ACADEMIC CURRICULUM VITAE

Jesse C. Christensen, PT, DPT, MSCI, PhD

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A. EDUCATION

<u>Year</u>	<u>Degree</u>	Institution (Area of Study / Specialization)
2020	Postdoc	VA Special Fellowship Geriatrics, Denver, CO, Geriatric Research
2018	Postdoc	University of Colorado, Aurora, CO, Rehabilitation Science
2017	PhD	University of Utah, Salt Lake City, UT, Applied Biomechanics
2016	MSCI	University of Utah, Salt Lake City, UT, Clinical Investigation
2007	DPT	University of Utah, Salt Lake City, UT, Physical Therapy
2005	BS	University of Utah, Salt Lake City, UT, Physical Therapy Studies

Licensure / Certification

2009 – Present	Physical Therapy, Utah (7069615-2401)
2008 – Present	Physical Therapy, Colorado (PTL.0009751)
2009—2019	APTA Physical Therapy Clinical Specialist in Sports

B. EMPLOYMENT / PROFESSIONAL EXPERIENCE

<u>Dates</u>	Position & Institution
01/2022 – Present	Vice President's Clinical and Translation Scholar, University of Utah, School of Medicine
01/2020 – Present	Motion Capture Lab Director, VA Salt Lake City, Dept. Physical Medicine & Rehab
08/2020 – Present	Research Assistant Professor, University of Utah, Dept. of Physical Therapy
01/2020 - Present	Adjunct Instructor, University of Utah, Dept. of Orthopaedics
01/2020—09/2020	Adjunct Instructor, University of Utah, Dept. of Physical Therapy
08/2008—06/2020	Staff Physical Therapist, Intermountain Healthcare, Dept. of Physical Therapy
09/2017—03/2018	Research Consultant, University of Utah, Dept. of Orthopaedics
08/2014—08/2017	Research Coordinator, University of Utah, Dept. of Orthopaedics
09/2012-09/2013	Staff Physical Therapist, Kindred Healthcare, Dept. of Physical Therapy
07/2007 -07/2008	Staff Physical Therapist, Howard Head Sports Medicine, Dept. of Physical Therapy

C. HONORS, RECOGNITIONS & AWARDS

<u>Year</u>	Recognition	Received From
2022	Vice President's Clinical and Translation Scholar	University of Utah, School of Medicine
2019	Lawren H. Daltroy Health Professional Preceptorship	Rheumatology Research Foundation
2018	Marilyn Gossman Graduate Student Research Award	American Physical Therapy Association
2018	Postdoc of the Month	University of Colorado

2017	Student Achievement Award	Rheumatology Research Foundation
2017	Marilyn Gossman Graduate Student Research Award	American Physical Therapy Association
2017	Student Researcher of the Year Award	University of Utah, College of Health
2017	Best Poster Award	Gait and Clinical Movement Analysis Society
2017	Best Graduate Student Poster Award	University of Utah, Center of Aging
2017	Education Council Honoree	Gait and Clinical Movement Analysis Society
2016	Richard K. & Maria A. Obyn Scholarship Honoree	University of Utah
2016	Research Foundation Preceptorship Award	American College of Rheumatology
2016	Best Research Project Award	Utah Physical Therapy Association
2016	LS Peery Scholar Recipient	University of Utah, School of Medicine
2015	Education Council Honoree	Gait and Clinical Movement Analysis Society
2015	Richard K. & Maria A. Obyn Scholarship Honoree	University of Utah
2015	Best Research Project Award	Utah Physical Therapy Association
2014	Best Research Project Award	Utah Physical Therapy Association
2014	Advancing Arthritis Research Recipient	Boston University
2004	Jarman Family Scholarship Honoree	University of Utah

D. EDITORIAL BOARDS & GRANT REVIEW PANELS

<u>Position & Institution</u>

04/2021—Present Ad Hoc Reviewer, VA Rehabilitation Research and Development Services SPIRE

E. ADVISORY & CONSULTING POSITIONS

<u>Dates</u>	Position & Institution
06/2021—02/2022	Research Consultant, OneStep Celloscope Ltd., Tel Aviv, Israel
10/2020—02/2022	Research Consultant, Immunis Inc., Laguna Beach, CA, USA
04/2022	Treasurer Nominee, APTA Special Interest Group Biomechanics
04/2021	Vice President Nominee, APTA Special Interest Group Biomechanics

F. MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

<u>Dates</u>	Position & Institution
2018—Present	Member, American Society of Biomechanics
2016—Present	Member, American College of Rheumatology
2014—Present	Member, Center of Aging, University of Utah
2014—Present	Member, American College of Sports Medicine
2014—Present	Member, Gait and Clinical Movement Analysis Society
2006—Present	Member, American Physical Therapy Association

Section of ResearchSection of OrthopedicsSection of Sports

G. MANUSCRIPT REVIEWER

Dates	Position & Institution

2017—Present Ad Hoc Reviewer, Journal of Orthopaedic & Sports Physical Therapy

2017—Present	Ad Hoc Reviewer, Journal of Biomechanics
2017—Present	Ad Hoc Reviewer, Arthritis Care & Research
2017—Present	Ad Hoc Reviewer, Gait & Posture
2016—Present	Ad Hoc Reviewer, The Knee
2015—Present	Ad Hoc Reviewer, The Anatomical Record
2014—Present	Ad Hoc Reviewer, Journal of Sport Rehabilitation
2014—Present	Ad Hoc Reviewer, Physiotherapy Journal

