Fulvia Taddei

List of Publications by Year
in descending order

83 papers	5,040 citations	109137 35 h-index	88477 70 g-index
90 all docs	90 docs citations	90 times ranked	2968 citing authors

#	Article	IF	Citations
1	Mathematical relationships between bone density and mechanical properties: A literature review. Clinical Biomechanics, 2008, 23, 135-146.	0.5	453
2	An accurate estimation of bone density improves the accuracy of subject-specific finite element models. Journal of Biomechanics, 2008, 41, 2483-2491.	0.9	333
3	Subject-specific finite element models implementing a maximum principal strain criterion are able to estimate failure risk and fracture location on human femurs tested in vitro. Journal of Biomechanics, 2008, 41, 356-367.	0.9	304
4	Subject-specific finite element models can accurately predict strain levels in long bones. Journal of Biomechanics, 2007, 40, 2982-2989.	0.9	274
5	The material mapping strategy influences the accuracy of CT-based finite element models of bones: An evaluation against experimental measurements. Medical Engineering and Physics, 2007, 29, 973-979.	0.8	251
6	An improved method for the automatic mapping of computed tomography numbers onto finite element models. Medical Engineering and Physics, 2004, 26, 61-69.	0.8	234
7	Subject-specific finite element models of long bones: An in vitro evaluation of the overall accuracy. Journal of Biomechanics, 2006, 39, 2457-2467.	0.9	212
8	Accuracy of finite element predictions in sideways load configurations for the proximal human femur. Journal of Biomechanics, 2012, 45, 394-399.	0.9	158
9	Are Subject-Specific Musculoskeletal Models Robust to the Uncertainties in Parameter Identification?. PLoS ONE, 2014, 9, e112625.	1.1	146
10	Automatic generation of accurate subject-specific bone finite element models to be used in clinical studies. Journal of Biomechanics, 2004, 37, 1597-1605.	0.9	139
11	Multiple loading conditions analysis can improve the association between finite element bone strength estimates and proximal femur fractures: A preliminary study in elderly women. Bone, 2014, 67, 71-80.	1.4	135
12	Compressive behaviour of child and adult cortical bone. Bone, 2011, 49, 769-776.	1.4	129
13	To what extent can linear finite element models of human femora predict failure under stance and fall loading configurations?. Journal of Biomechanics, 2014, 47, 3531-3538.	0.9	125
14	A modified method for assigning material properties to FE models of bones. Medical Engineering and Physics, 2008, 30, 444-453.	0.8	122
15	In vitro replication of spontaneous fractures of the proximal human femur. Journal of Biomechanics, 2007, 40, 2837-2845.	0.9	112
16	Are spontaneous fractures possible? An example of clinical application for personalised, multiscale neuro-musculo-skeletal modelling. Journal of Biomechanics, 2012, 45, 421-426.	0.9	109
17	Finite-Element Modeling of Bones From CT Data: Sensitivity to Geometry and Material Uncertainties. IEEE Transactions on Biomedical Engineering, 2006, 53, 2194-2200.	2.5	88
18	Experimental Validation of a Finite Element Model of a Human Cadaveric Tibia. Journal of Biomechanical Engineering, 2008, 130, 031016.	0.6	87

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19	nmsBuilder : Freeware to create subject-specific musculoskeletal models for OpenSim. Computer Methods and Programs in Biomedicine, 2017, 152, 85-92.	2.6	81
20	Influence of weak hip abductor muscles on joint contact forces during normal walking: probabilistic modeling analysis. Journal of Biomechanics, 2013, 46, 2186-2193.	0.9	68
21	Changes in femur stress after hip resurfacing arthroplasty: Response to physiological loads. Clinical Biomechanics, 2007, 22, 440-448.	0.5	65
22	Mechanical testing of bones: the positive synergy of finiteâ€“element models andin vitroexperiments. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 2725-2763.	1.6	63
23	Strain distribution in the proximal human femoral metaphysis. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2009, 223, 273-288.	1.0	62
24	Specimen-specific modeling of hip fracture pattern and repair. Journal of Biomechanics, 2014, 47, 536-543.	0.9	58
25	Sensitivity of a subject-specific musculoskeletal model to the uncertainties on the joint axes location. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 1555-1563.	0.9	58
26	The multimod application framework: A rapid application development tool for computer aided medicine. Computer Methods and Programs in Biomedicine, 2007, 85, 138-151.	2.6	51
27	Strain distribution in the proximal Human femur during in vitro simulated sideways fall. Journal of Biomechanics, 2015, 48, 2130-2143.	0.9	46
28	Mechanical strength of a femoral reconstruction in paediatric oncology: A finite element study. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2003, 217, 111-119.	1.0	42
29	Effect of sub-optimal neuromotor control on the hip joint load during level walking. Journal of Biomechanics, 2011, 44, 1716-1721.	0.9	42
30	Multiscale investigation of the functional properties of the human femur. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2008, 366, 3319-3341.	1.6	41
31	Biomechanics Modeling of the Musculoskeletal Apparatus: Status and Key Issues. Proceedings of the IEEE, 2006, 94, 725-739.	16.4	40
32	A novel approach to estimate trabecular bone anisotropy using a database approach. Journal of Biomechanics, 2013, 46, 2356-2362.	0.9	40
33	Automatic Generation of Finite Element Meshes from Computed Tomography Data. Critical Reviews in Biomedical Engineering, 2003, 31, 27-72.	0.5	40
34	Vascularised fibula graft inlaid in a massive bone allograft: Considerations on the bio-mechanical behaviour of the combined graft in segmental bone reconstructions after sarcoma resection. Injury, 2008, 39, 68-74.	0.7	37
35	Multiscale modelling of the skeleton for the prediction of the risk of fracture. Clinical Biomechanics, 2008, 23, 845-852.	0.5	36
36	Femoral loads during gait in a patient with massive skeletal reconstruction. Clinical Biomechanics, 2012, 27, 273-280.	0.5	36

