Wilson C Hayes

List of Publications by Year
in descending order

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80 papers	9,410 citations	41344 49 h-index	66911 78 g-index
81 all docs	81 docs citations	81 times ranked	5521 citing authors

#	Article	IF	Citations
1	Bone regeneration by implantation of purified, cultureâ€expanded human mesenchymal stem cells. Journal of Orthopaedic Research, 1998, 16, 155-162.	2.3	680
2	Hamstring Tendon Grafts for Reconstruction of the Anterior Cruciate Ligament. Journal of Bone and Joint Surgery - Series A, 1999, 81, 549-57.	3.0	554
3	Cross-sectional geometry of Pecos Pueblo femora and tibiaeâ€"A biomechanical investigation: I. Method and general patterns of variation. American Journal of Physical Anthropology, 1983, 60, 359-381.	2.1	489
4	Impact near the hip dominates fracture risk in elderly nursing home residents who fall. Calcified Tissue International, 1993, 52, 192-198.	3.1	379
5	Sex differences in ageâ€related remodeling of the femur and tibia. Journal of Orthopaedic Research, 1988, 6, 886-896.	2.3	359
6	Anterior Cruciate Ligament Graft Fixation. American Journal of Sports Medicine, 1994, 22, 240-247.	4.2	358
7	Fall Direction, Bone Mineral Density, and Function: Risk Factors for Hip Fracture in Frail Nursing Home Elderly. American Journal of Medicine, 1998, 104, 539-545.	1.5	300
8	Differences between the tensile and compressive strengths of bovine tibial trabecular bone depend on modulus. Journal of Biomechanics, 1994, 27, 1137-1146.	2.1	290
9	Trabecular bone exhibits fully linear elastic behavior and yields at low strains. Journal of Biomechanics, 1994, 27, 1127-1136.	2.1	270
10	Cross-sectional geometry of Pecos Pueblo femora and tibiaeâ€"A biomechanical investigation: II. Sex, age, and side differences. American Journal of Physical Anthropology, 1983, 60, 383-400.	2.1	253
11	Mechanical Properties of Trabecular Bone from the Proximal Femur. Journal of Computer Assisted Tomography, 1990, 14, 107-114.	0.9	244
12	A 20-Year Perspective on the Mechanical Properties of Trabecular Bone. Journal of Biomechanical Engineering, 1993, 115, 534-542.	1.3	239
13	An interactive graphics package for calculating cross-sectional properties of complex shapes. Journal of Biomechanics, 1980, 13, 59-64.	2.1	218
14	Structural changes in the femur with the transition to agriculture on the Georgia coast. American Journal of Physical Anthropology, 1984, 64, 125-136.	2.1	200
15	Role of loads and prosthesis material properties on the mechanics of the proximal femur after total hip arthroplasty. Journal of Orthopaedic Research, 1992, 10, 405-422.	2.3	189
16	Load Sharing Between the Shell and Centrum in the Lumbar Vertebral Body. Spine, 1997, 22, 140-150.	2.0	174
17	The Effects of Donor Age and Strain Rate on the Biomechanical Properties of Bone-Patellar Tendon-Bone Allografts. American Journal of Sports Medicine, 1994, 22, 328-333.	4.2	167
18	Force attenuation in trochanteric soft tissues during impact from a fall. Journal of Orthopaedic Research, 1995, 13, 956-962.	2.3	163