H. PEER-REVIEWED PUBLICATIONS

- 1. Thomsen PB, Aumeier JW, Wilbur CA, Oro EG, Carlson HB, **Christensen JC**. Lower Limb Extension Power is Associated with Slope Walking Joint Loading Mechanics in Older Adults. Recently Accepted by Journal of Applied Biomechanics.
- 2. **Christensen JC**, Jakiela JT, White DK. Factors Associated with Trajectories of Physical Activity Over 8 Years in Knee Osteoarthritis. European Journal of Rheumatology, Recently Accepted by Eur J Rheumatol.
- 3. Aljehani M, **Christensen JC**, Snyder-Mackler L, Crenshaw J, Brown A, Zeni JA. Knee Biomechanics and Contralateral Knee Osteoarthritis Progression after Total Knee Arthroplasty. Gait & Posture. 2022 Jan;91:266-275. PMID: 34775230.
- 4. **Christensen JC**, Quammen DL, Rigby JH, Christiansen CL, Stevens-Lapsley JE. Trunk Movement Compensation Identified by Inertial Measurement Units Are Associated with Physical Performance and Muscle Strength Deficit in People with Hip Osteoarthritis. Clin Biomech (Bristol, Avon). 2021 Jul 21;88:105436. PMID: 34364100.
- 5. **Christensen JC**, Pelt CE, Foreman KB, Anderson AE, LaStayo PC, Gililland JM, Mizner RL. Longitudinal Study of Knee Load Avoidant Movement Behavior After Total Knee Arthroplasty with Recommendations for Future Retraining Interventions. Knee 2021 Apr 16;30:90-99. PMID: 33878682.
- 6. Lyden K, Boucher R, Wei G, Zhou N, **Christensen JC**, Chertow G, Greene T, Beddhu S. Targeting Sedentary Behavior in CKD: A Pilot and Feasibility Randomized Controlled Trial. Clin J Am Soc Nephrol. 2021 Apr 22. PMID: 33888536.
- 7. Binder EF, **Christensen JC**, Stevens-Lapsley JE, Bartley J, Berry SD, Dobs AS, Fortinsky RH, Hildreth KL, Kiel DP, Kuchel G, Marcus RL, McDonough CL, Orwig D, Sinacore DR, Schwartz RS, Volpe E, Magaziner J, Schechtman KB. A Multi-Center Trial of Exercise and Testosterone Therapy In Female Hip Fracture Patients: Design, Methods and Impact of the COVID-19 Pandemic. Contemp Clin Trials. 2021 Mar 11;106356. PMID: 33716173.
- 8. **Christensen JC**, Capin JJ, Hinrichs LA, Aljehani M, Stevens-Lapsley JE, Zeni JA. Gait mechanics are influenced by quadriceps strength, age and sex after total knee arthroplasty. J Orthop Res, 2020 Oct 9. PMID: 33034899.
- Christensen JC, Kline PW, Murray AM, Christiansen CL. Movement Asymmetry During Low and High Demand Mobility Tasks after Dysvascular Transtibial Amputation. Clin Biomech (Bristol, Avon). 2020 Jul 7;80:105102. PMID: 32768801.
- 10. Kittelson AJ, Elings J, Colborn K, Hoogeboom T, **Christensen JC**, van Meeteren N, van Buuren S, Stevens-Lapsley JE. Reference Chart for Knee Flexion Following Total Knee Arthroplasty: A Novel Tool for Monitoring Postoperative Recovery. BMC Musculoskelet Disord, 2020 Jul 22;21(1):482. PMID: 32698900.

- 11. **Christensen JC**, Peters CL, Gililland JM, Pelt CE. Physical Activity, Pain Interference and Comorbidities Relate to PROMIS Physical Function in Younger Adults Following Total Knee Arthroplasty. Disabil Rehabil, 2020 Apr 21:1-7. PMID: 32315208.
- 12. Bade MJ, **Christensen JC**, Zeni JA, Christiansen CL, Dayton MR, Forster JE, Cheuy VA, Stevens-Lapsley JE. Movement Pattern Biofeedback Training after Total Knee Arthroplasty: Randomized Clinical Trial Protocol. Contemp Clin Trials, Contemp Clin Trials. 2020 Mar 11:105973. PMID: 32171937.
- 13. Kittelson AJ, **Christensen JC**, Lloyd BJ, Burrow K, Iannitto J, Stevens-Lapsley JE. Reliability, Responsiveness and Validity of Handheld Dynamometry for Assessing Quadriceps Strength in Total Knee Arthroplasty. Disabil Rehabil. 2020 Mar 6:1-8. PMID: 32142620.
- 14. **Christensen JC**, Kittelson AJ, Lloyd BJ, Himawan MA, Thigpen CA, Stevens-Lapsley JE. Characteristics of Young and Lower Functioning Patients Following Total Knee Arthroplasty: A Retrospective Study. BMC Musculoskelet Disord. 2019 Oct 27;20(1):483. PMID: 31656185.
- 15. **Christensen JC**, Marland JD, Miller CJ, Horton BS, White DR, West HS. Trajectory of Clinical Outcomes Following Hip Arthroscopy in Female Subgroup Populations. J Hip Preserv Surg. 2019 Mar 20;6(1):25-32. PMID: 31069092.
- 16. **Christensen JC**, Mizner RL, Foreman KB, LaStayo PC, Peters CL, Pelt CE. Preoperative Quadriceps Weakness Preferentially Predicts Postoperative Aberrant Movement Patterns During High-Demand Mobility Following Total Knee Arthroplasty. The Knee, 2019 Jan;26(1):79-87. PMID: 30600199.
- 17. **Christensen JC**, Paxton RJ, Baym C, Forster JE, Dayton MR, Hogan CA, Stevens-Lapsley JE. Benefits of Direct Patient Discharge to Outpatient Physical Therapy After Total Knee Arthroplasty. Disabil Rehabil 2020 Mar;42(5):660-666. PMID: 30616406.
- 18. **Christensen JC**, Miller CJ, Burns, RD, West, HS. Effect of Physical Therapy Visits on Clinical Outcomes Following Anterior Cruciate Ligament Reconstruction With and Without Concurrent Meniscal Repair. J Sport Rehabil. 2018 Oct 1:1-9. PMID 28787223.
- 19. **Christensen JC**, LaStayo, PC, Foreman KB, Marcus RL, Pelt CE, Mizner RL Quadriceps Weakness Preferentially Predicts Detrimental Gait Compensations Amongst Common Impairments After Total Knee Arthroplasty. J Orthop Res. 2018 Sep;36(9). PMID: 29577425.
- 20. **Christensen JC**, Foreman KB, Mizner RL, Marcus RL, Pelt CE, LaStayo, PC. Comparison of 2 Forms of Kinetic Biofeedback on the Immediate Correction of Knee Extensor Moment Asymmetry Following Total Knee Arthroplasty During Decline Walking, J Orthop Sports Phys Ther, 2018 Aug 20:1-23. PMID: 30124352.
- 21. Kagan R, Anderson MB, **Christensen JC**, Peters CL, Gililland JM, Pelt CE. The Recovery Curve For The PROMIS[®] Patient Reported Physical Function and Pain Interference Computerized Adaptive Tests Following Primary Total Knee Arthroplasty. J Arthroplasty, 2018 Mar 17. PMID: 29656980.
- 22. **Christensen JC**, Foreman KB, LaStayo PC. The Positive Benefits of Eccentric Movement Patterns Following Total Knee Arthroplasty. Geriatr Orthop Surg Rehabil, 2018 Mar 26;9:1-9. PMID: 29623234.
- 23. **Christensen JC,** LaStayo PC, Marcus RL, Stoddard GJ, Foreman KB, Mizer RL, Peters CL, Pelt CE. Visual Knee-Kinetic Biofeedback Technique Normalizes Gait Abnormalities During High-Demand Mobility After Total Knee Arthroplasty. The Knee, 2018 Jan;25(1):73-82. PMID: 29305025.

