

Massimiliano Baleani

List of Publications by Year in descending order

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69
papers

2,530
citations

201385

27
h-index

205818

48
g-index

70
all docs

70
docs citations

70
times ranked

2678
citing authors

#	ARTICLE	IF	CITATIONS
1	An accurate estimation of bone density improves the accuracy of subject-specific finite element models. <i>Journal of Biomechanics</i> , 2008, 41, 2483-2491.	0.9	333
2	Large-sliding contact elements accurately predict levels of bone-implant micromotion relevant to osseointegration. <i>Journal of Biomechanics</i> , 2000, 33, 1611-1618.	0.9	259
3	Compressive behaviour of child and adult cortical bone. <i>Bone</i> , 2011, 49, 769-776.	1.4	129
4	Fretting wear in a modular neck hip prosthesis. , 1997, 35, 207-216.		126
5	The effects of embalming using a 4% formalin solution on the compressive mechanical properties of human cortical bone. <i>Clinical Biomechanics</i> , 2008, 23, 1294-1298.	0.5	122
6	Dependence of mechanical compressive strength on local variations in microarchitecture in cancellous bone of proximal human femur. <i>Journal of Biomechanics</i> , 2008, 41, 438-446.	0.9	115
7	Mechanical testing of cancellous bone from the femoral head: Experimental errors due to off-axis measurements. <i>Journal of Biomechanics</i> , 2007, 40, 2426-2433.	0.9	100
8	Biological and Biomechanical Effects of Vancomycin and Meropenem in Acrylic Bone Cement. <i>Journal of Arthroplasty</i> , 2008, 23, 1232-1238.	1.5	75
9	An effective procedure to create a speckle pattern on biological soft tissue for digital image correlation measurements. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 39, 1-8.	1.5	69
10	The Effect of Sandblasting Treatment on Endurance Properties of Titanium Alloy Hip Prostheses. <i>Artificial Organs</i> , 2000, 24, 296-299.	1.0	63
11	Structural parameters and mechanical strength of cancellous bone in the femoral head in osteoarthritis do not depend on age. <i>Bone</i> , 2007, 41, 760-768.	1.4	62
12	Mechanical effects of the use of vancomycin and meropenem in acrylic bone cement. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2006, 77, 617-621.	1.2	56
13	Pre-clinical validation of a new partially cemented femoral prosthesis by synergetic use of numerical and experimental methods. <i>Journal of Biomechanics</i> , 2001, 34, 723-731.	0.9	53
14	Initial stability of a new hybrid fixation hip stem: Experimental measurement of implant-bone micromotion under torsional load in comparison with cemented and cementless stems. <i>Journal of Biomedical Materials Research Part B</i> , 2000, 50, 605-615.	3.0	52
15	Initial Stability of a Cementless Acetabular Cup Design: Experimental Investigation on the Effect of Adding Fins to the Rim of the Cup. <i>Artificial Organs</i> , 2001, 25, 664-669.	1.0	51
16	Fatigue strength of PMMA bone cement mixed with gentamicin and barium sulphate vs pure PMMA. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2003, 217, 9-12.	1.0	50
17	Surgical repair of the rotator cuff: a biomechanical evaluation of different tendon grasping and bone suture fixation techniques. <i>Clinical Biomechanics</i> , 2003, 18, 721-729.	0.5	46
18	Volume to density relation in adult human bone tissue. <i>Journal of Biomechanics</i> , 2011, 44, 103-108.	0.9	45

