



Scott L. Delp, Ph.D.

Director, Wu Tsai Human Performance Alliance at Stanford, James H. Clark Professor in the School of Engineering, Professor of Bioengineering and of Mechanical Engineering

CONTACT INFORMATION

- **Alternate Contact**

Lisa Stainton - Executive Assistant & NMBL Coordinator

Email lisa98@stanford.edu

Bio

BIO

Scott L. Delp, Ph.D., is the James H. Clark Professor of Bioengineering, Mechanical Engineering, and Orthopaedic Surgery at Stanford University. He is the Founding Chairman of the Department of Bioengineering at Stanford, and Director of the Wu Tsai Human Performance Alliance at Stanford, a university-wide research initiative focused on discovering biological principles to optimize human performance and catalyze innovations in human health for all. Dr. Delp is also the Director of the Restore Center, an NIH national center focused on measuring real world rehabilitation outcomes, and Director of the Mobilize Center, a NIH National Center of Excellence focused on Big Data and Mobile Health. Scott is focused on developing technologies to advance movement science and human health. Software tools developed in his lab, including OpenSim and Simtk.org, have become the basis of an international collaboration involving thousands of students and scientists who exchange simulations of human movement. Prior to joining the faculty at Stanford, Delp was on the faculty at Northwestern University and the Rehabilitation Institute of Chicago. He has published over 325 research articles in the field of biomechanics and has published a textbook from MIT Press entitled Biomechanics of Movement: The Science of Sports, Robotics, and Rehabilitation. Professor Delp has co-founded six health technology companies and is a member of the U.S. National Academy of Engineering.

ACADEMIC APPOINTMENTS

- Professor, Bioengineering
- Professor, Mechanical Engineering
- Member, Bio-X
- Member, Wu Tsai Human Performance Alliance
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Director, Wu Tsai Human Performance Alliance, (2021- present)
- Director, Restore Center, (2020- present)
- Director, Mobilize Center: NIH National Center of Excellence for Big Data in Mobile Health, (2014- present)
- Director, National Center for Simulation in Rehabilitation Research (NCSRR), (2010-2021)
- Chairman, Bioengineering Department, (2002-2007)

- Co-Director, NIH Center for Biomedical Computation at Stanford (Simbios), (2001-2012)
- Chairman, Biomechanical Engineering Division, (2000-2002)

HONORS AND AWARDS

- Test of Time Award, ACM SIGGRAPH (2023)
- Muybridge Award, International Society of Biomechanics (2021)
- Goel Award, Translational Excellence (2019)
- Member, National Academy of Engineering (2016)
- Fellow, American Society of Biomechanics (2012)
- Giovanni Borelli Award, American Society of Biomechanics (2011)
- James H. Clark Professor, Stanford University (2009-)
- Van C. Mow Medal, Am Soc. Mech. Eng (2008)
- Charles Lee Powell Professor, Stanford University (2006-2009)
- Distinguished Alumnus Award, Colorado State University (2005)
- Maurice E Muller Award, Excellence in Computer Assisted Surgery (2004)
- Fellow, American Institute of Biological and Medical Engineers (2003)
- Powell Faculty Scholar, Stanford University (2000)
- Technology Reinvestment Award, President of the United States (1993)
- National Young Investigator Award, National Science Foundation (1992-1998)
- Baxter Faculty Fellow, Baxter Foundation (1991)

PROFESSIONAL EDUCATION

- Ph.D., Stanford University , Mechanical Engineering (1990)
- M.S., Stanford University , Mechanical Engineering (1986)
- B.S., Colorado State University , Mechanical Engineering (1983)

LINKS

- Neuromuscular Biomechanics Lab: <https://nmbi.stanford.edu/>
- Google Scholar Profile: <https://scholar.google.com/citations?hl=en&user=OEivUAQAAAAJ>
- Wu Tsai Human Performance Alliance Stanford University: <https://humanperformance.stanford.edu/>
- Mobilize Center: <https://mobilize.stanford.edu/>
- Restore Center: <https://restore.stanford.edu/>
- SimTK: <https://simtk.org/>
- Wu Tsai Human Performance Alliance: <https://humanperformancealliance.org/>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Experimental and computational approaches to study human movement. Development of biomechanical models to analyze muscle function, study movement abnormalities, design medical products, and guide surgery. Imaging and health technology development. Discovering the principles of peak performance to advance human health. Human performance research. Wearable technologies, video motion capture, and machine learning to enable large-scale analysis.

