Dennis Janssen

List of Publications by Year in descending order

94 papers	1,809 citations	304368 22 h-index	360668 35 g-index
95 all docs	95 docs citations	95 times ranked	1614 citing authors

#	Article	IF	Citations
1	Computational tibial bone remodeling over a population after total knee arthroplasty: A comparative study. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2022, 110, 776-786.	1.6	5
2	Experimental measurements of femoral primary stability in two cementless posterior-stabilized knee replacement implants. Medical Engineering and Physics, 2022, 99, 103734.	0.8	3
3	Predicting friction at the bone â€“ Implant interface in cementless total knee arthroplasty. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 128, 105103.	1.5	5
4	A FE study on the effect of interference fit and coefficient of friction on the micromotions and interface gaps of a cementless PEEK femoral component. Journal of Biomechanics, 2022, 137, 111057.	0.9	8
5	The sensitivity of an anatomical coordinate system to anatomical variation and its effect on the description of knee kinematics as obtained from dynamic CT imaging.. Medical Engineering and Physics, 2022, 102, 103781.	0.8	1
6	Dual-functional porous and cisplatin-loaded polymethylmethacrylate cement for reconstruction of load-bearing bone defect kills bone tumor cells. Bioactive Materials, 2022, 15, 120-130.	8.6	8
7	The effect of different interference fits on the primary fixation of a cementless femoral component during experimental testing. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 113, 104189.	1.5	8
8	Decreased stress shielding with a PEEK femoral total knee prosthesis measured in validated computational models. Journal of Biomechanics, 2021, 118, 110270.	0.9	25
9	No effect in primary stability after increasing interference fit in cementless TKA tibial components. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 118, 104435.	1.5	3
10	Development of a crushable foam model for human trabecular bone. Medical Engineering and Physics, 2021, 96, 53-63.	0.8	8
11	Population-based effect of total knee arthroplasty alignment on simulated tibial bone remodeling. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 111, 104014.	1.5	5
12	The Effects of Cyclic Loading and Motion on the Implantâ€“Cement Interface and Cement Mantle of PEEK and Cobaltâ€“Chromium Femoral Total Knee Arthroplasty Implants: A Preliminary Study. Materials, 2020, 13, 3323.	1.3	13
13	A novel approach for optimal graft positioning and tensioning in anterior cruciate ligament reconstructive surgery based on the finite element modeling technique. Knee, 2020, 27, 384-396.	0.8	17
14	The implications of non-anatomical positioning of a meniscus prosthesis on predicted human knee joint biomechanics. Medical and Biological Engineering and Computing, 2020, 58, 1341-1355.	1.6	4
15	Towards a Standard Approach to Assess Tibial Bone Loss Following Total Knee Arthroplasty. Clinical Reviews in Bone and Mineral Metabolism, 2020, 18, 72-86.	1.3	2
16	The effects of manufacturing tolerances and assembly force on the volumetric wear at the taper junction in modular total hip arthroplasty. Computer Methods in Biomechanics and Biomedical Engineering, 2019, 22, 1061-1072.	0.9	20
17	Quantification of human bone microarchitecture damage in press-fit femoral knee implantation using HR-pQCT and digital volume correlation. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 97, 278-287.	1.5	28
18	Feasibility study of intraoperative coneâ€beam CT navigation for benign bone tumour surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2019, 15, e1993.	1.2	10

