Connor, K. M.** (2017). Quantifying knee mechanics during balance training exercises. Human Movement Science, 51, 138-145.

Gerstle, E.E., **O'Connor, K.M.,** Keenan, K.G., & Cobb, S.C. (2017). Foot and ankle kinematics during descent from varying step heights. Journal of Applied Biomechanics, 33, 453-459.

Weinhandl, J.T. & **O'Connor, K.M.** (2017). Influence of ground reaction force perturbations on anterior cruciate ligament loading during sidestep cutting. Computer Methods in Biomechanics and Biomedical Engineering, 20, 1394-1402.

Benson, L.C., Cobb, S.C., Hyngstrom, A.S., Keenan, K.G., Luo, J., & **O'Connor, K.M.** (2018). Identifying trippers and non-trippers based on knee kinematics during obstacle-free walking. Human Movement Science, 62, 58-66.

Gerstle, E.E., Keenan, K.G., **O'Connor, K.M.,** & Cobb, S.C. (2018). Lower extremity muscle activity during descent from varying step heights. Journal of Electromyography and Kinesiology, 42, 57-65.

Benson, L.C., Cobb, S.C., Hyngstrom, A.S., Keenan, K.G., Luo, J., & **O'Connor, K.M.** (2019). A Principal Components Analysis approach to quantifying foot clearance and foot clearance variability. Journal of Applied Biomechanics, 35, 116-122.

Morgan, A.M. & **O'Connor, K.M.** (2019). Evaluation of an accelerometer to assess knee mechanics during a drop landing. Journal of Biomechanics, 86, 125-131.

Seneli, R., Beschorner, K.E., **O'Connor, K.M.,** Keenan, K.G., Earl-Boehm, J.E., & S.C. Cobb (2021). Foot joint coupling variability differences between habitual rearfoot and forefoot runners prior to and following an exhaustive run. Journal of Electromyography and Kinesiology, 57, 102514.

Heintz Walters, B., W.E. Huddleston, **K.M. O'Connor**, J. Wang, M.H. Bement, & K.G. Keenan (2021). The role of eye movement, attention, and hand movements on age-related differences in pegboard tests. Journal of Neurophysiology, 126, 1710-1722.

Gerstle, E.E., **K.M. O'Connor**, K.K. Keenan, B.A. Slavens, & S.C. Cobb (2021). The influence of age and fall history on single transition step kinematics. Clinical Biomechanics, 89, 105456.

Heintz Walters, B. Huddleston, W.E., **O'Connor, K.M.**, Wang, J., Bement, M.H., & Keenan, K.G. (2023). Visual feedback and declines in attention are associated with altered visual strategy during a force-steadiness task in older adults. Journal of Neurophysiology 130:5, 1309-1320.

Nguyen, A., Cobb, S.C., Slavens, B., & **K.M. O'Connor** (2025). The Effects of Cheerleading Surfaces on Ankle Landing Characteristics During Vertical and Flip Landings. Journal of Applied Biomechanics, 41, 536-543.

**SELECTED PRESENTATIONS**

**O'Connor, K.M.** & Hinrichs, R.N. (1998). Effect of an induced mild leg length inequality on ground reaction forces during walking and running. Medicine and Science in Sports and Exercise, 30(5), S294. Presented at the American College of Sports Medicine national meeting.

Smith, S.L., **O'Connor, K.M.**, Im, J., & Rundell, K.W. (1999). 3-D analysis of V-2 ski skating during junior world biathlon competition. Medicine and Science in Sports and Exercise, 31(5), S335. Presented at the American College of Sports Medicine national meeting.

McDermott, W., **O'Connor, K.M.**, van Emmerik, R.E.A., & Hamill, J. (1999). Locomotor-respiratory coupling at different stride frequencies. Presented at the International Society of Biomechanics biennial meeting, Calgary, Canada.

Countryman, M., **O'Connor, K.M.**, & Hamill, J. (2000). Relationship between impact shock and rearfoot motion during running. Archives of Physiology and Biochemistry, 108(1/2), 140. Presented at the Canadian Society for Biomechanics annual meeting, Montreal, Canada.

**O'Connor, K.M.** & Hamill J. (2000). Cambered road influences on rearfoot motion and impact shock characteristics. Medicine and Science in Sports and Exercise, 32(5), S127. Presented at the American College of Sports Medicine national meeting.

Countryman, M., **O'Connor, K.M.**, & Hamill, J. (2001). Alterations in rearfoot motion across locomotor speeds. Presented at the International Society of Biomechanics biennial meeting, Zurich, Switzerland.