CLINICAL TRIALS

- Digital Knee Osteoarthritis Mindset Intervention, Not Recruiting

Teaching

COURSES

2025-26

- Biomechanics of Movement: BIOE 281, ME 281 (Win)
- Design Thinking in Human Performance Research: BIOE 190 (Spr)

2024-25

- Biomechanics of Movement: BIOE 281, ME 281 (Win)
- Design Thinking in Human Performance Research: BIOE 190 (Spr)

2023-24

- Biomechanics of Movement: BIOE 281, ME 281 (Win)
- Design Thinking in Human Performance Research: BIOE 190 (Spr)
- Form and Function: Anatomy and Biomechanics of Italian Renaissance Art: OSPFLOR 36 (Spr)

2022-23

- Biomechanics of Movement: BIOE 281, ME 281 (Win)
- Design Thinking in Human Performance Research: BIOE 190 (Spr)
- Modeling and Simulation of Human Movement: BIOE 485, ME 485 (Spr)

STANFORD ADVISEES

Ariana Rodrigues

Doctoral Dissertation Reader (AC)

Mary Kate Gale, Ananya Goyal, Michael Hittle, Kenji Marshall, Russell Martin, Anoosha Pai S, Akshita Rao, Sophia Shen, Skyler St. Pierre, Jessica Towns, Lara Weed, Keenon Werling

Postdoctoral Faculty Sponsor

Gauri Desai, Sarah Johnson, Dawit Lee, Benjamin McInroe, Krithika Swaminathan, Jack Williams

Doctoral Dissertation Advisor (AC)

Sydney Covitz, Hannah Heigold, Michelle Joyce, Janelle Kaneda, Six Skov, Kristen Steudel, Jon Stingel

Doctoral Dissertation Co-Advisor (AC)

Parnian Azizian, Madison George, Mohammadmahdi Honarmand, Katie Marusich, Shardul Sapkota, Tiange Xiang

Master's Program Advisor

Sebastian Colondres-Torres, Caeden Greene, David Kutz, Cyrus Xiang

Doctoral (Program)

Divya Adil, Sophie Clarke, Hannah Field, Ananya Goyal, Kb Ko, Cassidy Little, Sophia Shen, Sascha Stocker, Jessica Towns

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Bioengineering (Phd Program)

- Biomedical Data Science (Phd Program)
- Neurosciences (Phd Program)

