Nathaniel A Bates

List of Publications by Year
in descending order

65 papers	1,329 citations	331642 21 h-index	377849 34 g-index
65 all docs	65 docs citations	65 times ranked	974 citing authors

#	Article	IF	Citations
1	Arthrogenic muscle inhibition manifests in thigh musculature motor unit characteristics after anterior cruciate ligament injury. European Journal of Sport Science, 2023, 23, 840-850.	2.7	9
2	Are 6-Month Functional and Isokinetic Testing Measures Risk Factors for Second Anterior Cruciate Ligament Injuries at Long-T Follow-Up?. Journal of Knee Surgery, 2023, 36, 1060-1068.	1.6	3
3	Filtration Selection and Data Consilience: Distinguishing Signal from Artefact with Mechanical Impact Simulator Data. Annals of Biomedical Engineering, 2021, 49, 334-344.	2.5	2
4	Anterior Cruciate Ligament Loading Increases With Pivot-Shift Mechanism During Asymmetrical Drop Vertical Jump in Female Athletes. Orthopaedic Journal of Sports Medicine, 2021, 9, 232596712198909.	1.7	8
5	High school female basketball athletes exhibit decreased kneeâ€specific choice visualâ€motor reaction time. Scandinavian Journal of Medicine and Science in Sports, 2021, 31, 1699-1707.	2.9	7
6	Mechanics of cadaveric anterior cruciate ligament reconstructions during simulated jump landing tasks: Lessons learned from a pilot investigation. Clinical Biomechanics, 2021, 86, 105372.	1.2	5
7	Hamstrings Contraction Regulates the Magnitude and Timing of the Peak ACL Loading During the Drop Vertical Jump in Female Athletes. Orthopaedic Journal of Sports Medicine, 2021, 9, 232596712110344.	1.7	6
8	Effects of Sex and Age on Quadriceps and Hamstring Strength and Flexibility in High School Basketball Athletes. International Journal of Sports Physical Therapy, 2021, 16, 1302-1312.	1.3	1
9	Diminished neuromuscular system adaptability following anterior cruciate ligament injury: Examination of knee muscle force variability and complexity. Clinical Biomechanics, 2021, 90, 105513.	1.2	9
10	Prospective Frontal Plane Angles Used to Predict ACL Strain and Identify Those at High Risk for Sports-Related ACL Injury. Orthopaedic Journal of Sports Medicine, 2020, 8, 232596712095764.	1.7	22
11	Sex differences in passive and active stiffness of the knee flexor muscles during dynamic perturbation test: principal component analysis. Somatosensory & Motor Research, 2020, 37, 293-299.	0.9	0
12	Linear Discriminant Analysis Successfully Predicts Knee Injury Outcome From Biomechanical Variables. American Journal of Sports Medicine, 2020, 48, 2447-2455.	4.2	7
13	High school male basketball athletes exhibit greater hamstring muscle stiffness than females as assessed with shear wave elastography. Skeletal Radiology, 2020, 49, 1231-1237.	2.0	15
14	In vivo attachment site to attachment site length and strain of the ACL and its bundles during the full gait cycle measure by MRI and high-speed biplanar radiography. (Published Jan. 2, 2020). Journal of Biomechanics, 2020, 109, 109922.	2.1	0
15	Analysis of Internal Knee Forces Allows for the Prediction of Rupture Events in a Clinically Relevant Model of Anterior Cruciate Ligament Injuries. Orthopaedic Journal of Sports Medicine, 2020, 8, 232596711989375.	1.7	17
16	Timing of Strain Response of the ACL and MCL Relative to Impulse Delivery During Simulated Landings Leading up to ACL Failure. Journal of Applied Biomechanics, 2020, 36, 148-155.	0.8	21
17	Thigh musculature stiffness during active muscle contraction after anterior cruciate ligament injury. BMC Musculoskeletal Disorders, 2020, 21, 320.	1.9	6
18	ANALYSIS OF TIMING OF SECONDARY ACL INJURY IN PROFESSIONAL ATHLETES DOES NOT SUPPORT GAME TIMING OR SEASON TIMING AS A CONTRIBUTOR TO INJURY RISK. International Journal of Sports Physical Therapy, 2020, 15, 254-262.	1.3	3