Countryman, M., **O'Connor, K.**, Hamill, J (2002). Is rearfoot pronation a shock attenuating joint action? Presented at the 20th International Symposium on Biomechanics In Sports, Caceres, Spain.

**O'Connor, K.M.**, MacLean, C.L., & Hamill, J. (2002). Does the heel counter control movement of the rearfoot? Medicine and Science in Sports and Exercise, 34(5), S5. Presented at the American College of Sports Medicine national meeting, St. Louis, MO.

**O'Connor, K.M.**, Price, T., & Hamill, J. (2002). Muscle activation levels during running in varus, valgus, and neutral wedged shoes. Presented at the 4th World Congress of Biomechanics, Calgary, Canada.

**O'Connor, K.M.** & Hamill, J. (2003). The role of extrinsic foot muscles during running. Medicine and Science in Sports and Exercise, 35(5), S88. Presented at the American College of Sports Medicine national meeting, San Francisco, CA.

**O'Connor, K.M.**, Caldwell, G.C., & Hamill, J. (2003). Estimation of extrinsic foot muscle forces using a musculoskeletal model. Presented at the American Society of Biomechanics annual conference, Toledo, OH.

**O'Connor, K.M.**, Monteiro, S., & Earl, J. (2004). Comparison of knee joint moments presented in different segmental reference frames. Presented at the American Society of Biomechanics annual conference, Portland, OR.

Ebersole K.T. **O'Connor, K.M.**, & Wier, A.P. (2004). The influence of fatigue on the efficiency of electrical-mechanical activity of the superficial quadriceps femoris muscles. Presented at the XVth International Society of Electromyography and Kinesiology Congress, Boston, MA.

Ebersole K.T. & **O'Connor, K.M.** (2004). Mechanomyographic and electromyographic responses to repeated, concentric muscle actions. Medicine and Science in Sports and Exercise, 36(5), S119. Presented at the American College of Sports Medicine national meeting, Indianapolis, IN.

**O'Connor, K.M.,** Coventry, E., Hart, B.A., Earl, J.E., & Ebersole, K.T. (2005). The effect of lower extremity fatigue on shock attenuation during landing. Presented at the International Society of Biomechanics biennial meeting, Cleveland, OH.

Earl, J., Monteiro, S., & **O'Connor, K.M.** (2005). Effects of exaggerated pronation and supination on lower extremity mechanics during a cutting maneuver. Presented at the International Society of Biomechanics biennial meeting, Cleveland, OH.

**O'Connor, K.M.** (2005). Examination of extrinsic foot muscles during running using mfMRI. Medicine and Science in Sports and Exercise, 37(5)**,** S282. Presented at the American College of Sports Medicine national meeting, Indianapolis, IN.

Ebersole, K.T. & **O'Connor, K.M.** (2005). Electro-mechanical efficiency of the superficial quadriceps femoris muscles during maximal concentric muscle actions. Medicine and Science in Sports and Exercise, 37(5), S441. Presented at the American College of Sports Medicine national meeting, Indianapolis, IN.

**O'Connor, K.M**., Monteiro, S.K., Johnson, C., & Hoelker, I. (2006). Comparison of lateral cutting activities used to assess ACL injury risk. Presented at the American Society of Biomechanics annual meeting, Blacksburg, VA.

Sanna, G. & **O'Connor, K.M.** (2006). Fatigue-related changes in mechanics during soccer-related maneuvers in female soccer players. Presented at the 5th World Congress of Biomechanics, Munich, Germany.

Geiser, C.F., **O'Connor, K.M.**, Papaiouannou, Y., & Monteiro, S. (2006). Hamstring length changes during drop jump and squat maneuvers. Presented at the 24th International Symposium on Biomechanics In Sports, Salzburg, Austria.

Hill, N.S. & **O'Connor, K.M.** (2007). Knee dynamics during running with wedged orthoses. Medicine and Science in Sports and Exercise, **37(5)**, S5. Presented at the American College of Sports Medicine national meeting, New Orleans, LA.

Earl, J.E., Snyder, K.R., **O'Connor, K.M.**, Ebersole, K.T., & Monteiro, S.K. (2007). The effects of a hip strengthening intervention on lower extremity biomechanics in healthy women. Medicine

and Science in Sports and Exercise, 37(5), S71. Presented at the American College of Sports Medicine national meeting, New Orleans, LA.