Publications

PUBLICATIONS

- **Adaptations in biceps femoris long-head muscle-tendon mechanics during the Nordic hamstring exercise in response to 9 weeks of training.** *Journal of sport and health science*
Andrews, M. H., S, A. P., Gurchiek, R. D., Hodges, P. W., Lichtwark, G. A., Delp, S. L., Pincheira, P. A.
2026; 101134
- **Knee and hip joint dynamics differ between sprinting and Nordic hamstring exercises.** *Journal of biomechanics*
Steudel, K., Haralabidis, N., Gurchiek, R., Hicks, J., Delp, S.
2026; 200: 113236
- **Running with an exotendon reduces compressive knee contact force.** *Journal of biomechanics*
Stingel, J., Haralabidis, N., Hicks, J., Uhlrich, S., Delp, S.
2026; 199: 113217
- **Decoding menstrual health across the lifespan: a scoping review of digital health tools in research.** *medRxiv : the preprint server for health sciences*
Johnson, S. C., O'Day, J., Kraus, E., Delp, S., Hicks, J.
2026
- **Underlying Tremor Improvement with Consistent Use of Transcutaneous Afferent Patterned Stimulation in Patients with Essential Tremor.** *Tremor and other hyperkinetic movements (New York, N.Y.)*
Isaacson, S. H., Peckham, E., Tse, W., Petrossian, M. T., Soileau, M. J., Lew, M., Dietiker, C., Luthra, N., Agarwal, P., Dhall, R., Morgan, J., Shamim, E. A., Shill, et al
2026; 16: 1
- **GaitDynamics: a generative foundation model for analyzing human walking and running.** *Nature biomedical engineering*
Tan, T., Van Wouwe, T., Werling, K. F., Liu, C. K., Delp, S. L., Hicks, J. L., Chaudhari, A. S.
2026
- **Retraining Gastrocnemius Muscle Coordination Reduces Late-Stance Knee Contact Force in Individuals With Knee Osteoarthritis** *IEEE TRANSACTIONS ON NEURAL SYSTEMS AND REHABILITATION ENGINEERING*
Joyce, M. R., Muccini, J., Randoing, B., Delp, S. L., Uhlrich, S. D.
2026; 34: 1417-1425
- **Immediate reductions in compressive and shear forces in the knee from gait retraining are associated with slowed cartilage degeneration after 1 year in medial knee osteoarthritis: A retrospective observational cohort study.** *Osteoarthritis and cartilage*
Seagers, K., Kolesar, J. A., Mazzoli, V., Halilaj, E., Delp, S. L., Uhlrich, S. D.
2025
- **3D Patellar instability Anatomical Severity Score (3D-PASS): A Novel Machine Learning Score Using 3D Bone Position From MRI to Predict Outcomes of Patellar Instability Treatment (Using a Subset of Data in the JUPITER Cohort).** *Orthopaedic journal of sports medicine*
Sinopoli, M. L., Gatti, A. A., Wright, C. E., Bartsch, A., Veerkamp, M. W., Boutin, R. D., Mintz, D. N., Emery, K. H., Shea, K. G., Chaudhari, A. S., JUPITER Study Group, Wall, E. J., Elangovan, S., et al
2025; 13 (12): 23259671251362675
- **AddBiomechanics Dataset: Capturing the Physics of Human Motion at Scale.** *Computer vision - ECCV ... : ... European Conference on Computer Vision : proceedings. European Conference on Computer Vision*
Werling, K., Kaneda, J., Tan, T., Agarwal, R., Skov, S., Van Wouwe, T., Uhlrich, S., Bianco, N., Ong, C., Falisse, A., Sapkota, S., Chandra, A., Carter, et al
2025; 15146: 490-508
- **Automated Segmentation of Forearm Muscles: Clinical Associations With Hand Function, Muscle Volume and Intramuscular Fat.** *JCSM communications*
Fundaun, J., Oliva, V., Bédard, S., Wesselink, E. O., Lynn, B. P., Pai S, A., Pfyffer, D., Kaptan, M., Berhe, N., Ratliff, J., Hu, S. S., Smith, Z. A., Hastie, et al

