

Brian K Bay

List of Publications by Year in descending order

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59
papers

3,266
citations

159358

30
h-index

149479

56
g-index

59
all docs

59
docs citations

59
times ranked

2686
citing authors

#	ARTICLE	IF	CITATIONS
1	Developing a novel functional disc emulator to investigate the nucleus pulposus replacement. <i>Journal of Materials Science: Materials in Medicine</i> , 2021, 32, 28.	1.7	2
2	Regional Variations in Discrete Collagen Fibre Mechanics within Intact Intervertebral Disc Resolved Using Synchrotron Computed Tomography and Digital Volume Correlation. <i>Acta Biomaterialia</i> , 2021, , .	4.1	7
3	In situ characterization of nanoscale strains in loaded whole joints via synchrotron X-ray tomography. <i>Nature Biomedical Engineering</i> , 2020, 4, 343-354.	11.6	49
4	Synchrotron tomography of intervertebral disc deformation quantified by digital volume correlation reveals microstructural influence on strain patterns. <i>Acta Biomaterialia</i> , 2019, 92, 290-304.	4.1	46
5	A review of techniques for visualising soft tissue microstructure deformation and quantifying strain <i>Ex Vivo</i> . <i>Journal of Microscopy</i> , 2018, 272, 165-179.	0.8	35
6	Methodology for comparing wood adhesive bond load transfer using digital volume correlation. <i>Wood Science and Technology</i> , 2018, 52, 1569-1587.	1.4	13
7	Synchrotron tomographic quantification of strain and fracture during simulated thermal maturation of an organic-rich shale, UK Kimmeridge Clay. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 2553-2564.	1.4	31
8	Mode III Loading of Composite Panels. <i>Journal of Aircraft</i> , 2016, 53, 343-350.	1.7	0
9	Quantifying Bulk Electrode Strain and Material Displacement within Lithium Batteries via High-Speed Operando Tomography and Digital Volume Correlation. <i>Advanced Science</i> , 2016, 3, 1500332.	5.6	66
10	The effect of pore morphology on microbial enhanced oil recovery. <i>Journal of Petroleum Science and Engineering</i> , 2015, 130, 16-25.	2.1	33
11	Experimental characterization of nonwetting phase trapping and implications for geologic CO ₂ sequestration. <i>International Journal of Greenhouse Gas Control</i> , 2015, 42, 1-15.	2.3	32
12	Bone mineral density and donor age are not predictive of femoral ring allograft bone mechanical strength. <i>Journal of Orthopaedic Research</i> , 2014, 32, 1271-1276.	1.2	4
13	Culture of canine synoviocytes on porcine intestinal submucosa scaffolds as a strategy for meniscal tissue engineering for treatment of meniscal injury in dogs. <i>Veterinary Journal</i> , 2014, 199, 49-56.	0.6	10
14	Comparison of Growth Factor Treatments on the Fibrochondrogenic Potential of Canine Fibroblast-Like Synoviocytes for Meniscal Tissue Engineering. <i>Veterinary Surgery</i> , 2014, 43, 750-760.	0.5	5
15	Effect of fluid topology on residual nonwetting phase trapping: Implications for geologic CO ₂ sequestration. <i>Advances in Water Resources</i> , 2013, 62, 47-58.	1.7	185
16	Preliminary Biomechanical Proof of Concept for a Hybrid Locking Plate/Variable Pitch Screw Construct for Anterior Fixation of Type II Odontoid Fractures. <i>Spine</i> , 2012, 37, E1159-E1164.	1.0	9
17	Evaluation of Skull and Tooth Morphology and Mineralization Using High-Resolution X-Ray Tomography. <i>Methods in Molecular Biology</i> , 2012, 887, 69-79.	0.4	1
18	Relationship of donor variables and graft dimension on biomechanical performance of femoral ring allograft. <i>Journal of Orthopaedic Research</i> , 2011, 29, 1840-1845.	1.2	11

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19	Towards a modified consumer haptic device for robotic-assisted fine-motor repetitive motion training. Disability and Rehabilitation: Assistive Technology, 2011, 6, 546-551.	1.3	14
20	Ctip2/Bcl11b controls ameloblast formation during mammalian odontogenesis. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 4278-4283.	3.3	57
21	Methods and applications of digital volume correlation. Journal of Strain Analysis for Engineering Design, 2008, 43, 745-760.	1.0	173
22	Biomechanical Comparison of a Fully Threaded, Variable Pitch Screw and a Partially Threaded Lag Screw for Internal Fixation of Type II Dens Fractures. Spine, 2007, 32, E475-E479.	1.0	28
23	Bone contact forces on the distal tibia during the stance phase of running. Journal of Biomechanics, 2007, 40, 3503-3509.	0.9	76
24	The influence of pedicle screw placement on thoracic trabecular strain. Spinal Cord, 2006, 44, 249-253.	0.9	3
25	Comparison of the Linear Finite Element Prediction of Deformation and Strain of Human Cancellous Bone to 3D Digital Volume Correlation Measurements. Journal of Biomechanical Engineering, 2006, 128, 1-6.	0.6	106
26	The behavior of thoracic trabecular bone during flexion. Tokai Journal of Experimental and Clinical Medicine, 2005, 30, 163-70.	0.4	3
27	Development of an Animal Model of Acetabular Fractures. Clinical Orthopaedics and Related Research, 2004, 423, 64-73.	0.7	4
28	Trabecular bone strain changes associated with subchondral stiffening of the proximal tibia. Journal of Biomechanics, 2003, 36, 155-163.	0.9	33
29	Trabecular Bone Strain Changes Resulting From Partial and Complete Meniscectomy. Clinical Orthopaedics and Related Research, 2003, 407, 259-267.	0.7	24
30	Biomechanical Comparison of Posterior Pelvic Ring Fixation. Journal of Orthopaedic Trauma, 2003, 17, 481-487.	0.7	177
31	Trabecular Bone Strain Changes Associated With Subchondral Bone Defects of the Tibial Plateau. Journal of Orthopaedic Trauma, 2002, 16, 638-643.	0.7	12
32	Trabecular Bone Strain Changes Associated with Subchondral Comminution of the Distal Tibia. Journal of Orthopaedic Trauma, 2002, 16, 709-716.	0.7	8
33	Digital volume correlation including rotational degrees of freedom during minimization. Experimental Mechanics, 2002, 42, 272-278.	1.1	144
34	Digital volume correlation including rotational degrees of freedom during minimization. , 2002, 42, 272.		5
35	S1 Screw Bending Moment With Posterior Spinal Instrumentation Across the Lumbosacral Junction After Unilateral Iliac Crest Harvest. Spine, 2001, 26, 1950-1955.	1.0	48
36	The Effect of Anterior Osteophytes and Flexural Position on Thoracic Trabecular Strain. Spine, 2001, 26, 22-26.	1.0	14