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19	A noninvasive MRI based approach to estimate the mechanical properties of human knee ligaments. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 93, 43-51.	1.5	8
20	Inducing targeted failure in cadaveric testing of 3-segment spinal units with and without simulated metastases. Medical Engineering and Physics, 2018, 51, 104-110.	0.8	4
21	The peripheral soft tissues should not be ignored in the finite element models of the human knee joint. Medical and Biological Engineering and Computing, 2018, 56, 1189-1199.	1.6	9
22	Flexing and downsizing the femoral component is not detrimental to patellofemoral biomechanics in posterior-referencing cruciate-retaining total knee arthroplasty. Knee Surgery, Sports Traumatology, Arthroscopy, 2018, 26, 3377-3385.	2.3	20
23	Anterior referencing of tibial slope in total knee arthroplasty considerably influences knee kinematics: a musculoskeletal simulation study. Knee Surgery, Sports Traumatology, Arthroscopy, 2018, 26, 1540-1548.	2.3	21
24	Finite element wear prediction using adaptive meshing at the modular taper interface of hip implants. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 77, 616-623.	1.5	22
25	Biomechanical comparison of two different locking plates for open wedge high tibial osteotomy. Journal of Orthopaedic Science, 2018, 23, 105-111.	0.5	11
26	Evaluation of interference fit and bone damage of an uncemented femoral knee implant. Clinical Biomechanics, 2018, 51, 1-9.	0.5	13
27	Do Stem Design and Surgical Approach Influence Early Aseptic Loosening in Cementless THA?. Clinical Orthopaedics and Related Research, 2018, 476, 1212-1220.	0.7	36
28	Caseâ€specific nonâ€linear finite element models to predict failure behavior in two functional spinal units. Journal of Orthopaedic Research, 2018, 36, 3208-3218.	1.2	19
29	Relaxation of the MCL after an Open-Wedge High Tibial Osteotomy results in decreasing contact pressures of the knee over time. Knee Surgery, Sports Traumatology, Arthroscopy, 2017, 25, 800-807.	2.3	17
30	A preclinical numerical assessment of a polyetheretherketone femoral component in total knee arthroplasty during gait. Journal of Experimental Orthopaedics, 2017, 4, 3.	0.8	38
31	Evaluation of a Surrogate Contact Model in Force-Dependent Kinematic Simulations of Total Knee Replacement. Journal of Biomechanical Engineering, 2017, 139, .	0.6	12
32	A combined experimental and finite element approach to analyse the fretting mechanism of the headâ€“stem taper junction in total hip replacement. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2017, 231, 862-870.	1.0	17
33	A modelling approach demonstrating micromechanical changes in the tibial cemented interface due to in vivo service. Journal of Biomechanics, 2017, 56, 19-25.	0.9	3
34	Improving stress shielding following total hip arthroplasty by using a femoral stem made of Î² type Ti-33.6Nb-4Sn with a Youngâ€™s modulus gradation. Journal of Biomechanics, 2017, 63, 135-143.	0.9	46
35	The influence of ligament modelling strategies on the predictive capability of finite element models of the human knee joint. Journal of Biomechanics, 2017, 65, 1-11.	0.9	64
36	Fixation strength of a polyetheretherketone femoral component in total knee arthroplasty. Medical Engineering and Physics, 2017, 49, 157-162.	0.8	10

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37	Experimental and computational analysis of micromotions of an uncemented femoral knee implant using elastic and plastic bone material models. Journal of Biomechanics, 2017, 61, 137-143.	0.9	16
38	Experimental pre-clinical assessment of the primary stability of two cementless femoral knee components. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 75, 322-329.	1.5	12
39	The mechanical response of a polyetheretherketone femoral knee implant under a deep squatting loading condition. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2017, 231, 1204-1212.	1.0	30
40	Strain shielding in trabecular bone at the tibial cement-bone interface. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 66, 181-186.	1.5	16
41	Tibial component with and without stem extension in a trabecular metal cone construct. Knee Surgery, Sports Traumatology, Arthroscopy, 2017, 25, 3644-3652.	2.3	17
42	Development of a fast curing tissue adhesive for meniscus tear repair. Journal of Materials Science: Materials in Medicine, 2017, 28, 1.	1.7	45
43	Changes in microgaps, micromotion, and trabecular strain from interlocked cementâ€trabecular bone interfaces in total knee replacements with in vivo service. Journal of Orthopaedic Research, 2016, 34, 1019-1025.	1.2	6
44	FE analysis of the effects of simplifications in experimental testing on micromotions of uncemented femoral knee implants. Journal of Orthopaedic Research, 2016, 34, 812-819.	1.2	17
45	Experimental Measurement of the Static Coefficient of Friction at the Tiâ€“Ti Taper Connection in Total Hip Arthroplasty. Journal of Biomechanical Engineering, 2016, 138, 4032446.	0.6	8
46	Experimental and computational micromechanics at the tibial cement-trabeculae interface. Journal of Biomechanics, 2016, 49, 1641-1648.	0.9	12
47	A comparison between dynamic implicit and explicit finite element simulations of the native knee joint. Medical Engineering and Physics, 2016, 38, 1123-1130.	0.8	28
48	Functional biomechanical performance of a novel anatomically shaped polycarbonate urethane total meniscus replacement. Knee Surgery, Sports Traumatology, Arthroscopy, 2016, 24, 1485-1494.	2.3	19
49	In-situ mechanical behavior and slackness of the anterior cruciate ligament at multiple knee flexion angles. Medical Engineering and Physics, 2016, 38, 209-215.	0.8	19
50	TLEM 2.0 â€“ A comprehensive musculoskeletal geometry dataset for subject-specific modeling of lower extremity. Journal of Biomechanics, 2015, 48, 734-741.	0.9	136
51	The Effect of Surface Morphology on the Primary Fixation Strength of Uncemented Femoral Knee Prosthesis: A Cadaveric Study. Journal of Arthroplasty, 2015, 30, 300-307.	1.5	14
52	Incorporating in vivo fall assessments in the simulation of femoral fractures with finite element models. Medical Engineering and Physics, 2015, 37, 593-598.	0.8	4
53	Material properties of the human posterior knee capsule. Bio-Medical Materials and Engineering, 2015, 25, 177-187.	0.4	3
54	The sensitivity of cartilage contact pressures in the knee joint to the size and shape of an anatomically shaped meniscal implant. Journal of Biomechanics, 2015, 48, 1427-1435.	0.9	24