- 24. **Christensen JC**, LaStayo, PC, Mizner RL, Marcus RL, Pelt CE, Foreman KB. Joint Mechanical Asymmetries During Low- and High-Demand Mobility Tasks: Comparison Between Total Knee Arthroplasty and Healthy-Matched Peers, Gait Posture. 2017 Nov 21;60:104-110. PMID: 29175639.
- 25. Miller CJ, **Christensen JC**, Burns RD. Influence of Demographics and Utilization of Physical Therapy Services on Clinical Outcomes and Revision Rates Following Anterior Cruciate Ligament Reconstruction. J Orthop Sports Phys Ther. 2017 Oct 9:1-35. PMID: 28992770.
- 26. **Christensen JC**, Wilson C, Merryweather AS, Foreman KB. Kinematics of the Pelvis, Trunk and Thigh During an Obstacle Crossing Task While Under Temporal Constraints. Anat Rec (Hoboken). 2017 Apr; 300 (4):732-738. PMID: 28297177.
- 27. **Christensen JC**, Brothers J, Stoddard GJ, Pelt CE, Gililland JM, Peters CL. Higher Frequency of Reoperation With A New Bicruciate-Retaining Total Knee Arthroplasty. Clin Orthop Relat Res. 2017 Jan;475(1):62-69. PMID: 27043727.
- 28. Smith JW, Marcus RL. Tracy B, Foreman KB, **Christensen JC**, LaStayo PC. Stance Time Variability During Stair Stepping Before and After Total Knee Arthroplasty: A Pilot Study. Hum Mov Sci. 2016 Feb;45:53-62. PMID: 26590484.
- 29. **Christensen JC**, Goldfine LR, Barker T, Collingridge, D. What Can The First 2 Months Tell Us About Outcomes After Anterior Cruciate Ligament Reconstruction? J Athl Train. 2015 May;50(5):508-15. PMID: 25594914.
- 30. Smith JW, **Christensen JC**, Marcus RL, LaStayo PC. Muscle Force and Movement Variability Before and After Total Knee Arthroplasty: A Review. World J Orthop. 2014 Apr 18;5(2):69-79. PMID: 24829868.
- 31. **Christensen JC**, Goldfine LR, West HS. The Effects of Early Aggressive Rehabilitation on Outcomes After Anterior Cruciate Ligament Reconstruction Using Autologous Hamstring Tendon: A Randomized Clinical Trial. J Sport Rehabil. 2013 Aug;22(3):191-201. PMID: 23579334.
- 32. Philippon MJ, **Christensen JC**, Wahoff MS. Rehabilitation After Arthroscopic Repair of Intra-Articular Disorders of the Hip in a Professional Football Athlete. J Sport Rehabil. 2009 Feb;18(1):118-34. PMID: 19321911.
- 33. Dibble LE, **Christensen JC**, Ballard DJ, Foreman KB. Diagnosing Fall Risk in Persons With Parkinson Disease: The Validity of Collective Interpretation of Clinical Balance Tests. Phys Ther. 2008 Mar; 88(3): 323-32. PMID: 18187494.

I. NON-PEER REVIEWED PUBLICATIONS

- 1. Miller CJ, **Christensen JC**, Burns RD. Assessing Patient Satisfaction Following Anterior Cruciate Ligament Reconstruction. J Orthop Sports Phys Ther / J Bone Joint Surg Am Webinar. 2017 Dec. Edition.
- 2. **Christensen JC**, Brothers J, Stoddard GJ, Pelt CE, Gililland JM, Peters CL. CORR Insights: Higher Frequency of Reoperation With a New Bicruciate-retaining Total Knee Arthroplasty. Clin Orthop Relat Res, 2017 Jan;475(1):70-71. PMID: 27154532.
- 3. Miller CJ, **Christensen JC**. Role of Early Rehabilitation Stages After ACL Reconstruction. Lower Extremity Review Magazine. 2015 July Edition.

4. Dibble LE, **Christensen J**, Ballard DJ, Foreman KB. On "Diagnosis of fall risk in Parkinson disease ... Physical Therapy, 2008 May;88(5):679. PMID: 18450763.