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37	Trabecular bone strain changes associated with cartilage defects in the proximal and distal tibia. <i>Journal of Orthopaedic Research</i> , 2001, 19, 906-913.	1.2	18
38	Experimental Measurement of Three-Dimensional Continuum-Level Strain Fields in Trabecular Bone. <i>Advances in Experimental Medicine and Biology</i> , 2001, 496, 181-197.	0.8	9
39	Biomechanical consequences of excision of displaced Pipkin femoral head fractures. <i>Journal of Orthopaedic Trauma</i> , 2000, 14, 149-150.	0.7	21
40	Bone strain changes associated with intraarticular fractures of the proximal and distal tibia. <i>Journal of Orthopaedic Trauma</i> , 2000, 14, 139-140.	0.7	0
41	Digital volume correlation: Three-dimensional strain mapping using X-ray tomography. <i>Experimental Mechanics</i> , 1999, 39, 217-226.	1.1	690
42	Dorsal intercarpal ligament capsulodesis for scapholunate dissociation: Biomechanical analysis in a cadaver model. <i>Journal of Hand Surgery</i> , 1999, 24, 232-239.	0.7	95
43	Measurement of Strain Distributions Within Vertebral Body Sections by Texture Correlation. <i>Spine</i> , 1999, 24, 10-17.	1.0	34
44	Biomechanical Evaluation of Impaction Fractures of the Femoral Head. <i>Journal of Orthopaedic Trauma</i> , 1999, 13, 407-413.	0.7	17
45	The effect of boundary conditions on experimentally measured trabecular strain in the thoracic spine. <i>Journal of Biomechanics</i> , 1998, 31, 891-897.	0.9	32
46	Consequences of Transverse Acetabular Fracture Malreduction on Load Transmission Across the Hip Joint. <i>Journal of Orthopaedic Trauma</i> , 1998, 12, 90-100.	0.7	63
47	Biomechanical Evaluation of a Low Anterior Wall Fracture: Correlation with the CT Subchondral Arc. <i>Journal of Orthopaedic Trauma</i> , 1998, 12, 152-158.	0.7	28
48	Biomechanical Consequences of Anterior Column Fracture of the Acetabulum. <i>Journal of Orthopaedic Trauma</i> , 1998, 12, 547-552.	0.7	39
49	Biomechanics of the Hip Joint and the Effects of Fracture of the Acetabulum. <i>Clinical Orthopaedics and Related Research</i> , 1997, 339, 92-104.	0.7	51
50	Patellar strain and patellofemoral contact after bone-patellar tendon-bone harvest for anterior cruciate ligament reconstruction. <i>Archives of Physical Medicine and Rehabilitation</i> , 1997, 78, 256-263.	0.5	26
51	Displacement and strain of the median nerve at the wrist. <i>Journal of Hand Surgery</i> , 1997, 22, 621-627.	0.7	43
52	Surface remodeling of trabecular bone using a tissue level model. <i>Journal of Orthopaedic Research</i> , 1997, 15, 593-600.	1.2	25
53	Statically equivalent load and support conditions produce different hip joint contact pressures and periacetabular strains. <i>Journal of Biomechanics</i> , 1997, 30, 193-196.	0.9	56
54	The Effect of Variable Size Posterior Wall Acetabular Fractures on Contact Characteristics of the Hip Joint. <i>Journal of Orthopaedic Trauma</i> , 1996, 10, 395-402.	0.7	85

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55	Texture correlation: A method for the measurement of detailed strain distributions within trabecular bone. <i>Journal of Orthopaedic Research</i> , 1995, 13, 258-267.	1.2	121
56	Biomechanical consequences of fracture and repair of the posterior wall of the acetabulum.. <i>Journal of Bone and Joint Surgery - Series A</i> , 1995, 77, 1184-1192.	1.4	91
57	Median nerve displacement through the carpal canal. <i>Journal of Hand Surgery</i> , 1994, 19, 901-906.	0.7	83
58	Bone ingrowth and mechanical properties of coralline hydroxyapatite 1 yr after implantation. <i>Biomaterials</i> , 1993, 14, 341-348.	5.7	155
59	Repair of large cortical defects with block coralline hydroxyapatite. <i>Bone</i> , 1993, 14, 225-230.	1.4	16