Timothy A Burkhart

List of Publications by Year in Descending Order

51 papers	698 citations	13 h-index	25 g-index
55 ext. papers	805 ext. citations	3 avg, IF	4.19 L-index

#	Paper	IF	Citations
51	Bone Volumes and Trajectory Angles for Acetabular Anchor Placement Can Be Optimized.. *Arthroscopy, Sports Medicine, and Rehabilitation*, **2022**, 4, e447-e452	2	
50	Novel quantification of the regional strain distribution in the anterior cruciate ligament in response to simulated loading using micro-CT imaging. *Journal of Experimental Orthopaedics*, **2021**, 8, 95	2.3	
49	Accuracy and precision of image-based strain measurement using embedded radiopaque markers. *Medical Engineering and Physics*, **2021**, 92, 88-92	2.4	2
48	No Difference in Ligamentous Strain or Knee Kinematics Between Rectangular or Cylindrical Femoral Tunnels During Anatomic ACL Reconstruction With a Bone-Patellar Tendon-Bone Graft. *Orthopaedic Journal of Sports Medicine*, **2021**, 9, 23259671211009523	3.5	1
47	Insertion of Small Diameter Radiopaque Tracking Beads into the Anterior Cruciate Ligament Results in Repeatable Strain Measurement Without Affecting the Material Properties. *Annals of Biomedical Engineering*, **2021**, 49, 98-105	4.7	2
46	Suture Tape Reduces Quadriceps Tendon Repair Gap Formation Compared With High-Strength Suture: A Cadaveric Biomechanical Analysis. *Arthroscopy - Journal of Arthroscopic and Related Surgery*, **2020**, 36, 2260-2267	5.4	2
45	A fluoroscopic analysis of the length changes of the capsulo-osseous layer of the distal iliotibial band. *Knee Surgery, Sports Traumatology, Arthroscopy*, **2020**, 28, 715-724	5.5	
44	Females Are Not Proportionally Smaller Males: Relationships Between Radius Anthropometrics and Their Sex Differences. *Hand*, **2020**, 15, 850-857	1.4	1
43	A synthetic bone insert may protect the lateral cortex and fixation plate following a high tibial osteotomy by reducing the tensile strains. *Knee Surgery, Sports Traumatology, Arthroscopy*, **2020**, 28, 1814-1820	5.5	0
42	Complete Capsular Repair Restores Native Kinematics After Interportal and T-Capsulotomy. *American Journal of Sports Medicine*, **2019**, 47, 1451-1458	6.8	29
41	Development and validation of a finite element model to simulate the opening of a medial opening wedge high tibial osteotomy. *Computer Methods in Biomechanics and Biomedical Engineering*, **2019**, 22, 442-449	2.1	3
40	Image-Based Comparison Between the Bilateral Symmetry of the Distal Radii Through Established Measures. *Journal of Hand Surgery*, **2019**, 44, 966-972	2.6	8
39	Comparison of trans-cortical and cancellous screws to press fit for acetabular shell fixation in total hip arthroplasty: A cadaveric study. *Clinical Biomechanics*, **2019**, 69, 34-38	2.2	3
38	Lateral Compartment Contact Pressures Do Not Increase After Lateral Extra-articular Tenodesis and Subsequent Subtotal Meniscectomy. *Orthopaedic Journal of Sports Medicine*, **2019**, 7, 2325967119854657	3.5	9
37	Development and Assessment of a Micro-CT Compatible Five Degree-of-Freedom Knee Joint Motion Simulator. *Journal of Biomechanical Engineering*, **2019**,	2.1	6
36	The biomechanical and morphological characteristics of the ligamentum mucosum and its potential role in anterior knee pain. *Knee*, **2018**, 25, 1134-1141	2.6	4
35	A pilot hole does not reduce the strains or risk of fracture to the lateral cortex during and following a medial opening wedge high tibial osteotomy in cadaveric specimens. *Bone and Joint Research*, **2018**, 7, 166-172	4.2	7