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55	An experimental study to investigate biomechanical aspects of the initial stability of press-fit implants. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 42, 177-185.	1.5	25
56	Releasing the circumferential fixation of the medial meniscus does not affect its kinematics. Knee, 2014, 21, 1033-1038.	0.8	8
57	3D geometry analysis of the medial meniscus â€“ a statistical shape modeling approach. Journal of Anatomy, 2014, 225, 395-402.	0.9	21
58	ACETABULAR LOAD-TRANSFER AND MECHANICAL STABILITY: A FINITE ELEMENT ANALYSIS COMPARING DIFFERENT CEMENTLESS SOCKETS. Journal of Mechanics in Medicine and Biology, 2014, 14, 1450063.	0.3	1
59	Improving peri-prosthetic bone adaptation around cementless hip stems: A clinical and finite element study. Medical Engineering and Physics, 2014, 36, 345-353.	0.8	26
60	Generating finite element models of the knee: How accurately can we determine ligament attachment sites from MRI scans?. Medical Engineering and Physics, 2014, 36, 701-707.	0.8	18
61	Toward a method to simulate the process of bone ingrowth in cementless THA using finite element method. Medical Engineering and Physics, 2013, 35, 543-548.	0.8	8
62	Response to the comments on â€˜Experimental versus computational analysis of micromotions at the implant - bone interfaceâ€™. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2012, 226, 420-421.	1.0	0
63	On stabilization of loosened hip stems via cement injection into osteolytic cavities. Clinical Biomechanics, 2012, 27, 807-812.	0.5	10
64	The assessment of the risk of fracture in femora with metastatic lesions. Journal of Bone and Joint Surgery: British Volume, 2012, 94-B, 1135-1142.	3.4	55
65	A new approach to quantify trabecular resorption adjacent to cemented knee arthroplasty. Journal of Biomechanics, 2012, 45, 711-715.	0.9	25
66	Toward a more realistic prediction of periâ€prosthetic micromotions. Journal of Orthopaedic Research, 2012, 30, 1147-1154.	1.2	21
67	Interface micromechanics of transverse sections from retrieved cemented hip reconstructions: an experimental and finite element comparison. Journal of Materials Science: Materials in Medicine, 2012, 23, 2023-2035.	1.7	2
68	Effect of cementing technique and cement type on thermal necrosis in hip resurfacing arthroplastyâ€”a numerical study. Journal of Orthopaedic Research, 2012, 30, 364-370.	1.2	23
69	Mixed-mode loading of the cementâ€“bone interface: a finite element study. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 145-155.	0.9	3
70	Morphology based cohesive zone modeling of the cementâ€“bone interface from postmortem retrievals. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 1492-1503.	1.5	4
71	The effect of bone ingrowth depth on the tensile and shear strength of the implantâ€“bone e-beam produced interface. Journal of Materials Science: Materials in Medicine, 2011, 22, 2339-2346.	1.7	12
72	Balancing incompatible endoprosthetic design goals: A combined ingrowth and bone remodeling simulation. Medical Engineering and Physics, 2011, 33, 374-380.	0.8	28