2025; 8 (2): e70015

- **Video-based biomechanical analysis captures disease-specific movement signatures of myotonic dystrophy and facioscapulohumeral muscular dystrophy**
De Savasse, C., Ruth, P., Ulrich, S., Vogt-Domke, S., Ismail, S., Karman, L., Falisse, A., Muccini, J., Covitz, S., Day, J., Delp, S., Duong, T.
PERGAMON-ELSEVIER SCIENCE LTD.2025
- **Repurposing 2D Diffusion Models with Gaussian Atlas for 3D Generation. ... IEEE International Conference on Computer Vision workshops. IEEE International Conference on Computer Vision**
Xiang, T., Li, K., Long, C., Hane, C., Guo, P., Delp, S., Adeli, E., Fei-Fei, L.
2025; 2025: 16492-16502
- **How peak knee loads are affected by changing the mass of lower-limb body segments during walking. PLoS computational biology**
Miller, D. E., Brown, A. E., Bianco, N. A., Bhise, R., Delp, S. L., Collins, S. H.
2025; 21 (9): e1012833
- **Video-Based Biomechanical Analysis Captures Disease-Specific Movement Signatures of Different Neuromuscular Diseases. NEJM AI**
Ruth, P. S., Uhrlich, S. D., de Monts, C., Falisse, A., Muccini, J., Covitz, S., Vogt-Domke, S., Day, J., Duong, T., Delp, S. L.
2025; 2 (9)
- **Improved Strength Prediction Combining MRI Biomarkers of Muscle Quantity and Quality. NMR in biomedicine**
Mazzoli, V., Vainberg, Y., Hall, M. E., Barbieri, M., Asay, J., Muccini, J., Rosenberg, J., Kogan, F., Delp, S., Gold, G. E.
2025; 38 (9): e70112
- **Countrywide natural experiment links built environment to physical activity. Nature**
Althoff, T., Ivanovic, B., King, A. C., Hicks, J. L., Delp, S. L., Leskovec, J.
2025
- **Personalised gait retraining for medial compartment knee osteoarthritis: a randomised controlled trial. The Lancet. Rheumatology**
Uhrlich, S. D., Mazzoli, V., Silder, A., Finlay, A. K., Kogan, F., Gold, G. E., Delp, S. L., Beaupre, G. S., Kolesar, J. A.
2025
- **Video-based biomechanical analysis captures disease-specific movement signatures of different neuromuscular diseases. bioRxiv : the preprint server for biology**
Ruth, P. S., Uhrlich, S. D., de Monts, C., Falisse, A., Muccini, J., Covitz, S., Vogt-Domke, S., Day, J., Duong, T., Delp, S. L.
2025
- **Simulations Reveal how Touchdown Kinematic Variables affect Top Sprinting Speed: Implications for Coaching. Medicine and science in sports and exercise**
Haralabidis, N., Eaton, A. J., Delp, S. L., Hicks, J. L.
2025
- **Hamstring muscle architecture and microstructure changes following Nordic hamstring exercise training and detraining. Journal of sport and health science**
S, A. P., Andrews, M. H., Gurchiek, R. D., Pincheira, P. A., Barbieri, M., Friedrich, T., Kogan, F., Gold, G. E., Mazzoli, V., Lichtwark, G. A., Delp, S. L., Chaudhari, A. S.
2025: 101070
- **Detecting artificially impaired balance in human locomotion: metrics, perturbation effects and detection thresholds. The Journal of experimental biology**
Wu, J., Raitor, M., Tan, G. R., Staudenmayer, K. L., Delp, S. L., Liu, C. K., Collins, S. H.
2025; 228 (10)
- **PATIENT-SPECIFIC CARTILAGE PRESSURES ARE RELATED TO OSTEOARTHRITIS PROGRESSION AND DISEASE SEVERITY**
Gatti, A. A., Marusich, K. R., Ong, C., Chu, C. R., Esrafilian, A., Delp, S., Gold, G. E., Kogan, F., Chaudhari, A.
ELSEVIER SCI LTD.2025
- **GaitDynamics: A Generative Foundation Model for Analyzing Human Walking and Running. Research square**
Tan, T., Van Wouwe, T., Werling, K. F., Liu, C. K., Delp, S. L., Hicks, J. L., Chaudhari, A. S.
2025