J. JOURNAL PUBLICATIONS IN REVIEW (OR PREPARATION)

- 1. **Christensen JC**, Blackburn B, Browning B, Wilbur CA, Trinity J, Gililland JM, Pelt CE. Patient-Reported Outcomes Measurement Information System Physical Function and Knee Injury and Osteoarthritis Outcome Score Relationship on Performance Measures in People Undergoing Total Knee Arthroplasty. Under Review.
- 2. **Christensen JC**, Stanley EC, Oro EG, Carlson HB, Naveh YY, Shalita R, Teitz LS. The Validity and Reliability of the OneStep Smartphone Application Under Various Gait Conditions with Feasibility in Clinical Practice. Under Review.
- 3. Abraham N, Lyden K, Boucher R, , Wei G, Gonce V, Carle J, Fornadi K, Supiano M, **Christensen JC**, Beddhu S. An Intervention to Decrease Sedentary Behavior in Older Adults: A Secondary Analysis of a Randomized Controlled Trial. Under Review.
- 4. Abraham N, Lyden K, Boucher R, Wei G, Gonce V, Carle J, Fornadi K, Supiano M, **Christensen J**, Beddhu S. An Intervention to Decrease Sedentary Behavior in Older Adults: A Secondary Analysis of a Randomized Controlled Trial. Under Review.
- 5. **Christensen JC**, Blackburn B, Anderson LA, Gililland JM, Pelt CE. Recovery Curve for Perceived and Objective Physical Function After Primary Total Knee Arthroplasty, In Preparation.
- 6. Zeni JA, Kathleen M, Pohlig RT, **Christensen JC**, Stevens-Lapsley J, Snyder-Mackler L. Risk Factors for Contralateral Total Knee Arthroplasty, In Preparation.

K. INVITED PRESENTATIONS

- 1. **Christensen JC**, Fimmano G, Wilbur C, Ingersoll B, Aumeier J, Christiansen CL, Stevens-Lapsley JE. Trunk Movement Compensation Is Associated with Physical Performance Measures and Fatigue Deficits in Hip Osteoarthritis. Proceedings from American Rheumatology Convergence Meeting, Nov. 2021 [Poster Presentation] and American Physical Therapy Association, Combined Sections Meeting (Federal Section), Feb. 2022 [Poster Presentation].
- 2. Tran MK, Rauzi MR, **Christensen JC**, Monroe KM, Doré PM, Stevens-Lapsley JE, Binder EF. Early Fidelity Results for a Multi-site Randomized Controlled Trial in Women after Hip Fracture. Proceedings from American Physical Therapy Association, Combined Sections Meeting (Research Section), Feb. 2022 [Poster Presentation].
- 3. **Christensen JC**, Rigby JH, Christiansen CL, Stevens-Lapsley JE. Trunk Movement Compensation Is Associated with Physical Performance Measures and Fatigue Deficits in Hip Osteoarthritis. Proceedings from American College of Rheumatology Annual Meeting, Nov 2021 [Poster Presentation].
- 4. Rauzi MR, St Martin A, Tran MK, **Christensen JC**, Monroe KM, Dore P, Stevens-Lapsley JE, Binder EF. Remote Exercise Intervention Fidelity for a Multi-site Randomized Controlled Trial in Women after Hip Fracture. Proceedings from American College of Sports Medicine Conference Annual Meeting and World Congress, June 2021 [Poster Presentation].

- 5. Wankier Z, **Christensen JC**, Sinclair K, Sinclair S. Validation of Loadsol Devices as a Tool to Assess Patient Ground Reaction Forces During Prescribed Physical Therapy from Home. Proceedings of the Undergraduate Research Opportunities Program, University of Utah (Biomedical Engineering), Mar 2021 [Poster Presentation].
- 6. **Christensen JC**, Quammen D, Wojnar K, Kline P, Christiansen CL, Stevens-Lapsley JE. Validity of Inertial Measurement Units in Assessing Trunk Motion in Veterans with Total Hip Arthroplasty. Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Research Section), Feb. 2021 [Poster Presentation].
- 7. Hinrichs L, **Christensen JC**, Capin JJ, Aljehani M, Zeni J, Stevens-Lapsley JE. Gait Mechanics Are Influenced By Quadriceps Strength, Age and Sex after Total Knee Arthroplasty. Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Research Section), Feb. 2021 [Poster Presentation].
- 8. Leutzinger T, **Christensen JC**, Christiansen CL, Knarr B, Stevens-Lapsley JE. Subject Strength and Knee Alignment to Investigate Knee Joint Contact Forces Post Total Knee Arthroplasty. Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Research Section), Feb. 2021 [Poster Presentation].
- 9. **Christensen JC**, Silverman A, Foreman KB, Anderson A, Bachus K, Stevens-Lapsley JE. Quadriceps Muscle Forces and Strength during Downhill Walking Following Total Knee Arthroplasty. Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Research Section), Feb. 2020 [Poster Presentation].
- 10. Aljehani M, Bade M, Stevens-Lapsley JE, **Christensen JC**, Zeni J. Knee Adduction Moment Is Not Associated with Contralateral Osteoarthritis Progression after Knee Arthroplasty. Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Research Section), Feb. 2020 [Poster Presentation].
- 11. Thomsen P, Christensen JC, Gritton C, Christiansen CL. Assessing Quadriceps Strength and Movement Quality during a Step-Down Task after Total Knee Arthroplasty. Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Research Section), Feb. 2020 [Poster Presentation].
- 12. Cheuy V, Thomsen P, Lewis S, Edwards E, **Christensen JC**, Bade M, Zeni JA, Christiansen CL. Preoperative Strength and Movement Asymmetries in Older Adults with Unilateral Osteoarthritis. Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Research Section), Feb. 2020 [Poster Presentation].
- 13. Frazier B, **Christensen JC**, Zeni JA, Stevens-Lapsley JE, Knarr, BA. Simulation of Joint Contact Forces in Total Knee Arthroplasty Patients Using Opensim. Proceedings of the 11th Annual Research and Creative Activity Fair. Mar. 2019. [Poster Presentation].
- 14. Pelt CE, **Christensen JC**, Anderson MB, Hung M, Peters CL, Gililland JM. Recovery of Patient Reported Physical Function and Pain Following Primary Total Knee Arthroplasty. Proceedings of the American Academy of Orthopaedic Surgeons Annual Meeting, Mar. 2018 [Poster Presentation].
- 15. **Christensen JC**, Kittelson AJ, Loyd BJ, Forster J, Struessel T, DelGiorno J, Thigpen C, Stevens-Lapsley JE. Characteristics of a Young, Low Functioning Phenotype in Total Knee Arthroplasty Rehabilitation. Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Research Section), Feb. 2018 [Platform Presentation].
- 16. **Christensen JC**, Marland J, Miller CJ, Horton B, West HS. Preoperative Activity Level and Body Mass Index Influences One-Year Disability Scores Following Hip Arthroscopy. Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Orthopaedics Section), Feb. 2018 [Poster Presentation].