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19	INVESTIGATION OF PRIMARY AND SECOND ANTERIOR CRUCIATE LIGAMENT TEARS USING A GEOGRAPHIC DATABASE. International Journal of Sports Physical Therapy, 2020, 15, 593-602.	1.3	1
20	Influence of relative injury risk profiles on anterior cruciate ligament and medial collateral ligament strain during simulated landing leading to a noncontact injury event. Clinical Biomechanics, 2019, 69, 44-51.	1.2	10
21	Frontal Plane Loading Characteristics of Medial Collateral Ligament Strain Concurrent With Anterior Cruciate Ligament Failure. American Journal of Sports Medicine, 2019, 47, 2143-2150.	4.2	26
22	Multiplanar Loading of the Knee and Its Influence on Anterior Cruciate Ligament and Medial Collateral Ligament Strain During Simulated Landings and Noncontact Tears. American Journal of Sports Medicine, 2019, 47, 1844-1853.	4.2	59
23	Paradoxical relationship in sensorimotor system: Knee joint position sense absolute error and joint stiffness measures. Clinical Biomechanics, 2019, 67, 34-37.	1.2	5
24	Knee Abduction and Internal Rotation Moments Increase ACL Force During Landing Through the Posterior Slope of the Tibia. Journal of Orthopaedic Research, 2019, 37, 1730-1742.	2.3	47
25	Variation in ACL and MCL Strain Before Initial Contact Is Dependent on Injury Risk Level During Simulated Landings. Orthopaedic Journal of Sports Medicine, 2019, 7, 232596711988490.	1.7	9
26	External loads associated with anterior cruciate ligament injuries increase the correlation between tibial slope and ligament strain during in vitro simulations of in vivo landings. Clinical Biomechanics, 2019, 61, 84-94.	1.2	21
27	Effects of localized vibration on knee joint position sense in individuals with anterior cruciate ligament reconstruction. Clinical Biomechanics, 2018, 55, 40-44.	1.2	13
28	The influence of internal and external tibial rotation offsets on knee joint and ligament biomechanics during simulated athletic tasks. Clinical Biomechanics, 2018, 52, 109-116.	1.2	9
29	Sex-Based Differences of Medial Collateral Ligament and Anterior Cruciate Ligament Strains With Cadaveric Impact Simulations. Orthopaedic Journal of Sports Medicine, 2018, 6, 232596711876521.	1.7	21
30	Sex-Based Differences in Knee Kinetics With Anterior Cruciate Ligament Strain on Cadaveric Impact Simulations. Orthopaedic Journal of Sports Medicine, 2018, 6, 232596711876103.	1.7	27
31	Effects of Population Variability on Knee Loading During Simulated Human Gait. Annals of Biomedical Engineering, 2018, 46, 284-297.	2.5	3
32	Relative dearth of â€˜sex differencesâ€™ research in sports medicine. Journal of Science and Medicine in Sport, 2018, 21, 440-441.	1.3	15
33	Modeling of ACL Injury Mechanism. Medicine and Science in Sports and Exercise, 2018, 50, 106.	0.4	0
34	Effects of Localized Vibration on Knee Joint Position Sense in Individuals with ACL-Reconstruction. Medicine and Science in Sports and Exercise, 2018, 50, 254.	0.4	0
35	Validation of Noncontact Anterior Cruciate Ligament Tears Produced by a Mechanical Impact Simulator Against the Clinical Presentation of Injury. American Journal of Sports Medicine, 2018, 46, 2113-2121.	4.2	37
36	Robotic simulation of identical athletic-task kinematics on cadaveric limbs exhibits a lack of differences in knee mechanics between contralateral pairs. Journal of Biomechanics, 2017, 53, 36-44.	2.1	8