- **Leg Muscle Volume, Intramuscular Fat and Force Generation: Insights From a Computer-Vision Model and Fat-Water MRI.** *Journal of cachexia, sarcopenia and muscle*
Smith, A. C., Laguna, J. M., Wesselink, E. O., Scott, Z. E., Jenkins, H., Thornton, W. A., Wasielewski, M., Connor, J., Delp, S., Chaudhari, A. S., Parrish, T. B., Mackey, S., Elliott, et al
2025; 16 (1): e13735
- **Marker Data Enhancement for Markerless Motion Capture.** *IEEE transactions on bio-medical engineering*
Falisse, A., Uhlrich, S. D., Chaudhari, A. S., Hicks, J. L., Delp, S. L.
2025; PP
- **AddBiomechanics Dataset: Capturing the Physics of Human Motion at Scale**
Werling, K., Kaneda, J., Tan, T., Agarwal, R., Skov, S., Van Wouwe, T., Uhlrich, S., Bianco, N., Ong, C., Falisse, A., Sapkota, S., Chandra, A., Carter, et al
edited by Leonardis, A., Ricci, E., Roth, S., Russakovsky, O., Sattler, T., Varol, G.
SPRINGER INTERNATIONAL PUBLISHING AG.2025: 490-508
- **NeuHMR: Neural Rendering-Guided Human Motion Reconstruction**
Xiang, T., Wang, K., Heo, J., Adeli, E., Yeung, S., Delp, S., Li Fei-Fei, IEEE COMPUTER SOC
IEEE COMPUTER SOC.2025: 1518-1528
- **OpenCapBench: A Benchmark to Bridge Pose Estimation and Biomechanics**
Gozlan, Y., Falisse, A., Uhlrich, S., Gatti, A., Black, M., Hicks, J., Delp, S., Chaudhari, A., IEEE COMPUTER SOC
IEEE COMPUTER SOC.2025: 4056-4065
- **A Data-Driven Approach to Estimate Changes in Peak Knee Contact Force With Exoskeleton Assistance.** *IEEE transactions on neural systems and rehabilitation engineering : a publication of the IEEE Engineering in Medicine and Biology Society*
Miller, D. E., Brown, A. E., Bianco, N. A., Delp, S. L., Collins, S. H.
2025; 33: 3116-3128
- **ShapeMed-Knee: A Dataset and Neural Shape Model Benchmark for Modeling 3D Femurs.** *IEEE transactions on medical imaging*
Gatti, A. A., Blankemeier, L., Veen, D. V., Hargreaves, B., Delp, S. L., Gold, G. E., Kogan, F., Chaudhari, A. S.
2024; PP
- **Hamstrings are Stretched More and Faster during Accelerative Running Compared to Speed-Matched Constant-Speed Running.** *Medicine and science in sports and exercise*
Gurchiek, R. D., Teplin, Z., Falisse, A., Hicks, J. L., Delp, S. L.
2024
- **A randomized clinical trial testing digital mindset intervention for knee osteoarthritis pain and activity improvement.** *NPJ digital medicine*
Boswell, M. A., Evans, K. M., Ghandwani, D., Hastie, T., Zion, S. R., Moya, P. L., Giori, N. J., Hicks, J. L., Crum, A. J., Delp, S. L.
2024; 7 (1): 285
- **Multiscale hamstring muscle adaptations following 9 weeks of eccentric training.** *Journal of sport and health science*
Andrews, M. H., S, A. P., Gurchiek, R. D., Pincheira, P. A., Chaudhari, A. S., Hodges, P. W., Lichtwark, G. A., Delp, S. L.
2024: 100996
- **Personalizing the shoulder rhythm in a computational upper body model improves kinematic tracking in high range-of-motion arm movements.** *Journal of biomechanics*
Maier, J. N., Bianco, N. A., Ong, C. F., Muccini, J., Kuhl, E., Delp, S. L.
2024; 176: 112365
- **Impact Of Time Of Day On Neuromuscular Performance Of The Star Excursion Balance Test In Young Women**
Weed, L., Thompson, S., Kraus, E., Delp, S., Zeitzer, J.
LIPPINCOTT WILLIAMS & WILKINS.2024: 257-258
- **Quantification Of 3D Knee Morphology In Patients With Patellar Instability**
Lee, M. R., Gatti, A. A., Wright, C. E., Bartsch, A., Veerkamp, M. W., Parikh, S. N., Chaudhari, A. S., Shea, K. G., Sherman, S. L., Delp, S. L.
LIPPINCOTT WILLIAMS & WILKINS.2024: 61-62
- **Marker Data Enhancement For Markerless Motion Capture.** *bioRxiv : the preprint server for biology*
Falisse, A., Uhlrich, S. D., Chaudhari, A. S., Hicks, J. L., Delp, S. L.