- 17. Marland J, **Christensen JC**, Miller CJ, Horton B, West HS. Inferior Two-Year Outcomes Following Hip Arthroscopy for Femoroacetabular Impingement in a Female Subgroup Based on Age, Bony Morphology and Location of Pain. Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Orthopaedics Section), Feb. 2018 [Platform Presentation].
- 18. Miller CJ, Marland J, **Christensen JC**, McDermott W. Transverse Hip Kinematics During a Rotational Specific Task: Comparison Between Femoroacetabular Impingement Patients and Healthy-Matched Peers. . Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Sports Section), Feb. 2018 [Platform Presentation].
- 19. **Christensen JC**, Kittelson AJ, Lloyd BJ, Forster JE, Stevens-Lapsley JE. Identifying Vulnerable Patient Populations Based on Age and Physical Function on Clinical Outcomes Following Total Knee Arthroplasty. Proceedings for the American College of Rheumatology Annual Meeting, Nov. 2017 [Platform Presentation].
- 20. Peterson DS, **Christensen JC**, Hunt G, Foreman KB, Dibble LE. First-Trial Protective Step Performance Before and After Short-Term Perturbation Practice in People With Parkinson's Disease. Proceedings of the American Society of Neurorehabilitation, Nov. 2017 [Poster Presentation].
- 21. Marland J, **Christensen JC**, Miller CM, Horton B, West, HS. Clinical Outcomes Pertaining to Age, Hip Morphology and Location of Symptoms in Females Following Hip Arthroscopy. Proceedings of the International Society for Hip Arthroscopy, Oct. 2017 [Poster Presentation].
- 22. Miller CM, Marland J, **Christensen JC**, McDermott, B. Hip Mechanics Comparison Between Femoroacetabular Impingement Patients and Healthy-Matched Peers. Proceedings of the International Society for Hip Arthroscopy, Oct. 2017 [Poster Presentation].
- 23. **Christensen JC**, LaStayo PC, Marcus RL, Mizner RL, Pelt CE, Foreman KB. Biofeedback Results in Gait Characteristics Similar to Controls with Decline Walking after Total Knee Arthroplasty. Proceedings of the Gait and Clinical Movement Analysis Society, May 2017 [Poster Presentation].
- 24. **Christensen JC**, LaStayo PC, Marcus RL, Mizner RL, Foreman KB, Gililland GM, Peters CL, Pelt CE. Biofeedback Improves Joint Mechanic Symmetry During High-Demand Mobility After Total Knee Arthroplasty. Proceedings of the American Academy of Orthopaedic Surgeons Annual Meeting, Mar. 2017 [Poster Presentation].
- 25. **Christensen JC**, LaStayo PC, Marcus RL, Mizner RL, Pelt CE, Foreman KB. Biofeedback of Knee Kinetics Corrects Pronounced Joint Mechanic Asymmetry During Both Low- and High-Demand Walking Tasks Following Total Knee Arthroplasty. Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Research Section), Feb. 2017 [Platform Presentation].
- 26. Foreman KB, **Christensen JC**, Marcus RL, Mizner RL, Pelt CE, LaStayo PC. Decline Walking Reveals Pronounced Deficits in Physical Performance of Patients Compared to Over-Ground Walking After Total Knee Arthroplasty Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Orthopaedics Section), Feb. 2017 [Platform Presentation].
- 27. **Christensen JC**, LaStayo PC, Marcus RL, Mizner RL, Pelt CE, Foreman KB. Novel Biofeedback Technique Normalizes Gait Abnormalities During Decline Walking After Total Knee Arthroplasty. Proceedings of the American Physical Therapy Association, Combined Sections Meeting (Research Section), Feb. 2017 [Poster Presentation] & Utah Physical Therapy Association Fall Conference, Oct. 2016 [Platform Presentation].