**O'Connor, K.M.** & Armstrong, B.S.R. (2007). An innovative diagnostic tool for reducing traumatic knee injuries. Presented at the American Society of Biomechanics annual meeting, Stanford, CA.

**O'Connor, K.M.** & Bottum, M.C. (2007). Examination of knee mechanics using principal components analysis. Presented at the American Society of Biomechanics annual meeting, Stanford, CA.

Collins, J., Russell, E., **O'Connor, K.M.,** Hamill, J. (2008). The influence of small increases in stride frequency on oxygen consumption during walking. . Medicine and Science in Sports and Exercise, 38(5), S71. Presented at the American College of Sports Medicine national meeting, New Orleans, LA.

Joshi, M., Weinhandl, J., & **O'Connor, K.M.** (2008). Comparison of stopping tasks used to assess ACL injury risk. Presented at the North American Congress of Biomechanics annual meeting, Ann Arbor, MI.

Weinhandl, J., Joshi, M, & **O'Connor, K.M.** (2008). Gender comparisons between unilateral and bilateral landings. . Presented at the North American Congress of Biomechanics annual meeting, Ann Arbor, MI.

**O'Connor, K.M.,** Hill, N., Hart, B., & Earl, J. (2008). Effects of a subtalar strapped wedge on knee dynamics during gait in younger and older adults. . Presented at the North American Congress of Biomechanics annual meeting, Ann Arbor, MI.

**O'Connor, K.M.,** Armstrong, B.S.R., Weinhandl, J., Kusik, T., & Barrows, R. (2009). Validation of a single-camera 3D motion tracking system. Presented at the American Society of Biomechanics annual meeting, Penn State University.

Weinhandl, J., Armstrong, B.S.R., Earl, J., Kusik, T., Barrows, R., & **O'Connor, K.M.,** (2009). Assessment of an ACL injury risk protocol. Presented at the American Society of Biomechanics annual meeting, Penn State University.

Collins, J., Smith, J.C., Ebersole, K.T., & **O'Connor, K.M.,** (2009). Effects of a simulated soccer match on cutting knee dynamics and reaction time. Presented at the American Society of Biomechanics annual meeting, Penn State University.

Hamill, J., Russell, E., Gruber, A., Miller, R., & **O'Connor, K.M.** Extrinsic foot muscles forces when running in varus, valgus, and neutral shoes. Footwear Biomechanics, 1(s1), 61-62**.** Presented at the Ninth Footwear Biomechanics Symposium, South Africa.

Russell, E., Gruber, A., **O'Connor, K.M.**, Van Emmerik, R., & Hamill, J. (2009). Wedged footwear perturbations affect lower extremity coordination dynamics. Presented at the 27th International Symposium on Biomechanics In Sports, Limerick, Ireland.

**O'Connor, K.M. &** Hamill, J. (2009). Principal Component Analysis. Invited Presentation as part of a symposium ("Symposium on Recent Developments in Data Analysis") at the 27th International Symposium on Biomechanics In Sports, Limerick Ireland.

**O'Connor, K.M.** & Weinhandl, J. (2010). Hip joint moments using a greater trochanter method of locating the hip joint center. Presented at the American Society of Biomechanics annual meeting, Providence, RI.

Weinhandl, J.& **O'Connor, K.M.** (2010). Locating the hip joint center using a greater trochanter method. Presented at the American Society of Biomechanics annual meeting, Providence, RI.

Laughlin, W., Weinhandl, J., Kernozek, T., & **O'Connor, K.M.** (2010). The effects of single-leg landing technique on ACL loading. Presented at the American Society of Biomechanics annual meeting, Providence, RI.

Weinhandl, J.**,** Armstrong, B.S.R., Kusik, T., & Barrows, R., & **O'Connor, K.M.** (2010). Validation of a single-camera 3D motion tracking system. Presented at ACL Retreat V, Greensboro, NC. . Journal of Athletic Training, 45 (5), 535.

**O'Connor, K.M.**, Johnson, C., Laughlin, W. (2010). The effect of hamstrings fatigue on landing knee mechanics. Presented at the ACL Retreat V, Greensboro, NC. Journal of Athletic Training, 45 (5), 525.

Laughlin, W., Weinhandl, J., Bazett-Jones, D., & **O'Connor, K.M.** (2010). The effect of single-leg landing style on hamstrings muscle forces. Presented at ACL Retreat V, Greensboro, NC. Journal of Athletic Training, 45 (5), 537.

