Nikolas K Knowles

List of Publications by Year
in descending order

41	577	758635 12	642321 23
papers	citations	h-index	g-index

43	43	43	508
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Quantitative Computed Tomography (QCT) derived Bone Mineral Density (BMD) in finite element studies: a review of the literature. Journal of Experimental Orthopaedics, 2016, 3, 36.	0.8	65
2	Augmented glenoid component designs for type B2 erosions: a computational comparison by volume of bone removal and quality of remaining bone. Journal of Shoulder and Elbow Surgery, 2015, 24, 1218-1226.	1.2	64
3	Characterization of the Walch B3 glenoid in primary osteoarthritis. Journal of Shoulder and Elbow Surgery, 2017, 26, 909-914.	1.2	55
4	Quantification of the position, orientation, and surface area of bone loss in type B2 glenoids. Journal of Shoulder and Elbow Surgery, 2015, 24, 503-510.	1.2	38
5	Regional bone density variations in osteoarthritic glenoids: a comparison of symmetric to asymmetric (type B2) erosion patterns. Journal of Shoulder and Elbow Surgery, 2015, 24, 425-432.	1.2	37
6	Premorbid retroversion is significantly greater in type B2 glenoids. Journal of Shoulder and Elbow Surgery, 2016, 25, 1064-1068.	1.2	33
7	Revision shoulder arthroplasty: a systematic review and comparison of North American vs. European outcomes and complications. Journal of Shoulder and Elbow Surgery, 2020, 29, 1071-1082.	1.2	29
8	A comparison of normal and osteoarthritic humeral head size and morphology. Journal of Shoulder and Elbow Surgery, 2016, 25, 502-509.	1.2	23
9	Performance of QCT-Derived scapula finite element models in predicting local displacements using digital volume correlation. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 97, 339-345.	1.5	22
10	Effectiveness of CT for the detection of glenoid bone graft resorption following reverse shoulder arthroplasty. Orthopaedics and Traumatology: Surgery and Research, 2015, 101, 427-430.	0.9	15
11	The Walch type B humerus: glenoid retroversion is associated with torsional differences in the humerus. Journal of Shoulder and Elbow Surgery, 2019, 28, 1801-1808.	1.2	15
12	Osteoarticular distal clavicle autograft for the management of instability-related glenoid bone loss: an anatomic and cadaveric study. Journal of Shoulder and Elbow Surgery, 2020, 29, 1615-1620.	1.2	14
13	Material Mapping of QCT-Derived Scapular Models: A Comparison with Micro-CT Loaded Specimens Using Digital Volume Correlation. Annals of Biomedical Engineering, 2019, 47, 2188-2198.	1.3	13
14	Type E2 glenoid bone loss orientation and management with augmented implants. Journal of Shoulder and Elbow Surgery, 2020, 29, 1460-1469.	1.2	12
15	A 3D comparison of humeral head retroversion by sex and measurement technique. Shoulder and Elbow, 2018, 10, 192-200.	0.7	11
16	Is the Walch B3 glenoid significantly worse than the B2?. Shoulder and Elbow, 2018, 10, 256-261.	0.7	11
17	The shape match of the olecranon tip for reconstruction of the coronoid process: influence of side and osteotomy angle. Journal of Shoulder and Elbow Surgery, 2019, 28, e117-e124.	1.2	11
18	Development of a validated glenoid trabecular density-modulus relationship. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 90, 140-145.	1.5	11

#	Article	IF	Citations
19	The arthritic glenoid: anatomy and arthroplasty designs. Current Reviews in Musculoskeletal Medicine, 2016, 9, 23-29.	1.3	10
20	The Effect of Material Heterogeneity, Element Type, and Down-Sampling on Trabecular Stiffness in Micro Finite Element Models. Annals of Biomedical Engineering, 2019, 47, 615-623.	1.3	10
21	Fast Generation of Cartesian Meshes from Micro-Computed Tomography Data. Computer-Aided Design and Applications, 2018, 16, 161-171.	0.4	9
22	Density distribution of the type E2 glenoid in cuff tear arthropathy. Journal of Shoulder and Elbow Surgery, 2020, 29, 167-174.	1.2	8
23	The Application of Digital Volume Correlation (DVC) to Evaluate Strain Predictions Generated by Finite Element Models of the Osteoarthritic Humeral Head. Annals of Biomedical Engineering, 2020, 48, 2859-2869.	1.3	8
24	Full-field comparisons between strains predicted by QCT-derived finite element models of the scapula and experimental strains measured by digital volume correlation. Journal of Biomechanics, 2020, 113, 110101.	0.9	7
25	Morphological and Apparentâ€Level Stiffness Variations Between Normal and Osteoarthritic Bone in the Humeral Head. Journal of Orthopaedic Research, 2020, 38, 503-509.	1.2	5
26	Proximal Tibia Bone Stiffness and Strength in HR-pQCT- and QCT-Based Finite Element Models. Annals of Biomedical Engineering, 2021, 49, 2389-2398.	1.3	5
27	Methods for Post Hoc Quantitative Computed Tomography Bone Density Calibration: Phantom-Only and Regression. Journal of Biomechanical Engineering, 2018, 140, .	0.6	4
28	A comparison of densityâ€“modulus relationships used in finite element modeling of the shoulder. Medical Engineering and Physics, 2019, 66, 40-46.	0.8	4
29	Polyethylene glenoid component fixation geometry influences stability in total shoulder arthroplasty. Computer Methods in Biomechanics and Biomedical Engineering, 2019, 22, 271-279.	0.9	4
30	Coronoid process reconstruction with a distal clavicle autograft: an in silico analysis of fitting accuracy. Journal of Shoulder and Elbow Surgery, 2021, 30, 1282-1287.	1.2	4
31	Experimental DVC validation of heterogeneous micro finite element models applied to subchondral trabecular bone of the humeral head. Journal of Orthopaedic Research, 2022, 40, 2039-2047.	1.2	4
32	Computed Tomography Analysis of the Radial Notch of the Ulna. Journal of Hand Surgery, 2019, 44, 794.e1-794.e8.	0.7	3
33	Biomedical engineering undergraduate education: A Canadian perspective. International Journal of Mechanical Engineering Education, 2020, 48, 119-139.	0.6	3
34	Independent changes in bone mineralized and marrow soft tissues following acute knee injury require dual-energy or high-resolution computed tomography for accurate assessment of bone mineral density and stiffness. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 127, 105091.	1.5	3
35	An intra-bone axial load transducer: development and validation in an in-vitro radius model. Journal of Experimental Orthopaedics, 2015, 2, 19.	0.8	2
36	Fullâ€field experimental analysis of the influence of microstructural parameters on the mechanical properties of humeral head trabecular bone. Journal of Orthopaedic Research, 2021, , .	1.2	2

#	Article	IF	Citations
37	A finite element analysis of augmented glenoid components. Journal of Shoulder and Elbow Surgery, 2016, 25, e166-e168.	1.2	1
38	3D strain analysis of trabecular bone within the osteoarthritic humeral head subjected to stepwise compressive loads. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 125, 104922.	1.5	1
39	The Utility of Quantitative CT (QCT) to Detect Differences in Subchondral Bone Mineral Density Between Healthy People and People with Pain Following Wrist Trauma. Journal of Biomechanical Engineering, 2022, , .	0.6	1
40	Computed tomography analysis of the relationship between the coronoid and the radial head. Journal of Shoulder and Elbow Surgery, 2021, 30, 2824-2831.	1.2	0
41	Augmented Glenoid Replacement for Total Shoulder Arthroplasty. , 2016, , 111-119.		0