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37	Multimod Data Manager: A tool for data fusion. Computer Methods and Programs in Biomedicine, 2007, 87, 148-159.	2.6	34
38	Navigation in Orthognathic Surgery: 3D Accuracy. Facial Plastic Surgery, 2015, 31, 463-473.	0.5	34
39	Effect of lower-limb joint models on subject-specific musculoskeletal models and simulations of daily motor activities. Journal of Biomechanics, 2015, 48, 4198-4205.	0.9	33
40	Pre-clinical validation of joint prostheses: A systematic approach. Journal of the Mechanical Behavior of Biomedical Materials, 2009, 2, 120-127.	1.5	31
41	A new meshless approach for subject-specific strain prediction in long bones: Evaluation of accuracy. Clinical Biomechanics, 2008, 23, 1192-1199.	0.5	27
42	Experimental validation of a finite element model of a composite tibia. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2007, 221, 315-324.	1.0	24
43	Stress shielding and stress concentration of contemporary epiphyseal hip prostheses. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2009, 223, 27-44.	1.0	24
44	Extensive Risk Analysis of Mechanical Failure for an Epiphyseal Hip Prothesis: A Combined Numericalâ€"Experimental Approach. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2011, 225, 126-140.	1.0	23
45	European Society of Biomechanics S.M. Perren Award 2014: Safety factor of the proximal femur during gait: A population-based finite element study. Journal of Biomechanics, 2014, 47, 3433-3440.	0.9	23
46	Biomechanical robustness of a new proximal epiphyseal hip replacement to patient variability and surgical uncertainties: A FE study. Medical Engineering and Physics, 2012, 34, 161-171.	0.8	22
47	Comprehensive evaluation of PCA-based finite element modelling of the human femur. Medical Engineering and Physics, 2014, 36, 1246-1252.	0.8	22
48	Can CT image deblurring improve finite element predictions at the proximal femur?. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 63, 337-351.	1.5	22
49	Cortical bone mapping improves finite element strain prediction accuracy at the proximal femur. Bone, 2020, 136, 115348.	1.4	22
50	Multimodal fusion of biomedical data at different temporal and dimensional scales. Computer Methods and Programs in Biomedicine, 2011, 102, 227-237.	2.6	21
51	Inter-individual variability of bone density and morphology distribution in the proximal femur and T12 vertebra. Bone, 2014, 60, 213-220.	1.4	21
52	A new software tool for 3D motion analyses of the musculo-skeletal system. Clinical Biomechanics, 2006, 21, 870-879.	0.5	20
53	Computational tools for calculating alternative muscle force patterns during motion: A comparison of possible solutions. Journal of Biomechanics, 2013, 46, 2097-2100.	0.9	20
54	Virtual palpation of skeletal landmarks with multimodal display interfaces. Informatics for Health and Social Care, 2007, 32, 191-198.	1.0	19