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19	Anisotropy and inhomogeneity of the trabecular structure can describe the mechanical strength of osteoarthritic cancellous bone. <i>Journal of Biomechanics</i> , 2010, 43, 1160-1166.	0.9	43
20	The effect of tissue condition and applied load on Vickers hardness of human trabecular bone. <i>Journal of Biomechanics</i> , 2007, 40, 3267-3270.	0.9	41
21	Multiscale investigation of the functional properties of the human femur. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2008, 366, 3319-3341.	1.6	41
22	Comparative study of different tendon grasping techniques for arthroscopic repair of the rotator cuff. <i>Clinical Biomechanics</i> , 2006, 21, 799-803.	0.5	40
23	The muscle standardized femur: A step forward in the replication of numerical studies in biomechanics. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2003, 217, 105-110.	1.0	39
24	Multiscale modelling of the skeleton for the prediction of the risk of fracture. <i>Clinical Biomechanics</i> , 2008, 23, 845-852.	0.5	36
25	Reduced tissue hardness of trabecular bone is associated with severe osteoarthritis. <i>Journal of Biomechanics</i> , 2011, 44, 1593-1598.	0.9	33
26	Endurance testing of hip prostheses: a comparison between the load fixed in ISO 7206 standard and the physiological loads. <i>Clinical Biomechanics</i> , 1999, 14, 339-345.	0.5	32
27	Pre-clinical validation of joint prostheses: A systematic approach. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2009, 2, 120-127.	1.5	31
28	Elastic properties and strain-to-crack-initiation of calcium phosphate bone cements: Revelations of a high-resolution measurement technique. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 74, 428-437.	1.5	28
29	Microindentation on cortical human bone: Effects of tissue condition and indentation location on hardness values. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2009, 223, 913-918.	1.0	25
30	Osteon Classification in Human Fibular Shaft by Circularly Polarized Light. <i>Cells Tissues Organs</i> , 2010, 191, 260-268.	1.3	25
31	Experimentally Achievable Accuracy Using a Digital Image Correlation Technique in measuring Small-Magnitude (0.1%) Homogeneous Strain Fields. <i>Materials</i> , 2018, 11, 751.	1.3	25
32	Human bone hardness seems to depend on tissue type but not on anatomical site in the long bones of an old subject. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2013, 227, 200-206.	1.0	22
33	Suprapectoral biceps tenodesis: A biomechanical comparison of a new "soft anchor" tenodesis technique versus interference screw biceps tendon fixation. <i>Clinical Biomechanics</i> , 2015, 30, 188-194.	0.5	19
34	Nonunion fracture healing: Evaluation of effectiveness of demineralized bone matrix and mesenchymal stem cells in a novel sheep bone nonunion model. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2018, 12, 1972-1985.	1.3	19
35	Radiopacity of tantalum-loaded acrylic bone cement. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2006, 220, 787-791.	1.0	18
36	Long term breeding of the Lmna G609G progeric mouse: Characterization of homozygous and heterozygous models. <i>Experimental Gerontology</i> , 2020, 130, 110784.	1.2	18

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37	The influence of stem insertion rate on the porosity of the cement mantle of hip joint replacements. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2003, 217, 199-205.	1.0	16
38	The effect on the fatigue strength of bone cement of adding sodium fluoride. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2001, 215, 251-253.	1.0	14
39	The muscle standardised femur. Journal of Biomechanics, 2003, 36, 145-146.	0.9	13
40	Subject-specific knee joint model: Design of an experiment to validate a multi-body finite element model. Visual Computer, 2011, 27, 153-159.	2.5	12
41	In Vivo Damage of the Head-Neck Junction in Hard-on-Hard Total Hip Replacements: Effect of Femoral Head Size, Metal Combination, and 12/14 Taper Design. Materials, 2017, 10, 733.	1.3	11
42	An FEA-based protocol for the pre-clinical validation of custom-made hip implants. Journal of Medical Engineering and Technology, 1998, 22, 257-262.	0.8	9
43	Selection of the best element type in the finite element analysis of hip prostheses. Journal of Medical Engineering and Technology, 2000, 24, 145-148.	0.8	8
44	The effect of adding 10% of barium sulphate radiopacifier on the mechanical behaviour of acrylic bone cement. Fatigue and Fracture of Engineering Materials and Structures, 2011, 34, 374-382.	1.7	8
45	A procedure and criterion for bone cement fracture toughness tests. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2004, 218, 445-450.	1.0	7
46	Measurement of apparent mechanical properties of trabecular bone tissue: Accuracy and limitation of digital image correlation technique. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 103, 103542.	1.5	7
47	Endurance verification of custom-made hip prostheses. International Journal of Fatigue, 2000, 22, 865-871.	2.8	6
48	Temperature and ageing condition effects on the characterization of acrylic bone cement. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2001, 215, 113-118.	1.0	6
49	The effect of vacuum mixing and pre-heating the femoral component on the mechanical properties of the cement mantle. Journal of Bone and Joint Surgery: British Volume, 2010, 92-B, 454-460.	3.4	6
50	Repeatable procedure for evaluating taper damage on femoral stems with modular necks. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2011, 99B, 431-439.	1.6	6
51	“Trunionitis”: A Cause for Concern?. Seminars in Arthroplasty, 2012, 23, 248-250.	0.3	6
52	Effect of stem preheating on the fatigue behaviour of bone cement around hip prostheses. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2009, 223, 637-641.	1.0	5
53	In Vitro Comparative Study of Fretting-Corrosion Resistance of Ti6Al4V and Co28Cr6Mo in a Taper Joint Subjected to High Bending Moment. Corrosion, 2017, 73, 1520-1529.	0.5	5
54	An experimental procedure to perform mechanical characterization of small-sized bone specimens from thin femoral cortical wall. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 112, 104046.	1.5	5