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19	In vitro degradation of a poly(propylene fumarate)-based composite material. Biomaterials, 1996, 17, 2127-2130.	11.4	154
20	The Ingrowth of New Bone Tissue and Initial Mechanical Properties of a Degrading Polymeric Composite Scaffold. Tissue Engineering, 1995, 1, 41-52.	4.6	151
21	Hip impact velocities and body configurations for voluntary falls from standing height. Journal of Biomechanics, 1996, 29, 807-811.	2.1	150
22	Disturbance type and gait speed affect fall direction and impact location. Journal of Biomechanics, 2001, 34, 309-317.	2.1	150
23	The biomechanics of interference screw fixation of patellar tendon anterior cruciate ligament grafts. American Journal of Sports Medicine, 1993, 21, 880-886.	4.2	137
24	The effect of impact direction on the structural capacity of the proximal femur during falls. Journal of Bone and Mineral Research, 1996, 11, 377-383.	2.8	135
25	Trabecular bone modulus and strength can depend on specimen geometry. Journal of Biomechanics, 1993, 26, 991-1000.	2.1	133
26	Geometric variables from DXA of the radius predict forearm fracture load in vitro. Calcified Tissue International, 1993, 52, 199-204.	3.1	127
27	Multiaxial strength characteristics of trabecular bone. Journal of Biomechanics, 1983, 16, 743-752.	2.1	122
28	Theoretical analysis of the experimental artifact in trabecular bone compressive modulus. Journal of Biomechanics, 1993, 26, 599-607.	2.1	122
29	Computed tomography-based finite element analysis predicts failure loads and fracture patterns for vertebral sections. Journal of Orthopaedic Research, 1998, 16, 300-308.	2.3	122
30	Trochanteric bone mineral density is associated with type of hip fracture in the elderly. Journal of Bone and Mineral Research, 1994, 9, 1889-1894.	2.8	121
31	1999 Young Investigator Research Award Runner-Up. Spine, 2000, 25, 158.	2.0	119
32	Age-related differences in post-yield damage in human cortical bone. Experiment and model. Journal of Biomechanics, 1996, 29, 1463-1471.	2.1	117
33	Contact pressures in chondromalacia patellae and the effects of capsular reconstructive procedures. Journal of Orthopaedic Research, 1988, 6, 499-508.	2.3	104
34	Mechanical behavior of damaged trabecular bone. Journal of Biomechanics, 1994, 27, 1309-1318.	2.1	103
35	Functional Mobility Discriminates Nonfallers From One-Time and Frequent Fallers. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2000, 55, M672-M676.	3.6	98
36	Compressive fatigue behavior of bovine trabecular bone. Journal of Biomechanics, 1993, 26, 453-463.	2.1	90

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37	Finite element modeling of damage accumulation in trabecular bone under cyclic loading. Journal of Biomechanics, 1994, 27, 145-155.	2.1	89
38	Tensile strength of bovine trabecular bone. Journal of Biomechanics, 1985, 18, 723-727.	2.1	88
39	Biomechanical properties of the proximal femur determined in vitro by single-energy quantitative computed tomography. Journal of Bone and Mineral Research, 1989, 4, 715-722.	2.8	88
40	Characterization of partially saturated poly(propylene fumarate) for orthopaedic application. Journal of Biomaterials Science, Polymer Edition, 1997, 8, 893-904.	3.5	79
41	Compressive creep behavior of bovine trabecular bone. Journal of Biomechanics, 1994, 27, 301-310.	2.1	76
42	The tensile behavior of demineralized bovine cortical bone. Journal of Biomechanics, 1996, 29, 1497-1501.	2.1	74
43	Effects of selected thermal variables on the mechanical properties of trabecular bone. Biomaterials, 1995, 16, 545-551.	11.4	72
44	Distribution of contact force during impact to the hip. Annals of Biomedical Engineering, 1997, 25, 499-508.	2.5	68
45	Correlations between photon absorption properties and failure load of the distal radiusin vitro. Calcified Tissue International, 1991, 49, 292-297.	3.1	67
46	Patellofemoral contact pressures exceed the compressive yield strength of UHMWPE in total knee arthroplasties. Journal of Arthroplasty, 1995, 10, 363-368.	3.1	59
47	Effects of retinacular release and tibial tubercle elevation in patellofemoral degenerative joint disease. Journal of Orthopaedic Research, 1990, 8, 856-862.	2.3	57
48	Predicting Failure of Thoracic Vertebrae With Simulated and Actual Metastatic Defects. Clinical Orthopaedics and Related Research, 1997, 344, 313???319.	1.5	52
49	Ex vivo degradation of a poly(propylene glycol-fumarate) biodegradable particulate composite bone cement. , 1997, 35, 383-389.		51
50	Tibiofemoral Contact Pressures in Degenerative Joint Disease. Clinical Orthopaedics and Related Research, 1998, 348, 233???245.	1.5	51
51	Read my hips: Measuring trochanteric soft tissue thickness. Calcified Tissue International, 1993, 52, 85-89.	3.1	50
52	Stress analysis of compression plate fixation and its effects on long bone remodeling. Journal of Biomechanics, 1985, 18, 141-150.	2.1	44
53	The threshold trip duration for which recovery is no longer possible is associated with strength and reaction time. Journal of Biomechanics, 2001, 34, 589-595.	2.1	42
54	Mechanical properties of trabecular bone within and adjacent to osseous metastases. Journal of Bone and Mineral Research, 1992, 7, 1165-1171.	2.8	41

