Brian L Davis

List of Publications by Year
in descending order

Version: 2024-02-01

53 papers	1,428 citations	279701 23 h-index	345118 36 g-index
54 all docs	54 docs citations	54 times ranked	1370 citing authors

#	Article	IF	Citations
1	Evaluation of Diabetic Foot Ulcer Healing With Hyperspectral Imaging of Oxyhemoglobin and Deoxyhemoglobin. Diabetes Care, 2009, 32, 2056-2061.	4.3	153
2	Phasic behavior of EMG signals during gait: Use of multivariate statistics. Journal of Electromyography and Kinesiology, 1993, 3, 51-60.	0.7	102
3	Temporal characteristics of plantar shear distribution: Relevance to diabetic patients. Journal of Biomechanics, 2008, 41, 556-559.	0.9	85
4	Peak Plantar Pressure and Shear Locations. Diabetes Care, 2007, 30, 2643-2645.	4.3	80
5	Simultaneous measurement of plantar pressure and shear forces in diabetic individuals. Gait and Posture, 2002, 15, 101-107.	0.6	74
6	Plantar shear stress distributions: Comparing actual and predicted frictional forces at the footâ€“ground interface. Journal of Biomechanics, 2007, 40, 3045-3049.	0.9	63
7	Decomposition of superimposed ground reaction forces into left and right force profiles. Journal of Biomechanics, 1993, 26, 593-597.	0.9	54
8	A Device for Simultaneous Measurement of Pressure and Shear Force Distribution on the Plantar Surface of the Foot. Journal of Applied Biomechanics, 1998, 14, 93-104.	0.3	53
9	Neonatal and Infant Mandibular Distraction as an Alternative to Tracheostomy in Severe Obstructive Sleep Apnea. Cleft Palate-Craniofacial Journal, 2012, 49, 32-38.	0.5	53
10	Design and Validation of a General Purpose Robotic Testing System for Musculoskeletal Applications. Journal of Biomechanical Engineering, 2010, 132, 025001.	0.6	47
11	Frequency content of normal and diabetic plantar pressure profiles: Implications for the selection of transducer sizes. Journal of Biomechanics, 1996, 29, 979-983.	0.9	43
12	Temperature as a predictive tool for plantar triaxial loading. Journal of Biomechanics, 2014, 47, 3767-3770.	0.9	40
13	Management of exposed total knee prostheses with microvascular tissue transfer. Microsurgery, 2008, 28, 617-622.	0.6	38
14	Spatial relationships between shearing stresses and pressure on the plantar skin surface during gait. Journal of Biomechanics, 2012, 45, 619-622.	0.9	38
15	Simultaneous shear and pressure sensor array for assessing pressure and shear at foot/ground interface. Journal of Biomechanics, 2006, 39, 2893-2897.	0.9	37
16	Characterization of the calcaneal fat pad in diabetic and non-diabetic patients using magnetic resonance imaging. Magnetic Resonance Imaging, 1999, 17, 851-857.	1.0	33
17	Forefoot plantar shear stress distribution in hallux valgus patients. Gait and Posture, 2009, 30, 257-259.	0.6	31
18	Modeling and Optimal Control of an Energy-Storing Prosthetic Knee. Journal of Biomechanical Engineering, 2012, 134, 051007.	0.6	29