- 28. **Christensen JC,** Foreman, KB, Marcus RL, Pelt CE, LaStayo PC. The Positive Benefits of Negative Work During Eccentrically-Biased Movement Patterns Following Total Knee Arthroplasty. Proceedings of the American Physical Therapy Association, Combined Section Meeting (Geriatrics Section), Feb. 2017 [Poster Presentation].
- 29. Miller CJ, **Christensen JC**. Do Demographics, Utilization and Cost of Physical Therapy Interventions Influence Revision Rates and Clinical Outcomes in Patients Following Anterior Cruciate Ligament Reconstruction with Concurrent Meniscus Repair? Proceedings of the American Physical Therapy Association, Combined Section Meeting (Sport Section), Feb. 2017 [Platform Presentation].
- 30. **Christensen JC**, LaStayo PC, Marcus RL, Mizner RL, Pelt CE, Foreman KB. Real-Time Biofeedback Using Knee Kinetics on Lower Extremity Mechanics During Decline Treadmill Walking Following Total Knee Arthroplasty: A Case Series. Proceedings of the Gait and Clinical Movement Analysis Society, May 2016 [Platform Presentation].
- 31. **Christensen JC**, LaStayo PC, Marcus RL, Mizner RL, Pelt CE, Foreman KB. Preliminary Efficacy of a Superior Method of Biofeedback to Improve Limb Loading Symmetry During Decline Walking Following Total Knee Arthroplasty. Proceedings of the Gait and Clinical Movement Analysis Society, May 2016 [Poster Presentation].
- 32. Miller CJ, **Christensen JC**. Do Age and Gender Influence Pass Rates in Functional Tests in a Lower Physical Therapy Utilization Model Following Anterior Cruciate Ligament Reconstruction?] Proceedings of the American Physical Therapy Association, Combined Section Meeting (Sport Section), Feb. 2016 [Poster Presentation]. J Orthop Sports Phys Ther. 2016 Jan; 46(1):A1-A208.
- 33. Pelt CE, **Christensen JC**, Brothers J, Gililland JM, Peters CL. Cruciate-Retaining vs. Bi-Cruciate-Retaining Implants In Primary Total Knee Arthroplasty: Early Clinical Results. Proceedings of the Knee Society Conference, Sept. 2015 [Platform Presentation] & International Congress for Joint Reconstruction, Jan. 2016 [Platform Presentation].
- 34. **Christensen JC**, Miller CJ, Burns RD. Do Demographics, Utilization and Cost of Physical Therapy Interventions Influence Clinical Outcomes in Individuals Following Anterior Cruciate Ligament Reconstruction? Proceedings of the American Physical Therapy Association, Combined Section Meeting (Sport section), Feb. 2015 [Platform Presentation] & Annual Health Services Research Conference, Mar. 2015 [Poster Presentation]. J Orthop Sports Phys Ther. 2015 Jan; 45(1):A1-A18.
- 35. Miller CJ, **Christensen JC**, Burns RD. The Influence of Demographic and Physical Therapy Utilization on Incidence Rates for Revision Surgery Following Anterior Cruciate Ligament Reconstruction. Proceedings of the American Physical Therapy Association, Combined Section Meeting (Orthopaedic Section), Feb. 2015 [Platform Presentation] & Annual Health Services Research Conference, Mar. 2015 [Poster Presentation]. J Orthop Sports Phys Ther. 2015 Jan; 45(1):A1-A18.
- 36. **Christensen JC**, Brennan GP, West HS. Utilizing Criteria-Based Treatment Approach for Indicating Arthroscopic Surgery for Knee Osteoarthritis. Proceedings of the Boston University Center for Enhancing Activity and Participation among Persons with Arthritis (ENACT), Apr. 2014 [Poster Presentation].
- 37. **Christensen JC**, Goldfine LR, Barker T, Collingridge, D. What Can The First Two Months Tell Us About Short- and Long-Term Outcomes After Anterior Cruciate Ligament Reconstruction? Proceedings of the American Physical Therapy Association, Combined Section Meeting (Sport Section), Feb. 2014 [Platform Presentation]. J Orthop Sports Phys Ther. 2014 Jan; 44(1):A1-A19.
- 38. **Christensen JC**, Goldfine LR, West HS. The Effects of Early Aggressive Rehabilitation on Outcomes after Anterior Cruciate Ligament Reconstruction Using Autologous Hamstring Tendon: A Randomized Clinical Trial. Proceedings

- of the American Physical Therapy Association, Combined Section Meeting (Sport Section), Jan. 2013 [Poster Presentation]. J Orthop Sports Phys Ther. 2013 Jan; 43(1):A1-A15.
- 39. **Christensen JC**, Goldfine LR, West HS. Associations Between Early Range of Motion and Force Output on the International Knee Documentation Committee Subjective Form After Anterior Cruciate Ligament Reconstruction. Proceedings of the American Physical Therapy Association, Combined Section Meeting (Sport Section), Jan. 2013 [Poster Presentation].
- 40. **Christensen JC**, Goldfine LR, West HS. The Effects of Postoperative Bracing After Anterior Cruciate Ligament Reconstruction. Proceedings of the Utah Physical Therapy Association Fall Conference, Oct. 2012 [Poster Presentation]. J Orthop Sports Phys Ther. 2013 Jan; 43(1):A1-A15.
- 41. **Christensen JC**, Brennan GP, West HS. Clinical Surgical Decision Making In Preparation for Knee Arthroscopy. Proceedings of the American Physical Therapy Association, Combined Section Meeting (Orthopaedic Section), Feb. 2011 [Platform Presentation].
- 42. **Christensen JC**, **Dibble LE**, Ballard DJ, Foreman KB. Evaluating The Validity of Using a Battery of Clinical Balance Tests to Predict Fall Risk In Persons with Parkinson's Disease. Proceedings of the Utah Physical Therapy Association Fall Conference, Oct. 2007 [Platform Presentation].

L. GRANTSMANSHIP ACTIVITY

Pending Support

- 1. **Christensen JC** (PI): Targeted Strength Training in Knee Osteoarthritis Phenotypes. Rheumatology Research Foundation, Investigator Award.
- 2. Trinity J (PI); **Christensen JC (Co-I)**. Evaluating the Long-term Health Consequences of COVID-19 and Rehabilitation Therapies to Speed Convalescence. VA Merit Award RR&D (01RX003810-01A1).
- 3. Hanrahan M (PI); **Christensen JC (Co-I)**. The Flowstate Knee Brace: Custom Engineered Evidence-Based Wearable Smart Tech for Citizens with Arthritis. NIH NIA SBIR Phase I STTR Sole Research Institute (ZRM7TBGWZRY9).