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55	In vivo histologic and biomechanical characterization of a biodegradable particulate composite bone cement. Journal of Biomedical Materials Research Part B, 1989, 23, 1-16.	3.1	40
56	Forensic Injury Biomechanics. Annual Review of Biomedical Engineering, 2007, 9, 55-86.	12.3	39
57	Strength Reductions from Trabecular Destruction Within Thoracic Vertebrae. Journal of Spinal Disorders, 1993, 6, 130???136.	1.1	38
58	Stress analysis of a condylar knee tibial component: Influence of metaphyseal shell properties and cement injection depth. Journal of Orthopaedic Research, 1985, 3, 424-434.	2.3	37
59	Maxillary molar extraction causes increased bone loss in the mandible of ovariectomized rats. Journal of Bone and Mineral Research, 1995, 10, 1087-1093.	2.8	35
60	In vitro characterization and biomechanical optimization of a biodegradable particulate composite bone cement. Journal of Biomedical Materials Research Part B, 1988, 22, 1071-1082.	3.1	32
61	Stride Width Discriminates Gait of Side-Fallers Compared to Other-Directed Fallers During Overground Walking. Journal of Aging and Health, 2007, 19, 200-212.	1.7	31
62	Age changes in geometry and mineral content of the lower limb bones. Annals of Biomedical Engineering, 1984, 12, 573-584.	2.5	27
63	The evaluation of a rat model for the analysis of densitometric and biomechanical properties of tumor-induced osteolysis. Journal of Orthopaedic Research, 2001, 19, 200-205.	2.3	22
64	Local Demineralization as a Model for Bone Strength Reductions in Lytic Transcortical Metastatic Lesions. Investigative Radiology, 1991, 26, 934-938.	6.2	20
65	Biomechanical evaluation of a biodegradable composite as an adjunct to internal fixation of proximal femur fractures. Journal of Orthopaedic Research, 1991, 9, 48-53.	2.3	20
66	Postfracture Instability of Vertebrae With Simulated Defects Can Be Predicted From Computed Tomography Data. Spine, 2000, 25, 1775-1781.	2.0	17
67	Biomechanical optimization of a model particulate composite for orthopaedic applications. Journal of Orthopaedic Research, 1986, 4, 76-85.	2.3	14
68	A method for measuring the structural properties of the rat mandible. Archives of Oral Biology, 1994, 39, 1029-1033.	1.8	13
69	In-Vivo Degradation of a Poly(Propylene-Fumarate) Biodegradable, Particulate Composite Bone Cement. Materials Research Society Symposia Proceedings, 1995, 394, 15.	0.1	12
70	A Comparison of the Synthes 4.5â€mm Cannulated Screw and the Synthes 4.5â€mm Standard Cortex Screw Systems in Equine Bone. Veterinary Surgery, 1998, 27, 540-546.	1.0	12
71	Agility and Balance Differ Between Older Community and Retirement Facility Residents. Journal of Applied Gerontology, 2004, 23, 457-468.	2.0	12
72	<title>Biomechanical competence of microstructural bone in the progress of adaptive bone remodeling</title>. , 1997, 3149, 69.		10

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73	The Quick Step: A New Test for Measuring Reaction Time and Lateral Stepping Velocity. Journal of Applied Biomechanics, 2002, 18, 271-277.	0.8	9
74	Balance Self-Efficacy Predicts Risk Factors for Side Falls and Frequent Falls in Community-Dwelling Elderly. Journal of Aging and Physical Activity, 2003, 11, 28-39.	1.0	9
75	Determining Fall Direction and Impact Location for Various Disturbances and Gait Speeds Using the Articulated Total Body Model. Journal of Biomechanical Engineering, 2007, 129, 393-399.	1.3	9
76	Age-related hip fractures. Current Opinion in Orthopaedics, 1994, 5, 9-15.	0.3	6
77	How do we prevent hip fractures?. Calcified Tissue International, 1994, 54, 175-177.	3.1	5
78	Preventative ibandronate treatment has the most beneficial effect on the microstructure of bone in experimental tumor osteolysis. Journal of Bone and Mineral Metabolism, 2007, 25, 86-92.	2.7	5
79	Biomechanics of Fractures. , 2009, , 51-81.		3
80	Biodegradable Polymer Composites for Temporary Replacement of Trabecular Bone: The Effect of Polymer Molecular Weight on Composite Strength and Modulus. Materials Research Society Symposia Proceedings, 1993, 331, 251.	0.1	2