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73	Does highâ€flexion total knee arthroplasty promote early loosening of the femoral component?. Journal of Orthopaedic Research, 2011, 29, 976-983.	1.2	61
74	Multi-axial loading micromechanics of the cementâ€“bone interface in postmortem retrievals and lab-prepared specimens. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 366-374.	1.5	14
75	The behavior of the micro-mechanical cementâ€“bone interface affects the cement failure in total hip replacement. Journal of Biomechanics, 2011, 44, 228-234.	0.9	19
76	Mixed-mode failure strength of implantâ€“cement interface specimens with varying surface roughness. Journal of Biomechanics, 2011, 44, 780-783.	0.9	20
77	Experimental versus Computational Analysis of Micromotions at the Implantâ€”Bone Interface. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2011, 225, 8-15.	1.0	21
78	The mechanical effects of different levels of cement penetration at the cementâ€“bone interface. Journal of Biomechanics, 2010, 43, 1167-1175.	0.9	53
79	The effect of cement creep and cement fatigue damage on the micromechanics of the cementâ€“bone interface. Journal of Biomechanics, 2010, 43, 3028-3034.	0.9	14
80	Computational assessment of press-fit acetabular implant fixation: The effect of implant design, interference fit, bone quality, and frictional properties. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2010, 224, 67-75.	1.0	40
81	The importance of a thick cement mantle depends on stem geometry and stemâ€”cement interfacial bonding. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2009, 223, 315-327.	1.0	3
82	Finite element simulation of cementâ€bone interface micromechanics: A comparison to experimental results. Journal of Orthopaedic Research, 2009, 27, 1312-1318.	1.2	37
83	Fatigue creep damage at the cementâ€“bone interface: An experimental and a micro-mechanical finite element study. Journal of Biomechanics, 2009, 42, 2513-2519.	0.9	21
84	Finite element analysis of the effect of cementing concepts on implant stability and cement fatigue failure. Monthly Notices of the Royal Astronomical Society: Letters, 2009, 80, 319-324.	1.2	30
85	Micro-mechanical modeling of the cementâ€“bone interface: The effect of friction, morphology and material properties on the micromechanical response. Journal of Biomechanics, 2008, 41, 3158-3163.	0.9	59
86	Experimental micromechanics of the cementâ€“bone interface. Journal of Orthopaedic Research, 2008, 26, 872-879.	1.2	56
87	FINITE ELEMENT SIMULATION OF CEMENT-BONE INTERFACE MICRO-MECHANICS. Journal of Biomechanics, 2008, 41, S90.	0.9	1
88	Thin cement mantles surrounding femoral hip implants might not be deleterious in all cases. Clinical Biomechanics, 2008, 23, 500-501.	0.5	1
89	Mechanical implications of interfacial defects between femoral hip implants and cement: A finite element analysis of interfacial gaps and interfacial porosity. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2008, 222, 1037-1047.	1.0	1
90	Finite Element-based Preclinical Testing of Cemented Total Hip Implants. Clinical Orthopaedics and Related Research, 2007, 456, 138-147.	0.7	30

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91	Finite Element Analysis of the Long-Term Fixation Strength of Cemented Ceramic Cups. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2006, 220, 533-539.	1.0	8
92	Why would cement porosity reduction be clinically irrelevant, while experimental data show the contrary. Journal of Orthopaedic Research, 2005, 23, 691-697.	1.2	22
93	The contradictory effects of pores on fatigue cracking of bone cement. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2005, 74B, 747-753.	1.6	22
94	Finite-element analysis of failure of the Capital Hip designs. Journal of Bone and Joint Surgery: British Volume, 2005, 87-B, 1561-1567.	3.4	17