Truebenbach, C.A., Earl-Boehm, J., Huddleston, W., Swartz, A., & **O'Connor, K.M.** (2011). Effects of a fatiguing run on lower extremity mechanics in female runners. Presented at the American Society of Biomechanics annual meeting, Long Beach, CA.

Laughlin, W.A., Weinhandl, J.T., & O'Connor, K.M. (2011). Comparing filter cutoff frequency effects on lower extremity joint moment calculated for use in musculoskeletal modeling. Presented at the American Society of Biomechanics annual meeting, Long Beach, CA.

Weinhandl, J.T., Laughlin, W.A., & **O'Connor, K.M.** (2011). An optimization algorithm to improve computed muscle control. Presented at the American Society of Biomechanics annual meeting, Long Beach, CA.

Weinhandl, J.T., Earl-Boehm, J.E., Ebersole, K.T., Huddleston, W.E., Armstrong, B.S.R., & **O'Connor, K.M.** (2012). Estimating anterior cruciate ligament loading during a randomly cued cutting task using a musculoskeletal model. Presented at the American College of Sports Medicine annual meeting, San Francisco, CA.

Weinhandl, J.T., Earl-Boehm, J.E., Ebersole, K.T., Huddleston, W.E., Armstrong, B.S.R., & **O'Connor, K.M.** (2012). Hamstrings weakness increases ACL loading during sidestep cutting. Presented at the American Society of Biomechanics annual meeting, Gainesville, FL.

Weinhandl, J.T. & **O'Connor, K.M.** (2013). Influence of Anticipation on ACL Loading When Ground Reaction Forces Are Perturbed During a Sidestep Cutting Maneuver. Presented at the American Society of Biomechanics annual meeting, Omaha, NE.

Benson, L. & **O'Connor, K.M.** (2014). The Effect of Exertion on Joint Kinematics and Kinetics During Running Using a Waveform Analysis Approach. Presented at the World congress of Biomechanics meeting, Boston, MA.

Almronroeder, T.G., Benson, L., & **O'Connor, K.M.** (2014). The effect of a prefabricated foot orthotic on frontal plane joint mechanics during running. Presented at the World congress of Biomechanics meeting, Boston, MA.

Benson, L. & **O'Connor, K.M.** (2015). Assessment of Knee Mechanics and Muscle Activity during balance exercises. Presented at the American Society of Biomechanics annual meeting, Columbus, OH.

Gerstle, E., **O'Connor, K.M.**, Keenan, K., Cobb, S.C. (2015). Foot and ankle kinematics during descent form varying step heights. Presented at the American Society of Biomechanics annual meeting, Columbus, OH.

Johnson, B., Campbell-Kyureghyan, N., Otieno, W., & **O'Connor, K.M.** (2015). Influence of jackhammer weight on hand-arm vibration transmission. Presented at the American Society of Biomechanics annual meeting, Columbus, OH.

Benson, L., Cobb, S.C., Hyngstrom, A., Keenan, K., Luo, J., **O'Connor, K.M.** (2016). Predicting walking foot clearance from sagittal joint coordination. Presented at the American Society of Biomechanics annual meeting, Raleigh, NC.

Morgan, A.M., Safarovic, B., Weissenboeck, K., Almonroeder, T.G., & **O'Connor, K.M.** (2016). Comparison of gait parameters using anatomical- and functional-based methods of hip joint center definitions. Presented at the American Society of Biomechanics annual meeting, Raleigh, NC.

**O'Connor, K.M.**, Safarovic, B., Weissenboeck, K., Almonroeder, T.G., & Alexander, A.M. (2016). Comparison of gait parameters using anatomical- and functional-based methods of knee joint axis definitions. Presented at the American Society of Biomechanics annual meeting, Raleigh, NC.

O'Connor, M.L, **O'Connor, K.M.**, Ebersole, K.T., & Earl-Boehm, J.E. (2016). The development of the single-leg landing error scoring system (SL-LESS) for lower extremity movement screening. Presented at the National Athletic Training Association annual convention, Baltimore, MD.

Seneli, R., Beschorner, K.E., Keenan, K., Earl-Boehm, J.E., **O'Connor, K.M.**, & Cobb, S.C. (2016). Foot joint coupling variability in rearfoot and forefoot runners after an exhaustive run. Presented at the annual meeting of the American College of Sports Medicine, Boston, MA.

Gerstle, E., Keenan, L, **O'Connor, K.M.,** & Cobb, S.C. (2016). Lower extremity muscle activity during descent from varying step heights. Presented at the annual meeting of the Gait & Clinical Movement Analysis Society, Lexington, KY.