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55	Development of a Novel Passive-Dynamic Custom AFO for Drop-Foot Patients: Design Principles, Manufacturing Technique, Mechanical Properties Characterization and Functional Evaluation. Applied Sciences (Switzerland), 2022, 12, 4721.	1.3	5
56	The effect of gentamicin sulphate on the fracture properties of a manually mixed bone cement. Fatigue and Fracture of Engineering Materials and Structures, 2007, 30, 479-488.	1.7	4
57	Letter to the Editor referring to the article "Some basic relationship between density values in cancellous bone and cortical bone" published on Journal of Biomechanics (volume 41, Issue 9, Pages) Tj ETQq1 0.0.784314 rgBT /O		
58	Achievable accuracy of hip screw holding power estimation by insertion torque measurement. Clinical Biomechanics, 2018, 52, 57-65.	0.5	4
59	A case-driven hypothesis for multi-stage crack growth mechanism in fourth-generation ceramic head fracture. Journal of Orthopaedic Surgery and Research, 2022, 17, .	0.9	4
60	Analysis of 16 retrieved proximal cemented femoral stems. Journal of Arthroplasty, 2006, 21, 464-465.	1.5	3
61	MULTIAXIAL MINIATURIZED LOAD CELL FOR MEASURING FORCES ACTING THROUGH A STERNOTOMY. Experimental Techniques, 2006, 30, 23-28.	0.9	3
62	Quantitative Crack Surface Morphology of Bone Cements in Relation to Propagation Rate. Fatigue and Fracture of Engineering Materials and Structures, 2007, 30, 783-795.	1.7	3
63	DIFFERENCES BETWEEN CONTRALATERAL BONES OF THE HUMAN LOWER LIMBS: A MULTISCALE INVESTIGATION. Journal of Mechanics in Medicine and Biology, 2014, 14, 1450032.	0.3	3
64	Suturing the myotendinous junction in total hip arthroplasty: A biomechanical comparison of different stitching techniques. Clinical Biomechanics, 2015, 30, 1077-1082.	0.5	3
65	COMPRESSIVE PROPERTIES OF TRABECULAR BONE RELATED TO MICROCT EVALUATED MORPHOMETRIC PARAMETERS: PRELIMINARY RESULTS. Journal of Mechanics in Medicine and Biology, 2005, 05, 349-355.	0.3	2
66	Fatigue-fractured surfaces of commercial bone cements. Computer Methods in Biomechanics and Biomedical Engineering, 2007, 10, 157-158.	0.9	1
67	Osteoarthritic cancellous bone seems to orientate its structure to compensate for tissue degeneration. IFMBE Proceedings, 2009, , 1389-1391.	0.2	0
68	Fatigue and Wear Characterization of the Preformed Hip Spacer. , 2007, , 121-127.		0
69	Torsional Stability of Total HIP Arthroplasty: In-Vitro and FEM Analysis with New Trends for the Future. , 2020, , 77-86.		0