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55	Muscle discretization affects the loading transferred to bones in lower-limb musculoskeletal models. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2012, 226, 161-169.	1.0	19
56	New aspects and approaches in pre-operative planning of hip reconstruction: a computer simulation. Langenbeck's Archives of Surgery, 2004, 389, 400-404.	0.8	18
57	Finite Element Modeling of Resurfacing Hip Prosthesis: Estimation of Accuracy Through Experimental Validation. Journal of Biomechanical Engineering, 2010, 132, 021002.	0.6	18
58	A new hip epiphyseal prosthesis: Design revision driven by a validated numerical procedure. Medical Engineering and Physics, 2011, 33, 1203-1211.	0.8	17
59	Locally measured microstructural parameters are better associated with vertebral strength than whole bone density. Osteoporosis International, 2014, 25, 1285-1296.	1.3	17
60	Tibia Adaptation after Fibula Harvesting: An in Vivo Quantitative Study. Clinical Orthopaedics and Related Research, 2009, 467, 2149-2158.	0.7	16
61	Large-Scale Finite Element Analysis of Human Cancellous Bone Tissue Micro Computer Tomography Data: A Convergence Study. Journal of Biomechanical Engineering, 2014, 136, 101013.	0.6	15
62	Sensitivity of the Primary Stability of a Cementless Hip Stem to Its Position and Orientation. Artificial Organs, 2008, 32, 555-560.	1.0	14
63	Enabling the interactive display of large medical volume datasets by multiresolution bricking. Journal of Supercomputing, 2010, 51, 3-19.	2.4	13
64	Leftâ€“right differences in the proximal femurâ€™s strength of post-menopausal women: a multicentric finite element study. Osteoporosis International, 2016, 27, 1519-1528.	1.3	12
65	Growth and remodelling of the autologous bone transplant used in a pediatric femoral reconstruction. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2002, 216, 95-104.	1.0	11
66	Abductor muscle strengthening in THA patients operated with minimally-invasive anterolateral approach for developmental hip dysplasia. HIP International, 2021, 31, 66-74.	0.9	11
67	Effect of a virtual reality interface on the learning curve and on the accuracy of a surgical planner for total hip replacement. Computer Methods and Programs in Biomedicine, 2010, 97, 86-91.	2.6	10
68	Assessment of femoral neck fracture risk for a novel proximal epiphyseal hip prosthesis. Clinical Biomechanics, 2011, 26, 585-591.	0.5	9
69	Custom-made 3D-Printed Prosthesis in Periacetabular Resections Through a Novel Ileo-adductor Approach. Orthopedics, 2022, 45, 1-5.	0.5	9
70	Component positioning and ceramic damage in cementless ceramic-on-ceramic total hip arthroplasty. Journal of Orthopaedic Science, 2019, 24, 643-651.	0.5	8
71	Effects of Hip Abductor Strengthening on Musculoskeletal Loading in Hip Dysplasia Patients after Total Hip Replacement. Applied Sciences (Switzerland), 2021, 11, 2123.	1.3	7
72	Finite Element Assessment of Bone Fragility from Clinical Images. Current Osteoporosis Reports, 2021, 19, 688-698.	1.5	7

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73	Kinematic study of a reconstructed hip in paediatric oncology. Medical and Biological Engineering and Computing, 2005, 43, 102-106.	1.6	5
74	Relationship between bone adaptation and in-vivo mechanical stimulus in biological reconstructions after bone tumor: A biomechanical modeling analysis. Clinical Biomechanics, 2017, 42, 99-107.	0.5	5
75	Bone adaptation of a biologically reconstructed femur after Ewing sarcoma: Long-term morphological and densitometric evolution. Skeletal Radiology, 2017, 46, 1271-1276.	1.2	5
76	3D Multiscale Visualisation for Medical Datasets. , 2008, , .		4
77	Fast 3D mesh generation of femur based on planar parameterization and morphing. , 2008, , .		4
78	Letter to the Editor referring to the article â€˜Some basic relationship between density values in cancellous bone and cortical boneâ€™ published on Journal of Biomechanics (volume 41, Issue 9, Pages) Tj ETQq0 0 0 rgBT /Overlock 10	0.0	4
79	THE EFFECT OF COMPUTED TOMOGRAPHY CURRENT REDUCTION ON PROXIMAL FEMUR SUBJECT-SPECIFIC FINITE ELEMENT MODELS. Journal of Mechanics in Medicine and Biology, 2017, 17, 1750012.	0.3	4
80	Biomechanical Testing of the Proximal Femoral Epiphysis: Intact and Implanted Condition. , 2006, , 431.		3
81	MULTIMODAL DISPLAY INTERFACE FOR PLANNING AND MONITORING COMPLEX SKELETAL RECONSTRUCTIONS. Journal of Mechanics in Medicine and Biology, 2005, 05, 465-468.	0.3	1
82	Letter to the Editor commenting on â€œMultilevel finite element modeling for the prediction of local cellular deformation in bone,â€•Deligianni DD and Apostolopoulos CA (2008) Biomech Model Mechanobiol 7(2):151â€“159. Biomechanics and Modeling in Mechanobiology, 2009, 8, 427-428.	1.4	1
83	A taper-fit junction to improve long bone reconstruction: A parametric In Silico model. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 124, 104790.	1.5	1