Benson, L.C., Cobb, S.C., Hyngstrom, A.S., Keenan, K.G., Luo, J., & **O'Connor, K.M.** (2017). Using a single ankle-worn accelerometer to predict lower extremity joint range of motion. Biennial meeting of the International Society of Biomechanics, Brisbane, Australia.

Morgan, A.M. & **O'Connor, K.M.** (2017). Evaluation of using an accelerometer to assess sagittal plane knee mechanics during a drop landing. Presented at the American Society of Biomechanics annual meeting, Boulder, CO.

Hocking, A., Ericksen, H. M**., O'Connor, K. M**. & Earl-Boehm, J. E. (2018). Investigating Hip and Trunk Kinematics and Strength Differences Between Those With a History of Exertional Medial Tibial Pain and Healthy Controls. Presented at the 70th NATA Clinical Symposia and AT Expo, Las Vegas, NV

Gerstle, E.E., **O'Connor, K.M.,** Keenan, L.G., Slavens, B., & Cobb, S.C. (2019). Transition step mechanics: the influence of age and fall history, Presented at the International Society of Biomechanics biennial meeting, Calgary.

Nguyen, A.V., Slavens, B.A., Cobb, S.C., & **O'Connor, K.M.** (2023). The effects of cheerleading surfaces on vertical and flip landing mechanics. Presented at the American Society of Biomechanics annual meeting, Knoxville, TN.

**TEACHING**

Undergraduate Courses – KIN 320 (Biomechanics)

Graduate Courses – KIN 520 (Introduction to Biomechanics Research), KIN 522 (Qualitative Analysis of Human Movement), KIN 721 (Muscle Mechanics & Modelling), KIN 725 (Interdisciplinary Themes in Biomechanics), KIN 701 (Graduate Seminar), KIN 703 (Research Methods in Kinesiology), KIN 708 (Clinical Gait Analysis)

Guest Lecturer – University of Applied Sciences, Upper Austria, MS Medical Engineering program, 2013-present

**STUDENT SUPERVISION (Primary Adviser)**

**Ph.D. Health Sciences / Ph.D. Kinesiology**

Josh Weinhandl, 2011, *Influence of neuromuscular factors on anterior cruciate ligament loading in response to external force perturbations*

Lauren Benson, 2016, *Identifying gait deficits in stroke patients using inertial sensors*

Alex Morgan, 2021, *Use of wearable technology to detect and alter subtle gait asymmetries following anterior cruciate ligament reconstruction*

**M.S. Kinesiology**

Evan Coventry, 2004, *The effect of lower extremity fatigue on shock attenuation during landing*

Giorgio Sanna, 2005, *Fatigue-related changes mechanics during soccer-related maneuvers in female soccer players*

Nandina Hill, 2007, *Effects of a subtalar strapped wedge on knee dynamics during gait in younger and older adults.*

Carrie Truebenbach, 2007, *The effects of a foot and ankle muscle strengthening program on foot pronation in runners pre- and post- fatigue*

Michael Bottum, 2007, comprehensive exam option

Carl Johnson, 2007, *The role of the hamstrings in protecting the ACL: fatigue effects*

Michael Stibor, 2008, comprehensive exam option

Ian Hoelker, 2008, comprehensive exam option

Heather Curtiss, 2008, comprehensive exam option

Joseph Collins, 2009, *Effects of a simulated soccer match on cutting knee dynamics and reaction time*

Tony Laughlin, 2010, *The effects of single leg landing technique on ACL loading*

Lauren Benson, 2013, *The effects of fatigue on joint coordination variability during running mechanics*

Anthony Nguyen, 2022, *The effects of cheerleading surfaces on landing characteristics during vertical and flip landings*

Carter Schmitz, 2023, *The effects of task complexity on knee mechanics and joint coordination variability during a side-step cutting task*

Tan Lee Guan, 2025, *The effects of secondary cognitive task on balance control and muscle activation in female athletes during jump landing task*

Josiah Shaw, 2025, *Post-activation potentiation of vertical jumping performance using an isometric mid-thigh pull*

**STUDENT RESEARCH GRANTS (Primary Adviser)**

Heather Curtiss (2003). UWM College of Health Sciences Student Research Award. "Does the support moment explain frontal plane joint instability?"