#	Article	IF	Citations
19	Design of a novel prosthetic socket: Assessment of the thermal performance. Journal of Biomechanics, 2015, 48, 1294-1299.	0.9	28
20	Realtime Visual Feedback Diminishes Energy Consumption of Amputee Subjects During Treadmill Locomotion. Journal of Prosthetics and Orthotics, 2004, 16, 49-54.	0.2	25
21	A biomechanical evaluation of one-stage vs two-stage bilateral knee arthroplasty patients. Gait and Posture, 1999, 9, 24-30.	0.6	24
22	Novel Hyaluronic Acid Coating for Potential Use in Glucose Sensor Design. Diabetes Technology and Therapeutics, 2003, 5, 393-399.	2.4	24
23	Lower-extremity amputations in patients with diabetes: pre- and post-surgical decisions related to successful rehabilitation. Diabetes/Metabolism Research and Reviews, 2004, 20, S45-S50.	1.7	24
24	Assessment of the Effects of Diabetes on Midfoot Joint Pressures Using a Robotic Gait Simulator. Foot and Ankle International, 2009, 30, 767-772.	1.1	23
25	Effects of Age, Density, and Geometry on the Bending Strength of Human Metatarsals. Foot and Ankle International, 1997, 18, 216-221.	1.1	21
26	Association Between Plantar Temperatures and Triaxial Stresses in Individuals With Diabetes. Diabetes Care, 2015, 38, e178-e179.	4.3	16
27	Prediction of Plantar Shear Stress Distribution by Artificial Intelligence Methods. Journal of Biomechanical Engineering, 2009, 131, 091007.	0.6	15
28	Plantar Shear Stress Distribution in Athletic Individuals with Frictional Foot Blisters. Journal of the American Podiatric Medical Association, 2010, 100, 116-120.	0.2	14
29	An extensometer for global measurement of bone strain suitable for use in vivo in humans. Journal of Biomechanics, 2001, 34, 385-391.	0.9	13
30	Exercise Equipment Used in Microgravity. Current Sports Medicine Reports, 2012, 11, 142-147.	0.5	11
31	Simulation of lower limb axial arterial length change during locomotion. Journal of Biomechanics, 2012, 45, 1485-1490.	0.9	11
32	Modeling Effects of Muscle Fatigue on Unilateral Postural Control. Journal of Applied Biomechanics, 1996, 12, 173-184.	0.3	10
33	Expanded butterfly plots: A new method to analyze simultaneous pressure and shear on the plantar skin surface during gait. Journal of Biomechanics, 2015, 48, 2214-2216.	0.9	10
34	Plantar pressure and shear measurement using surface stress-sensitive film. Measurement Science and Technology, 2020, 31, 025701.	1.4	10
35	Footwear and Balance in Older Men. Journal of the American Geriatrics Society, 1993, 41, 1011-1012.	1.3	9
36	Plantar Shear Stress Distribution in Patients with Rheumatoid Arthritis. Journal of the American Podiatric Medical Association, 2010, 100, 265-269.	0.2	8

#	Article	IF	Citations
37	Thermal Conductivities of Commercially Available Prosthetic Materials. Journal of Prosthetics and Orthotics, 2014, 26, 212-215.	0.2	8
38	Shear and pressure under the first ray in neuropathic diabetic patients: Implications for support of the longitudinal arch. Journal of Biomechanics, 2017, 52, 176-178.	0.9	8
39	Pivot shift and Lachman test simulation-based exploration in juvenile populations for accurately predicting anterior tibial translation. Journal of Biomechanics, 2022, 136, 111069.	0.9	8
40	Laser-induced auto-fluorescence (LIAF) as a method for assessing skin stiffness preceding diabetic ulcer formation. Journal of Biomechanics, 2007, 40, 736-741.	0.9	7
41	Spatial frequency content of plantar pressure and shear profiles for diabetic and non-diabetic subjects. Journal of Biomechanics, 2016, 49, 3746-3748.	0.9	7
42	Assessing the biomechanical properties of nitinol staples in normal, osteopenic and osteoporotic bone models: A finite element analysis. Injury, 2021, 52, 2820-2826.	0.7	7
43	Quantifying muscle activity in non-ambulatory children with spastic cerebral palsy before and after selective dorsal rhizotomy. Journal of Electromyography and Kinesiology, 2001, 11, 31-37.	0.7	6
44	Estimating Forces during Exercise Activity Using Non-invasive Kinect Camera. , 2015, , .		6
45	Simulation Based Design and Evaluation of a Transcatheter Mitral Heart Valve Frame. Journal of Medical Devices, Transactions of the ASME, 2012, 6, 31005-31012.	0.4	5
46	Biomechanics - Part II. , 2009, , 69-77.		5
47	Experimental thermal analysis of a novel prosthetic socket along with silicone and PCM liners. Journal of Biomechanics, 2020, 104, 109788.	0.9	4
48	Active functional stiffness of the knee joint during activities of daily living: A parameter for improved design of prosthetic limbs. Clinical Biomechanics, 2014, 29, 1193-1199.	0.5	3
49	The effect of frictional coefficients and sock material on plantar surface shear stress measurement. Journal of Biomechanics, 2021, 127, 110682.	0.9	3
50	Design principles for a zero-gravity locomotion simulator. Journal of Biomechanics, 1989, 22, 998.	0.9	1
51	Examining feedback mechanisms of postural control in Chiari Malformation by average wavelet coefficient decomposition and the Hurst exponent. Gait and Posture, 2021, 88, 280-285.	0.6	1
52	In search of the homunculus. Journal of Biomechanics, 1989, 22, 1093.	0.9	0
53	Correlations between stance time and shear stress peaks on the plantar skin surface of diabetic and non-diabetic patients. Footwear Science, 2015, 7, S13-S14.	0.8	0