Donal S Mcnally

List of Publications by Year
in descending order

64 papers	2,670 citations	279798 23 h-index	182427 51 g-index
64 all docs	64 docs citations	64 times ranked	1958 citing authors

#	Article	IF	Citations
1	'Stress' distributions inside intervertebral discs. Journal of Bone and Joint Surgery: British Volume, 1996, 78, 965-972.	3.4	507
2	Internal Intervertebral Disc Mechanics as Revealed by Stress Profilometry. Spine, 1992, 17, 66-73.	2.0	305
3	Effects of hydrostatic pressure on matrix synthesis in different regions of the intervertebral disk. Journal of Applied Physiology, 1996, 80, 839-846.	2.5	228
4	The clinical biomechanics award paper 1993 Posture and the compressive strength of the lumbar spine. Clinical Biomechanics, 1994, 9, 5-14.	1.2	165
5	In Vivo Stress Measurement Can Predict Pain on Discography. Spine, 1996, 21, 2580-2587.	2.0	154
6	The internal mechanical functioning of intervertebral discs and articular cartilage, and its relevance to matrix biology. Matrix Biology, 2009, 28, 384-389.	3.6	109
7	Abnormal stress concentrations in lumbar intervertebral discs following damage to the vertebral bodies: a cause of disc failure?. European Spine Journal, 1993, 1, 214-221.	2.2	90
8	The internal mechanics of the intervertebral disc under cyclic loading. Journal of Biomechanics, 2002, 35, 1263-1271.	2.1	87
9	Can Intervertebral Disc Prolapse Be Predicted By Disc Mechanics?. Spine, 1993, 18, 1525-1530.	2.0	83
10	2009 ISSLS Prize Winner: What Influence Does Sustained Mechanical Load Have on Diffusion in the Human Intervertebral Disc?. Spine, 2009, 34, 2324-2337.	2.0	71
11	Combined hydrogels that switch human pluripotent stem cells from self-renewal to differentiation. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 5580-5585.	7.1	67
12	Stress Distributions inside Intervertebral Discs: The Validity of Experimental â€˜Stress Profilometryâ€™. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 1996, 210, 81-87.	1.8	61
13	High pressures and asymmetrical stresses in the scoliotic disc in the absence of muscle loading. Scoliosis, 2007, 2, 4.	0.4	61
14	Development and validation of a new transducer for intradiscal pressure measurement. Journal of Biomedical Engineering, 1992, 14, 495-498.	0.7	50
15	Computer vision elastography: speckle adaptive motion estimation for elastography using ultrasound sequences. IEEE Transactions on Medical Imaging, 2005, 24, 755-766.	8.9	40
16	A computational simulation study of the influence of helmet wearing on head injury risk in adult cyclists. Accident Analysis and Prevention, 2013, 60, 15-23.	5.7	39
17	Rigid-body modelling of shaken baby syndrome. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2005, 219, 63-70.	1.8	37
18	X-ray computed tomography and additive manufacturing in medicine: a review. International Journal of Metrology and Quality Engineering, 2017, 8, 17.	1.0	30

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19	Neonatal head and torso vibration exposure during inter-hospital transfer. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2017, 231, 99-113.	1.8	29
20	The internal pressure and stress environment of the scoliotic intervertebral disc â€" a review. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2008, 222, 209-219.	1.8	28
21	Microhardness anisotropy of lamellar bone. Journal of Biomechanics, 1997, 30, 1059-1061.	2.1	26
22	Regional wall mechanics and blunt traumatic aortic rupture at the isthmus. European Journal of Cardio-thoracic Surgery, 2008, 34, 616-622.	1.4	26
23	An analytical model of intervertebral disc mechanics. Journal of Biomechanics, 1995, 28, 53-68.	2.1	25
24	Ultrasound Imaging of the Intervertebral Disc. Spine, 2003, 28, 107-113.	2.0	22
25	The Evaluation of Digital Rectal Examination for Assessment of Anal Tone in Suspected Cauda Equina Syndrome. Spine, 2015, 40, 1213-1218.	2.0	21
26	Intervertebral disc structure: observation by a novel use of ultrasound imaging. Ultrasound in Medicine and Biology, 2000, 26, 751-758.	1.5	19
27	The angular distribution of vertebral trabeculae in modern humans, chimpanzees and the Kebara 2 Neanderthal. Journal of Human Evolution, 2002, 43, 189-205.	2.6	18
28	Effect of mechanical preconditioning on the electrical properties of knitted conductive textiles during cyclic loading. Textile Reseach Journal, 2019, 89, 445-460.	2.2	17
29	Knoop microhardness anisotropy of the ovine radius. Journal of Biomechanics, 2000, 33, 1551-1557.	2.1	16
30	An in vitro biomechanical comparison of Cadiscâ„¢-L with natural lumbar discs in axial compression and sagittal flexion. European Spine Journal, 2012, 21, 612-617.	2.2	16
31	MADYMO simulation of children in cycle accidents: A novel approach in risk assessment. Accident Analysis and Prevention, 2013, 59, 469-478.	5.7	16
32	The objectives for the mechanical evaluation of spinal instrumentation have changed. European Spine Journal, 2002, 11, S179-S185.	2.2	14
33	A systematic literature review and metaâ€analysis on digital health interventions for people living with dementia and Mild Cognitive Impairment. International Journal of Geriatric Psychiatry, 2022, 37, .	2.7	14
34	A One-Dimensional Theoretical Prediction of the Effect of Reduced End-Plate Permeability on the Mechanics of the Intervertebral Disc. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2005, 219, 329-335.	1.8	13
35	The implications of stress patterns in the vertebral body under axial support of an artificial implant. Medical Engineering and Physics, 2009, 31, 833-837.	1.7	12
36	The Effects Of Posterior Fixation On Internal Intervertebral Disc Mechanics. Journal of Bone and Joint Surgery: British Volume, 1997, 79, 154-160.	3.4	12