Jeremy Macali (2004). UWM College of Health Sciences Student Research Award. "The effect of subtalar axis orientation on rearfoot mechanics during running." ($300)

Evan Coventry (2004). UWM College of Health Sciences Student Research Award. "The effect of lower extremity fatigue on shock attenuation during landing" ($300)

Giorgio Sanna (2005). UWM College of Health Sciences Student Research Award. "Fatigue-related changes mechanics during soccer-related maneuvers in female soccer players" ($500)

Carl Johnson (2005). UWM College of Health Sciences Student Research Award. "The role of the hamstrings in protecting the ACL: fatigue and training effects" ($500)

Nandina Hill (2006). UWM College of Health Sciences Student Research Award. "The effect of a strapped wedged on knee joint mechanics" ($500)

Carrie Truebenbach (2007). UWM College of Health Sciences Student Research Award. "Effects of a fatiguing run on ankle strength and lower extremity mechanics in female runners" ($500)

Joseph Collins (2009). UWM College of Health Sciences Student Research Award. "Effects of a simulated soccer match on cutting knee dynamics and neuromuscular risk factors" ($300)

Joseph Collins (2009). "The Effects of a simulated soccer match on cutting knee dynamics and neuromuscular risk factors". Wisconsin Athletic Trainer's Association (Ebersole PI). ($1000)

Tony Laughlin (2009). UWM College of Health Sciences Student Research Award. "The Effects of Technique on ACL loading during landing" ($500)

Joshua Weinhandl (2009). UWM College of Health Sciences Student Research Award. "Association of quadriceps-to-hamstrings strength ratio with anterior cruciate ligament tension and knee joint mechanics" ($500)

Joshua Weinhandl (2011). UWM College of Health Sciences Student Research Award. "The Influence of Neuromuscular Factors on Anterior Cruciate Ligament Loading in Response to External Force Perturbations" ($2000)

Joshua Weinhandl (2011). International Society of Biomechanics Matching dissertation Grant. "The Influence of Neuromuscular Factors on Anterior Cruciate Ligament Loading in Response to External Force Perturbations" ($2500)

Lauren Benson (2013). UWM College of Health Sciences Student Research Award. "The effects of fatigue on intra-limb coordination during running using a waveform analysis approach" ($500)

Lauren Benson (2014). UWM College of Health Sciences Student Research Award. "The effect of balance training on knee kinematics and kinetics for athletes with previous overuse knee injury" ($2000)

Gus Almonroeder (2014). UWM College of Health Sciences Student Research Award. "The effect of a foot orthotic on knee mechanics during running in recreational athletes" ($2000)

Lauren Benson (2016). UWM College of Health Sciences Student Research Award. "Identifying gait deficits in stroke patients using inertial sensors" ($1900)

Lauren Benson (2016). International Society of Biomechanics Matching dissertation Grant. "Identifying Gait Deficits in Stroke Patients Using Inertial Sensors" ($2000)

**PROFESSIONAL SERVICE**

**Ad-Hoc Manuscript Reviewer**

Clinical Biomechanics
Journal of Applied Biomechanics
Journal of Athletic Training
Journal of Biomechanics
Journal of Medicine & Science in Sports
Medicine & Science in Sports & Exercise
Research Quarterly for Exercise and Sport
Human Movement Science
Journal of Sport Sciences
PLOS ONE
Sports Biomechanics

**Other**

Conference organizer and host of the Midwest Graduate Student Biomechanics Symposium held in March 2006.

Grant Reviewer, Italian Ministry of Health, 2009 (Young Investigator grants)

Abstract Reviewer, American Society of Biomechanics Annual Meeting (multiple years)

Conference Session Chair, American Society of Biomechanics Annual Meeting,
Sports Section, 2013
Human Performance Section, 2017

Award Reviewer
American Kinesiology Association Student Awards Committee, 2015-2017
American Society of Biomechanics, Post-doctoral young investigator award, 2016

Program Committee, American Society of Biomechanics, 2016-2017

**PROFESSIONAL SOCIETIES**

American Society of Biomechanics (1998-present)
American College of Sports Medicine (2000-2009)
International Society of Biomechanics (2001-present)

**AWARDS**

College of Health Sciences Service Award (2016)

**OTHER EXPERIENCE**

2016-2018 Chief Scientist, Metria Innovation, Inc.
2000-present Software Development Consultant, Exeter Research Inc.

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|---|---|
| 1998-2002 | Graduate Research Assistant, University of Massachusetts Amherst |
| 1997-1998 | Research Assistant, United States Olympic Committee |
| 1995-1997 | Teaching Assistant, Arizona State University |
| 1994-1995 | Computer Programmer, MCI Corporation |