

PATRICK FISCHER, PhD

CURRICULUM VITAE

EDUCATION

PhD	Mechanical Engineering Montana State University Bozeman, Montana	2021
MS*	Mechanical Engineering Montana State University Bozeman, Montana	2021
BS	Mechanical Engineering Montana State University Bozeman, Montana	2017

***Degree earned concurrently with doctorate**

PROFESSIONAL EXPERIENCE

PhD Consultant Biodynamic Research Corporation San Antonio, Texas	2024 - Present
System MAC Engineer Shriners Children's Network Sacramento, California	2023-2024
MAC Engineer Shriners Children's – Northern California Sacramento, California	2022-2023
NSF Graduate Research Fellow Montana State University Bozeman, Montana	2019-2021
Graduate Research Assistant Montana State University Bozeman, Montana	2018-2019

PROFESSIONAL AFFILIATIONS

American Society of Biomechanics	2018-2022, 2024-Present
The Accreditation Commission for Traffic Accident Reconstruction (ACTAR #5125)	2025-Present

APPOINTMENTS

Clinical Adjunct Professor USAF School of Aerospace Medicine	2024
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TEACHING EXPERIENCE

Graduate Teaching Assistant, Advanced Mechanics of Materials Montana State University Bozeman, Montana	2019
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Graduate Teaching Assistant, Thermodynamics I Montana State University Bozeman, Montana	2018
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Undergraduate Teaching Assistant, Thermodynamics I Montana State University Bozeman, Montana	2015-2017
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HONORS AND AWARDS

National Science Foundation Graduate Research Fellowship, Awarded
2019-2021

PUBLICATIONS

Gall, J, Scott, W.R., Bonugli, E., Watson, R.A, Fischer, P. "Validation of the Use of Quasistatic Force Deformation Measurements for Determining Collision Force in Low-Speed Override/Underride Collisions." SAE Automotive Technical Paper 2025-01-5018, 2025

Kruger, Karen M., Fischer, Patrick D., Augsburger, Sam, Feng, Jing, Girouard, Jean-Francois, Gregory, Dan L, Johnson, Logan, MacWilliams, Bruce A., McMulkin, Mark L., Nelson, Bradley, Warshauer, Spencer, Saraswat, Prabhav, & Chafetz, Ross S. (2024) Shriners Standard Gait Model: 1st Edition. *Gait & Posture (Special Edition)*. DOI: <https://doi.org/10.1016/j.gaitpost.2024.03.006>

Bertozzi, Filippo, Fischer, Patrick D., Aflatounian, Fatemah, Hutchison, Keith A., Sforza, Chiarella, & Monfort, Scott M. (2023) Influence of Fatigue on Cognitive-Motor Function During Unanticipated Landings. *American Journal of Sports Medicine*, **51**(10): 2740 – 2747. DOI: 10.1177/03635465231180612

Bertozzi, Filippo, Fischer, Patrick D., Hutchison, Keith A., Zago, Matteo, Sforza, Chiarella, & Monfort, Scott M. (2023) Associations Between Cognitive Function and ACL Injury-Related Biomechanics: A Systematic Review. *Sports Health: A Multidisciplinary Approach*. Online ahead of print. DOI: 10.1177/19417381221146557

Fischer, Patrick D., Hutchison, Keith A., Becker, James N., & Monfort, Scott M. (2021) Evaluating the Spectrum of Cognitive-Motor Relationships During Dual-Task Jump-Landing. *Journal of Applied Biomechanics*, **37**(4): 388 – 395. DOI: 10.1123/jab.2020-0388

Fischer, Patrick D., Hutchison, Keith A., Becker, James N., Monfort, Scott M. Does Dual-Task Ability Generalize Across Movement Tasks? (Manuscript in preparation for *American Journal of Sports Medicine*)

Fischer, Patrick D., Hutchison, Keith A., Becker, James N., Monfort, Scott M. Decoupling Visual Constraint from Rapid Decision-Making Tasks in an Open-Skill Movement (Manuscript in preparation for *Sports Biomechanics*)

Monfort, Scott M., Aflatounian, Fatemah, Fischer Patrick D., Becker, James N., Hutchison, Keith A., Simon, Janet E., Grooms, Dustin R. Relationships between Patient-Reported Outcomes and Predictors of Second ACL Injuries during Unanticipated Jump Landings (Submitted for review – *Medicine & Science in Sports & Exercise*)

CO-AUTHORED CONFERENCE ABSTRACTS

Bertozzi F, Fischer PD, Aflatounian F, Hutchison KA, Galli M, Tarabini M, Sforza C, and Monfort SM (2022) Do fatigue-induced changes in cognitive performance relate to changes in knee mechanics?, 27th Congress of the European Society of Biomechanics; Porto, Portugal.

Davis J, Fischer PD, Monfort SM (2021) Do Cognitive Dual-Tasks Have Limb-Dependent Effects on Landing Mechanics?, 45th Annual Meeting of the American Society of Biomechanics; virtual.

Aflatounian, F, Fischer PD, Monfort SM (2021) Do the Effects of Cognitive Tasks on Landing Mechanics depend on Jump Direction?, 45th Annual Meeting of the American Society of Biomechanics; virtual.

Monfort SM, Fischer PD, Hutchison KA, and Becker JN (2020) Influence of Baseline Cognitive Function on Knee Mechanics during Dual-Task Sidestep Cutting, 44th Annual Meeting of the American Society of Biomechanics; virtual.

Monfort SM, Fischer PD, Hutchison KA (2019) Multitasking Strategy Associates with Knee Abduction Angle during Cognitively-Challenging Jump Landing, 43rd Annual Meeting of the American Society of Biomechanics; Calgary, AB.

SCIENTIFIC PRESENTATIONS

45th Annual Meeting of the American Society of Biomechanics

Online, August 10-13, 2021

Decoupling Visual Constraint from Unanticipated Directional Cues in a Jump-Landing Task

Virtual Podium Presentation

45th Annual Meeting of the American Society of Biomechanics

Online, August 10-13, 2021

How Visual and Auditory Cognitive Performance Relate to Landing Mechanics

Virtual Poster Presentation

44th Annual Meeting of the American Society of Biomechanics

Online, August 4-7, 2020

Effects of Movement Type on Dual Task Costs during Recall Tests

Virtual Poster Presentation

44th Annual Meeting of the American Society of Biomechanics

Online, August 4-7, 2020

Influences of Cognitive Distractors on Knee Mechanics during a Sidestep Cut

Virtual Poster Presentation

2020 American Society of Sports Medicine Annual Meeting

Online, May 26-30, 2020

Correlations Between Dual-Task Costs in Clinic Versus Laboratory Movement Tests

Virtual Poster Presentation

43rd Annual Meeting of the American Society of Biomechanics

Calgary, AB, July 31-August 4, 2019

Visually-Demanding Secondary Tasks Associate with Decreased Knee Flexion during a Jump Landing Task

Podium Presentation

Nominated for the David Winter Young Investigator Award

NATA 70th Clinical Symposia and AT Expo

Las Vegas, NV, June 24-27, 2019

Cognitive Effects of Varying Types of Distractions on Athletic Performance
and their Associations with Cognitive Abilities

Poster Presentation

42nd Annual Meeting of the American Society of Biomechanics

Rochester, MN, August 8-11, 2018

An Initial Look at Gait Stability During Over-Ground Walking in Cancer
Patients

Poster Presentation