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37	Effect of sagittal plane mechanics on ACL strain during jump landing. Journal of Orthopaedic Research, 2017, 35, 1171-1172.	2.3	6
38	Preventive Biomechanics: A Paradigm Shift With a Translational Approach to Injury Prevention. American Journal of Sports Medicine, 2017, 45, 2654-2664.	4.2	67
39	Incidence of Second Anterior Cruciate Ligament Tears (1990-2000) and Associated Factors in a Specific Geographic Locale. American Journal of Sports Medicine, 2017, 45, 1567-1573.	4.2	43
40	Knee Abduction Affects Greater Magnitude of Change in ACL and MCL Strains Than Matched Internal Tibial Rotation In Vitro. Clinical Orthopaedics and Related Research, 2017, 475, 2385-2396.	1.5	45
41	Novel mechanical impact simulator designed to generate clinically relevant anterior cruciate ligament ruptures. Clinical Biomechanics, 2017, 44, 36-44.	1.2	37
42	Incidence of Second Anterior Cruciate Ligament Tears and Identification of Associated Risk Factors From 2001 to 2010 Using a Geographic Database. Orthopaedic Journal of Sports Medicine, 2017, 5, 232596711772419.	1.7	91
43	How Anterior Cruciate Ligament Injury was averted during Knee Collapse in a NBA Point Guard. , 2017, 1, 008-12.		1
44	Posterior Tibial Slope Angle Correlates With Peak Sagittal and Frontal Plane Knee Joint Loading During Robotic Simulations of Athletic Tasks. American Journal of Sports Medicine, 2016, 44, 1762-1770.	4.2	20
45	Motion Analysis and the Anterior Cruciate Ligament: Classification of Injury Risk. Journal of Knee Surgery, 2016, 29, 117-125.	1.6	25
46	Characteristics of inpatient anterior cruciate ligament reconstructions and concomitant injuries. Knee Surgery, Sports Traumatology, Arthroscopy, 2016, 24, 2778-2786.	4.2	36
47	Sex-based differences in knee ligament biomechanics during robotically simulated athletic tasks. Journal of Biomechanics, 2016, 49, 1429-1436.	2.1	18
48	Impacts of Robotic Compliance and Bone Bending on Simulated Knee Kinematics. American Journal of Biomedical Engineering, 2016, 6, 12-18.	0.9	1
49	Reliability of 3-Dimensional Measures of Single-Leg Drop Landing Across 3 Institutions: Implications for Multicenter Research for Secondary ACL-Injury Prevention. Journal of Sport Rehabilitation, 2015, 24, 198-209.	1.0	28
50	Reliability of 3-Dimensional Measures of Single-Leg Cross Drop Landing Across 3 Different Institutions. Orthopaedic Journal of Sports Medicine, 2015, 3, 232596711561790.	1.7	9
51	Relative Strain in the Anterior Cruciate Ligament and Medial Collateral Ligament During Simulated Jump Landing and Sidestep Cutting Tasks. American Journal of Sports Medicine, 2015, 43, 2259-2269.	4.2	43
52	A Novel Methodology for the Simulation of Athletic Tasks on Cadaveric Knee Joints with Respect to In Vivo Kinematics. Annals of Biomedical Engineering, 2015, 43, 2456-2466.	2.5	24
53	Prediction of Kinematic and Kinetic Performance in a Drop Vertical Jump with Individual Anthropometric Factors in Adolescent Female Athletes: Implications for Cadaveric Investigations. Annals of Biomedical Engineering, 2015, 43, 929-936.	2.5	4
54	Anterior cruciate ligament biomechanics during robotic and mechanical simulations of physiologic and clinical motion tasks: A systematic review and meta-analysis. Clinical Biomechanics, 2015, 30, 1-13.	1.2	62

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55	Dynamic Balance in Children: Performance Comparison Between Two Testing Devices. Athletic Training & Sports Health Care, 2015, 7, 160-164.	0.4	9
56	Reliability of Three-Dimensional Biomechanics Across Three Different Institutions. Medicine and Science in Sports and Exercise, 2014, 46, 961.	0.4	0
57	Feasibility and reliability of dynamic postural control measures in children in first through fifth grades. International Journal of Sports Physical Therapy, 2014, 9, 140-8.	1.3	35
58	Consistency of clinical biomechanical measures between three different institutions: implications for multi-center biomechanical and epidemiological research. International Journal of Sports Physical Therapy, 2014, 9, 289-301.	1.3	7
59	The validity of 2-dimensional measurement of trunk angle during dynamic tasks. International Journal of Sports Physical Therapy, 2014, 9, 420-7.	1.3	13
60	Reduced hip strength is associated with increased hip motion during running in young adult and adolescent male long-distance runners. International Journal of Sports Physical Therapy, 2014, 9, 456-67.	1.3	19
61	Timing differences in the generation of ground reaction forces between the initial and secondary landing phases of the drop vertical jump. Clinical Biomechanics, 2013, 28, 796-799.	1.2	41
62	Kinetic and kinematic differences between first and second landings of a drop vertical jump task: Implications for injury risk assessments. Clinical Biomechanics, 2013, 28, 459-466.	1.2	74
63	Impact differences in ground reaction force and center of mass between the first and second landing phases of a drop vertical jump and their implications for injury risk assessment. Journal of Biomechanics, 2013, 46, 1237-1241.	2.1	110
64	Correlating Knee Characteristics and Dynamic Load to Customize Gait Simulation In Vitro. , 2013, , .		0
65	Arthrometric curve-shape variables to assess anterior cruciate ligament deficiency. Clinical Biomechanics, 2012, 27, 830-836.	1.2	9