2024

- **ISB recommendations on the definition, estimation, and reporting of joint kinematics in human motion analysis applications using wearable inertial measurement technology.** *Journal of biomechanics*
Cereatti, A., Gurchiek, R., Mündermann, A., Fantozzi, S., Horak, F., Delp, S., Aminian, K.
2024; 173: 112225
- **ShapeMed-Knee: A Dataset and Neural Shape Model Benchmark for Modeling 3D Femurs.** *medRxiv : the preprint server for health sciences*
Gatti, A. A., Blankemeier, L., Van Veen, D., Hargreaves, B., Delp, S. L., Gold, G. E., Kogan, F., Chaudhari, A. S.
2024
- **A DIGITAL MINDSET INTERVENTION TO IMPROVE PAIN AND EXERCISE PARTICIPATION IN INDIVIDUALS WITH KNEE OSTEOARTHRITIS: A RANDOMIZED CLINICAL TRIAL**
Boswell, M., Evans, K., Ghnadwani, D., Hastie, T., Zion, S., Moya, P., Giori, N., Crum, A., Delp, S.
ELSEVIER SCI LTD.2024: S7-S8
- **REDUCED COMPRESSIVE & SHEAR FORCES FROM GAIT RETRAINING RELATE TO SLOWED CARTILAGE DEGENERATION**
Seagers, K., Kolesar, J. A., Mazzoli, V., Halilaj, E., Delp, S., Uhlrich, S.
ELSEVIER SCI LTD.2024: S28-S29
- **Hamstrings are stretched more and faster during accelerative running compared to speed-matched constant speed running.** *bioRxiv : the preprint server for biology*
Gurchiek, R. D., Teplin, Z., Falisse, A., Hicks, J. L., Delp, S. L.
2024
- **A simulation framework to determine optimal strength training and musculoskeletal geometry for sprinting and distance running.** *PLoS computational biology*
Van Wouwe, T., Hicks, J., Delp, S., Liu, K. C.
2024; 20 (2): e1011410
- **Lower-Limb Exoskeletons Appeal to Both Clinicians and Older Adults, Especially for Fall Prevention and Joint Pain Reduction.** *IEEE transactions on neural systems and rehabilitation engineering : a publication of the IEEE Engineering in Medicine and Biology Society*
Raitor, M., Ruggles, S. W., Delp, S. L., Liu, C. K., Collins, S. H.
2024; 32: 1577-1585
- **OpenCap: Movement Biomechanics from Smartphone Videos**
Falisse, A., Uhlrich, S. D., Hicks, J. L., Delp, S. L.
edited by Pons, J. L., Tornero, J., Akay, M.
SPRINGER INTERNATIONAL PUBLISHING AG.2024: 519-522
- **Towards Video-Based Movement Biomarkers for Neuromuscular Diseases**
Uhlrich, S. D., Ruth, P. S., de Monts, C., Falisse, A., Muccini, J., Ataide, P., Day, J., Duong, T., Delp, S. L.
edited by Pons, J. L., Tornero, J., Akay, M.
SPRINGER INTERNATIONAL PUBLISHING AG.2024: 501-504
- **OccFusion: Rendering Occluded Humans with Generative Diffusion Priors.** *Advances in neural information processing systems*
Sun, A., Xiang, T., Delp, S., Fei-Fei, L., Adeli, E.
2024; 37: 92184-92209
- **OccFusion: Rendering Occluded Humans with Generative Diffusion Priors.** *Advances in neural information processing systems*
Sun, A., Xiang, T., Delp, S., Fei-Fei, L., Adeli, E.
2024; 37: 92184-92209
- **DiffusionPoser: Real-time Human Motion Reconstruction From Arbitrary Sparse Sensors Using Autoregressive Diffusion**
Van Wouwe, T., Lee, S., Falisse, A., Delp, S., Liu, C., IEEE COMPUTER SOC
IEEE COMPUTER SOC.2024: 2513-2523
- **Muscle-driven simulations and experimental data of cycling.** *Scientific reports*
Clancy, C. E., Gatti, A. A., Ong, C. F., Maly, M. R., Delp, S. L.
2023; 13 (1): 21534