Ongoing Support

- Christensen JC (PI). Blood Flow Restriction Strength Training to Improve Physical Inactivity in Veterans with Knee Osteoarthritis: Pilot Randomized Clinical Trial. The Western Institute of Veterans Research Grant. 3/1/2022-2/28/2023. (\$30,000).
- 2. **Christensen JC** (PI). Targeted Strength Training to Improve Physical Inactivity in Adults with Knee Osteoarthritis: Pilot Randomized Clinical Trial. College of Health Competitive Seed Grant Program, University of Utah. 4/1/2022-3/31/2023. (\$27,500).
- 3. Trinity J (PI); **Christensen JC** (Co-I). Increasing Physical Activity Post Total Knee Arthroplasty with Seated Elliptical Exercise: Impact on Rehabilitation Effectiveness and Vascular and Skeletal Muscle Function. Cubii Ltd. Industry Sponsored. 8/1/2022-7/31/2023. (\$28,000).
- 4. Beddhu S (PI); **Christensen JC** (Co-I). Sit Less, Interact and Move More (SLIMM) 2 Study. NIH NIDDK R01 AG074592-01. 05/15/2021-04/30/2026. (\$3,425,635).
- 5. Binder EF (PI); **Christensen JC** (Consultant). Combining Testosterone Therapy and Exercise to Improve Function Post Hip Fracture. NIH NIA R01 AG051647. 09/15/2017—05/31/2024. (\$4,129,857).

Completed Support

- 1. Sinclair S/Bachus K (PI). **Christensen JC (Co-I)**. HUMAC NORM Muscle Strength and Activation Recovery on Functional Recovery in the Veteran Population. VA Salt Lake City Internal Grant. 5/1/2022. (\$48,900).
- 2. **Christensen JC** (PI). Electromyography Influence on Physical Recovery in the Veteran Population. VA Salt Lake City Internal Grant. 4/1/2022. (\$16,298).
- 3. **Christensen JC** (PI). Smart Technology Application for Measuring Spatiotemporal Characteristics in Healthy Adults: Validation and Reliability Study. Celloscope Ltd. Industry Sponsored. 06/23/2021—05/31/2022. (\$6,729).
- 4. **Christensen JC** (PI). Movement Retraining Influence on Joint Contact Forces Following Joint Arthroplasty. VA Fellowship in Advanced Geriatrics, U.S. Department of Veterans Affairs. 08/01/2018—12/31/2019. (\$100,276).
- 5. **Christensen JC** (PI). Movement Compensation in Patients Following Total Hip Arthroplasty: Can Wearable Technology Detect Deficits in Real-World Daily Activities and Abnormal Joint Contact Loading? Rheumatology Research Foundation. 01/01/2019—12/31/2019 (\$12,000).
- Christensen JC (PI). Identifying Vulnerable Patient Populations Based on Age and Physical Function on Clinical Outcomes Following Total Knee Arthroplasty. Rheumatology Research Foundation. 12/15/2016—12/14/2017 (\$4,000).
- 7. Pelt CE (PI); **Christensen JC** (Co-I). Motor Retraining for High-Demand Mobility Tasks in Older Adults Following Total Knee Arthroplasty: Can We Improve Postoperative Physical Function? 01/05/2015—01/04/2016. LS Peery Discovery Foundation (\$60,000).
- 8. **Christensen JC** (PI). Determining Superior Method of Biofeedback to Improve Limb Loading Symmetry During Low- and High-Demand Mobility Tasks Following Total Knee Arthroplasty. 05/24/2015—05/23/2016. LS Peery Discovery Foundation (\$4,000).
- 9. LaStayo PC (PI); **Christensen JC** (Co-I). The Positive Benefits of Negative Movement Patterns Following Total Knee Arthroplasty. 08/24/2014—08/23/2015. University of Utah Educational Resource Development Council (\$5,500).

Unfunded Support

- 1. **Christensen JC** (PI): Targeted Strength Training in Knee Osteoarthritis Phenotypes. 12/06/2021. Rheumatology Research Foundation, Investigator Award.
- 2. **Christensen JC** (PI). Telerehabilitation Movement Pattern Training after Total Knee Arthroplasty: A Pilot Study. 12/01/2020. University of Utah, College of Health Seed Grant.
- 3. **Christensen JC** (PI). Targeted Strength Training to Maximize Outcomes in Patients with Knee Osteoarthritis. 12/04/2020. Rheumatology Research Foundation, Investigator Award.
- 4. **Christensen JC** (PI). Adapting the EnhanceFitness® Program to Help Adults at High Risk for Lower Limb Loss Adopt a Healthy Lifestyle and Decrease Disability. 04/30/2020. University of Utah, KL2 Mentored Career Development Scholar Program.
- 5. **Christensen JC** (PI). Blood Flow Strength Training in Phenotype Subgrouping of Patients with Knee Osteoarthritis. 12/01/2019. Rheumatology Research Foundation, Scientist Development Award.
- Christensen JC (PI). Lower Limb Joint Biomechanical Asymmetry and Alterability Following Total Knee
 Arthroplasty. 01/01/2016. American Physical Therapy Association, Foundation of Physical Therapy. Promotion of
 Doctoral Studies (PODS II) Scholarship.
- 7. **Christensen JC** (PI). Real-Time Biofeedback to Improve Movement Asymmetry Following Total Knee Arthroplasty. 01/01/2014. American Physical Therapy Association, Foundation of Physical Therapy. Promotion of Doctoral Studies (PODS I) Scholarship.

Grant Experience

1. Binder EF (PI). Combining Testosterone Therapy and Exercise to Improve Function Post Hip Fracture. NIH R01 AG051647. 09/15/2017—05/31/2024 (\$4,129,857). **Postdoctoral Researcher (execution)**.

- 2. Stevens-Lapsley JE (PI). Movement Pattern Biofeedback Training after Total Knee Arthroplasty. NIH R01-AG056585-02. 09/15/2017—04/30/2022 (\$2,117,150). **Postdoctoral Researcher (execution, writing)**.
- 3. Stevens-Lapsley JE (PI). Advancing Rehabilitation after Total Hip Arthroplasty. VA RR&D IO1 RX002251. 10/01/2016—09/30/2021 (\$1,099,636). **Postdoctoral Researcher (execution)**.
- Lester ME (PI). Community Based Measurement of Instability and Exposure in Persons with Postural Instability.
 US Army Advanced Medical Technology Initiative. 01/01/2016—12/31/2018 (\$225,000). Predoctoral Researcher (execution).