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37	Musculoskeletal motion flow fields using hierarchical variable-sized block matching in ultrasonographic video sequences. Journal of Biomechanics, 2004, 37, 511-522.	2.1	11
38	High-frequency ultrasound imaging of the intervertebral disc. Ultrasound in Medicine and Biology, 2002, 28, 939-947.	1.5	10
39	The effect of leg fracture level and vehicle front-end geometry on pedestrian knee injury and response. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2006, 220, 857-869.	1.8	10
40	The sensitivity of the calculation of Î”V to vehicle and impact parameters. Accident Analysis and Prevention, 2013, 55, 144-153.	5.7	10
41	Effects of Adding Resorbable Phosphate Glass Fibres and PLA to Calcium Phosphate Bone Cements. Journal of Applied Biomaterials and Functional Materials, 2014, 12, 203-209.	1.6	9
42	Finite element investigation of the effect of a bifid arch on loading ofÂtheÂvertebral isthmus. Spine Journal, 2014, 14, 675-682.	1.3	9
43	On the axial distribution of plaque stress: Influence of stenosis severity, lipid core stiffness, lipid core length and fibrous cap stiffness. Medical Engineering and Physics, 2019, 68, 76-84.	1.7	8
44	Computational mechanical characterization of geometrically transformed Schwarz P lattice tissue scaffolds fabricated via two photon polymerization (2PP). Additive Manufacturing, 2019, 25, 399-411.	3.0	8
45	Study of Performance of Knitted Conductive Sleeves as Wearable Textile Strain Sensors for Joint Motion Tracking. , 2020, 2020, 4555-4558.		8
46	Smartphone monitoring of in-ambulance vibration and noise. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2021, 235, 428-436.	1.8	8
47	Canine collars: an investigation of collar type and the forces applied to a simulated neck model. Veterinary Record, 2020, 187, e52.	0.3	7
48	Demonstration of the appearance of the paraspinal musculoligamentous structures of the cervical spine using ultrasound. Clinical Anatomy, 2005, 18, 96-103.	2.7	6
49	Defining acute aortic syndrome after trauma. Journal of Trauma and Acute Care Surgery, 2012, 73, 977-982.	2.1	6
50	Pressure profilometry of the lumbosacral disk in dogs. American Journal of Veterinary Research, 2001, 62, 1734-1739.	0.6	5
51	The effect of washing on the electrical performance of knitted textile strain sensors for quantifying joint motion. Journal of Industrial Textiles, 2022, 51, 8528S-8548S.	2.4	5
52	Experimental determination of the frequency response characteristics of physiological pressure measurement systems. Medical and Biological Engineering and Computing, 1989, 27, 442-444.	2.8	4
53	Six-element sensor for measuring vaginal pressure profiles. Medical and Biological Engineering and Computing, 1993, 31, 184-186.	2.8	4
54	Investigation of changes in the electrical properties of novel knitted conductive textiles during cyclic loading. , 2016, 2016, 6058-6061.		4

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55	Wear analysis of explanted conventional metal back polyethylene glenoid liners. Medical Engineering and Physics, 2018, 59, 1-7.	1.7	4
56	Finding Comfortable Routes for Ambulance Transfers of Newborn Infants. , 2020, 2020, 5905-5908.		2
57	Comparison of standard automotive industry injury predictors and actual injury sustained during significant whiplash events. European Spine Journal, 2021, 30, 3043-3058.	2.2	2
58	Intraoperative pulmonary embolism of Harrington rod during spinal surgery: the potential dangers of rod cutting. European Spine Journal, 2006, 15, 1853-1857.	2.2	1
59	In vitro Biomechanical Comparison of the Native Intervertebral Disc and a Compliant Artificial Lumbar Disc Replacement (Cadisc-L). Spine Journal, 2011, 11, S153.	1.3	1
60	Non-specific arm pain. Lancet, The, 1999, 354, 1558-1559.	13.7	0
61	In vivo remodelling of an organic bone mineral spinal fusion. Spine Journal, 2016, 16, S77.	1.3	0
62	The objectives for the mechanical evaluation of spinal instrumentation have changed. , 2004, , 123-129.		0
63	Determination of a standard site for the measurement of bone mineral density of the human calcaneus. American Journal of Anatomy, 1998, 193, 449-456.	1.0	0
64	The Effect of Angulated Radius Fractures in Forearm Rotation: A Computer Based Model. Journal of Biomedical Science and Engineering, 2016, 09, 302-306.	0.4	0