- **From Skin to Skeleton: Towards Biomechanically Accurate 3D Digital Humans** *ACM TRANSACTIONS ON GRAPHICS*
Keller, M., Werling, K., Shin, S., Delp, S., Pujades, S., Liu, C., Black, M. J.
2023; 42 (6)
- **AddBiomechanics: Automating model scaling, inverse kinematics, and inverse dynamics from human motion data through sequential optimization.** *PLoS one*
Werling, K., Bianco, N. A., Raitor, M., Stingel, J., Hicks, J. L., Collins, S. H., Delp, S. L., Liu, C. K.
2023; 18 (11): e0295152
- **Simulating Muscle-Level Energetic Cost Savings When Humans Run with a Passive Assistive Device.** *IEEE robotics and automation letters*
Stingel, J. P., Hicks, J. L., Uhlich, S. D., Delp, S. L.
2023; 8 (10): 6267-6274
- **OpenCap: Human movement dynamics from smartphone videos.** *PLoS computational biology*
Uhlich, S. D., Falisse, A., Kidziński, Ł., Muccini, J., Ko, M., Chaudhari, A. S., Hicks, J. L., Delp, S. L.
2023; 19 (10): e1011462
- **The History and Future of Neuromusculoskeletal Biomechanics.** *Journal of applied biomechanics*
Lloyd, D. G., Jonkers, I., Delp, S. L., Modenese, L.
2023: 1-11
- **AddBiomechanics: Automating model scaling, inverse kinematics, and inverse dynamics from human motion data through sequential optimization.** *bioRxiv : the preprint server for biology*
Werling, K., Bianco, N. A., Raitor, M., Stingel, J., Hicks, J. L., Collins, S. H., Delp, S. L., Liu, C. K.
2023
- **Simulating the effect of ankle plantarflexion and inversion-eversion exoskeleton torques on center of mass kinematics during walking.** *PLoS computational biology*
Bianco, N. A., Collins, S. H., Liu, K., Delp, S. L.
2023; 19 (8): e1010712
- **Ten steps to becoming a musculoskeletal simulation expert: A half-century of progress and outlook for the future.** *Journal of biomechanics*
Uhlich, S. D., Uchida, T. K., Lee, M. R., Delp, S. L.
2023; 154: 111623
- **How Connecting the Legs with a Spring Improves Human Running Economy.** *bioRxiv : the preprint server for biology*
Stingel, J. P., Hicks, J. L., Uhlich, S. D., Delp, S. L.
2023
- **Can static optimization detect changes in peak medial knee contact forces induced by gait modifications?** *Journal of biomechanics*
Kaneda, J. M., Seagers, K. A., Uhlich, S. D., Kolesar, J. A., Thomas, K. A., Delp, S. L.
2023; 152: 111569
- **A scoping review of portable sensing for out-of-lab anterior cruciate ligament injury prevention and rehabilitation.** *NPJ digital medicine*
Tan, T., Gatti, A. A., Fan, B., Shea, K. G., Sherman, S. L., Uhlich, S. D., Hicks, J. L., Delp, S. L., Shull, P. B., Chaudhari, A. S.
2023; 6 (1): 46
- **Smartphone videos of the sit-to-stand test predict osteoarthritis and health outcomes in a nationwide study.** *NPJ digital medicine*
Boswell, M. A., Kidziński, Ł., Hicks, J. L., Uhlich, S. D., Falisse, A., Delp, S. L.
2023; 6 (1): 32
- **PREDICTING CHRONIC KNEE PAIN USING AN AUTOMATED MRIBASED BONE AND CARTILAGE STATISTICAL SHAPE MODEL: DATA FROM THE OSTEOARTHRITIS INITIATIVE**
Gatti, A. A., Kogan, F., Delp, S. L., Gold, G. E., Chaudhari, A. S.
ELSEVIER SCI LTD.2023: S78-S79
- **Effects of Wearable Fitness Trackers and Activity Adequacy Mindsets on Affect, Behavior, and Health: Longitudinal Randomized Controlled Trial.** *Journal of medical Internet research*
Zahrt, O. H., Evans, K., Murnane, E., Santoro, E., Baiocchi, M., Landay, J., Delp, S., Crum, A.
2023; 25: e40529

- **Digital medicine Digitising tremor** *LANCET*
Delp, S. L., Topol, E. J.
2023; 401 (10372): 187
- **Digitising tremor.** *Lancet (London, England)*
Delp, S. L., Topol, E. J.
2023; 401 (10372): 187
- **Leveraging Mobile Technology for Public Health Promotion: A Multidisciplinary Perspective.** *Annual review of public health*
Hicks, J. L., Boswell, M. A., Althoff, T., Crum, A. J., Ku, J. P., Landay, J. A., Moya, P. M., Murnane, E. L., Snyder, M. P., King, A. C., Delp, S. L.
2022
- **Confounds in neuroimaging: A clear case of sex as a confound in brain-based prediction.** *Frontiers in neurology*
Weber, K. A., Teplin, Z. M., Wager, T. D., Law, C. S., Prabhakar, N. K., Ashar, Y. K., Gilam, G., Banerjee, S., Delp, S. L., Glover, G. H., Hastie, T. J., Mackey, S.
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