M. MENTORED GRANTS & HONORS

- 1. Ingersoll B; **Christensen JC** (Mentor). University of Utah Undergraduate Research Opportunities Program (\$1200). Utilization of Physical Therapy Visits on Lower Limb Joint Kinetics After Total Knee Arthroplasty: A Retrospective Study. May. 2022-Aug. 2022.
- 2. Browning B; **Christensen JC** (Mentor). University of Utah Undergraduate Research Opportunities Program (\$1200). Patient-Reported Outcomes Measurement Information System Physical Function and Knee Injury and Osteoarthritis Outcome Score Relationship on Performance Measures in People Undergoing Total Knee Arthroplasty. May 2022-Aug. 2022.
- 3. Aumeier J; Christensen JC (Mentor). University of Utah Beehive Honor Society Recipient. Apr. 2022.
- 4. Oro E; **Christensen JC** (Mentor). University of Utah Undergraduate Research Opportunities Program (\$1200). Studying Sedentary Behavior in Patients with Chronic Kidney Disease in The SLIMM 2 Study as a Resistance Training Guide. Jan. 2022-Apr. 2022.
- 5. Carlson H; **Christensen JC** (Mentor). University of Utah Undergraduate Research Opportunities Program (\$1200). Hip Mechanics as a Reflection of Physical Function in Aging Adults with Early to Late-Stage of Hip Osteoarthritis. Jan. 2022-Apr. 2022.
- 6. Ingersoll B; **Christensen JC** (Mentor). University of Utah Undergraduate Research Opportunities Program (\$1200). Biomechanics and Strength Outcome Comparison Between Supervised and Unsupervised Physical Therapy After Total Knee Arthroplasty: A Retrospective Study. Jan. 2022-Apr. 2022.
- 7. Stanley E; **Christensen JC** (Mentor). University of Utah Undergraduate Research Opportunities Program (\$1200). Reliability and Validation of Mobile Software Application in Healthy Adults. Aug. 2021-Dec. 2021.
- 8. Quammen D. **Christensen JC** (Mentor). American College of Rheumatology, Research Foundation Medical and Graduate Student Preceptorship (\$4000). Using Wearable Technology to Detect Movement Compensation and Physical Decline in People with Hip Osteoarthritis. Sept. 2020-Dec. 2020.

N. MENTORSHIP

Yr Grad.	Role	Student(s)	Institution	Dept	Area of Research
2024	Mentor	J. Vlisides-Henry	Univ Utah	AT	Research internship
2024	Mentor	B. Browning	Univ Utah	KIN	UROP
2024	Mentor	H. Carlson	Univ Utah	KIN	UROP
2024	Mentor	B. Ingersoll	Univ Utah	KIN	UROP
2024	Mentor	E. Oro	Univ Utah	KIN	UROP
2023	Mentor	S. Brumwell	Utah State	BIO	UROP
2023	Mentor	Z. Wankier	Univ Utah	BME	UROP
2023	Mentor	C. Wilbur	Univ Utah	KIN	UROP
2023	Mentor	G. Fimmano	Univ Utah	KIN	UROP
2025	Mentor	E. Stanley	Univ Utah	CS	UROP
2022	Mentor	E. Stephenson	Univ Utah	ME	UROP
2022	Mentor	W. Graham	Univ Utah	ME	UROP
2020	Supervisor	J. Rogers	Univ Colo	PT	Research internship
2020	Supervisor	M. Lovely	Univ Colo	PT	Research internship

					Christensen – April 2022
2020	Supervisor	A. St. Martin	Univ Colo	PT	STEP clinical trial
2020	Supervisor	A. Freitas	Univ Colo	PT	TKA/THA motion analysis
2020	Supervisor	S. Lewis	Univ Colo	PT	TKA/THA motion analysis
2020	Supervisor	J. lannitto	Univ Colo	PT	TKA/THA motion analysis
2019	Supervisor	K. Wojnar	Univ Colo	PT	THA/IMU motion analysis
2019	Co-Advisor	P. Thomsen	Univ Colo	MHA	MS degree
2019	Supervisor	M. Darnell	Univ Colo	PT	TKA/THA motion analysis
2019	Supervisor	C. Alexander	Univ Colo	PT	TKA/THA motion analysis
2018	Supervisor	M. Jaeckel	Univ Colo	PT	TKA/THA motion analysis
2018	Supervisor	C. Buenting	Univ Colo	MHA	TKA motion analysis
2019	Supervisor	G. Hunt	Univ Utah	BME	TKA motion analysis
2018	Supervisor	C. Miller	Univ Utah	PT	ACL clinical outcomes
2017	Supervisor	B. Stewart	Univ Utah	PT	TKA motion analysis
2011	CI	C. Houck	NAU	PT	Clinical rotation
2009	CI	M. Goodfrey	Creighton	PT	Clinical rotation

^{*}KIN, kinesiology; CI, clinical instructor; PT, physical therapy dept.; MHA, modern human anatomy dept.; BME, biomedical engineering dept; CS, computer science; ME, mechanical engineering; UROP, undergraduate research opportunities program.

O. TEACHING APPOINTMENTS

<u>Dates</u>	Position, Course & Institution
05/2020—Present	Testing Proctor, Tests and Measures (PH TH 7070), University of Utah
08/2018—Present	Visiting Lecturer, Motor Control (PH TH 7200), University of Utah
08/2014-08/2017	Visiting Lecturer, Pathokinesiology (PH TH 6080), University of Utah
08/2014-08/2017	Visiting Lecturer, Research & Evidence Practice (PH TH 6090), University of Utah
01/2011-08/2017	Visiting Lecturer, Musculoskeletal Management (PH TH 7240), University of Utah
05/2013—05/2015	Lab Instructor, Gross Anatomy (PH TH 6040), University of Utah