34	There Are No Kinematic Differences Between Inframeniscal and Suprameniscal Anterolateral Ligament Injury in the Anterior Cruciate Ligament-Deficient Knee. *American Journal of Sports Medicine*, **2018**, 46, 3391-3399	6.8	2
33	The infra-meniscal fibers of the anterolateral ligament are stronger and stiffer than the supra-meniscal fibers despite similar histological characteristics. *Knee Surgery, Sports Traumatology, Arthroscopy*, **2017**, 25, 1078-1085	5.5	13
32	The effect of asymmetrical body orientation during simulated forward falls on the distal upper extremity impact response of healthy people. *Journal of Electromyography and Kinesiology*, **2017**, 33, 48-56	2.5	3
31	Reliability of Head, Neck, and Trunk Anthropometric Measurements Used for Predicting Segment Tissue Masses in Living Humans. *Journal of Applied Biomechanics*, **2017**, 33, 373-378	1.2	
30	Rotational Laxity Control by the Anterolateral Ligament and the Lateral Meniscus Is Dependent on Knee Flexion Angle: A Cadaveric Biomechanical Study. *Clinical Orthopaedics and Related Research*, **2017**, 475, 2401-2408	2.2	32
29	Standard versus physiologic bone preparation in total knee arthroplasty and the effect on joint space opening. *Clinical Biomechanics*, **2017**, 49, 155-161	2.2	
28	Bikini versus traditional incision direct anterior approach: is there any difference in soft tissue damage?. *HIP International*, **2017**, 27, 397-400	1.7	19
27	Laboratory Evaluation of the gForce Tracker, a Head Impact Kinematic Measuring Device for Use in Football Helmets. *Annals of Biomedical Engineering*, **2016**, 44, 1246-56	4.7	50
26	Effect of Soft Tissue Releases on Joint Space Opening in Total Knee Arthroplasty. *Journal of Arthroplasty*, **2016**, 31, 2912-2916	4.4	4
25	Effect of posture on forces and moments measured in a Hybrid III ATD lower leg. *Traffic Injury Prevention*, **2016**, 17, 381-5	1.8	0
24	Finite-Element Analysis of Bone Stresses on Primary Impact in a Large-Animal Model: The Distal End of the Equine Third Metacarpal. *PLoS ONE*, **2016**, 11, e0159541	3.7	17
23	Biomechanical analysis of simulated clinical testing and reconstruction of the anterolateral ligament of the knee. *American Journal of Sports Medicine*, **2015**, 43, 2189-97	6.8	167
22	Anatomy of the proximal tibiofibular joint and interosseous membrane, and their contributions to joint kinematics in below-knee amputations. *Journal of Anatomy*, **2015**, 226, 143-9	2.9	5
21	Leg soft tissue position and velocity data from skin markers can be obtained with good to acceptable reliability following heel impacts. *Journal of Sports Sciences*, **2015**, 33, 1606-13	3.6	3
20	Biomechanical Analysis of Simulated Clinical Testing and Reconstruction of the ALL: Response. *American Journal of Sports Medicine*, **2015**, 43, NP41-2	6.8	1
19	Effect of hoof orientation and ballast on acceleration and vibration in the hoof and distal forelimb following simulated impacts ex vivo. *Equine Veterinary Journal*, **2015**, 47, 223-9	2.4	6
18	Development and validation of a distal radius finite element model to simulate impact loading indicative of a forward fall. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*, **2014**, 228, 258-71	1.7	15
17	Differences in distal lower extremity tissue masses and mass ratios exist in athletes of sports involving repetitive impacts. *Journal of Sports Sciences*, **2014**, 32, 533-41	3.6	6

16	In vitro biomechanical evaluation of fibular movement in below knee amputations. *Clinical Biomechanics*, **2014**, 29, 551-5	2.2	1
15	The effect of static muscle forces on the fracture strength of the intact distal radius in vitro in response to simulated forward fall impacts. *Journal of Biomechanics*, **2014**, 47, 2672-8	2.9	3
14	Kinematics, kinetics and muscle activation patterns of the upper extremity during simulated forward falls. *Journal of Electromyography and Kinesiology*, **2013**, 23, 688-95	2.5	19
13	Multivariate injury risk criteria and injury probability scores for fractures to the distal radius. *Journal of Biomechanics*, **2013**, 46, 973-8	2.9	3
12	Finite element modeling mesh quality, energy balance and validation methods: a review with recommendations associated with the modeling of bone tissue. *Journal of Biomechanics*, **2013**, 46, 1477-88	2.9	109
11	Tissue mass ratios and the reporting of distal lower extremity injuries in varsity athletes at a Canadian University. *Journal of Sports Sciences*, **2013**, 31, 684-7	3.6	8
10	Leg tissue mass composition affects tibial acceleration response following impact. *Journal of Applied Biomechanics*, **2012**, 28, 29-40	1.2	9
9	Failure characteristics of the isolated distal radius in response to dynamic impact loading. *Journal of Orthopaedic Research*, **2012**, 30, 885-92	3.8	8
8	Reliability of impact forces, hip angles and velocities during simulated forward falls using a novel Propelled Upper Limb fall ARrest Impact System (PULARIS). *Journal of Biomechanical Engineering*, **2012**, 134, 011001	2.1	5
7	Predicting distal radius bone strains and injury in response to impacts using multi-axial accelerometers. *Journal of Biomechanical Engineering*, **2012**, 134, 101007	2.1	2
6	Prediction of Upper and Lower Extremity Tissue Masses Using Surface Anthropometric Measures and DXA **2012**, 679-696		
5	Determining the optimal system-specific cut-off frequencies for filtering in-vitro upper extremity impact force and acceleration data by residual analysis. *Journal of Biomechanics*, **2011**, 44, 2728-31	2.9	13
4	Activation level of extensor carpi ulnaris affects wrist and elbow acceleration responses following simulated forward falls. *Journal of Electromyography and Kinesiology*, **2010**, 20, 1203-10	2.5	10
3	The effectiveness of wrist guards for reducing wrist and elbow accelerations resulting from simulated forward falls. *Journal of Applied Biomechanics*, **2010**, 26, 281-9	1.2	25
2	Manual segmentation of DXA scan images results in reliable upper and lower extremity soft and rigid tissue mass estimates. *Journal of Biomechanics*, **2009**, 42, 1138-42	2.9	42
1	Reliability of upper and lower extremity anthropometric measurements and the effect on tissue mass predictions. *Journal of Biomechanics*, **2008**, 41, 1604-10	2.9	20