

Markus O Heller

List of Publications by Year in descending order

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97
papers

7,793
citations

93792

39
h-index

56606

87
g-index

109
all docs

109
docs citations

109
times ranked

5977
citing authors

#	ARTICLE	IF	CITATIONS
1	Finite element analysis in orthopedic biomechanics. , 2022, , 637-658.		1
2	On the 3D Nature of the Magpie (Aves: Pica pica) Functional Hindlimb Anatomy During the Take-Off Jump. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 676894.	2.0	1
3	Assessing Movement Quality in Youth Footballers: The Relationship between Hip and Lower Limb Movement Screen and Functional Movement Screen. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 9298.	1.3	2
4	Knieendoprothetik: Biomechanik des Kniegelenks. <i>Springer Reference Medizin</i> , 2021, , 1-18.	0.0	0
5	Statistical Finite Element Analysis of the Mechanical Response of the Intact Human Femur Using a Wide Range of Individual Anatomies. <i>Lecture Notes in Computational Vision and Biomechanics</i> , 2020, , 171-180.	0.5	0
6	A systematic review of the discriminating biomechanical parameters during the single leg squat. <i>Physical Therapy in Sport</i> , 2019, 36, 78-91.	0.8	21
7	Retraining in a Female Elite Rower with Persistent Symptoms Post-Arthroscopy for Femoroacetabular Impingement Syndrome: A Proof-of-Concept Case Report. <i>Journal of Functional Morphology and Kinesiology</i> , 2019, 4, 24.	1.1	4
8	ASSESSING MOVEMENT QUALITY USING THE HIP AND LOWER LIMB MOVEMENT SCREEN: DEVELOPMENT, RELIABILITY AND POTENTIAL APPLICATIONS. <i>Journal of Musculoskeletal Research</i> , 2019, 22, 1950008.	0.1	1
9	On intrinsic equivalences of the finite helical axis, the instantaneous helical axis, and the SARA approach. A mathematical perspective. <i>Journal of Biomechanics</i> , 2019, 84, 4-10.	0.9	21
10	Scapular kinematics in professional wheelchair tennis players. <i>Clinical Biomechanics</i> , 2018, 53, 7-13.	0.5	12
11	Impact of antagonistic muscle co-contraction on in vivo knee contact forces. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2018, 15, 101.	2.4	42
12	Accuracy of movement quality screening to document effects of neuromuscular control retraining exercises in a young ex-footballer with hip and groin symptoms: A proof of concept case study. <i>Medical Hypotheses</i> , 2018, 120, 116-120.	0.8	7
13	Predicting sport and occupational lower extremity injury risk through movement quality screening: a systematic review. <i>British Journal of Sports Medicine</i> , 2017, 51, 580-585.	3.1	62
14	High prevalence of acetabular retroversion in asymptomatic adults. <i>Bone and Joint Journal</i> , 2017, 99-B, 1584-1589.	1.9	13
15	Validation of CT image-based software for three-dimensional measurement of acetabular coverage profile. <i>Technology and Health Care</i> , 2017, 25, 989-1004.	0.5	3
16	Assessing the Effect of Unicondylar Knee Arthroplasty on Proximal Tibia Bone Strains Using Digital Image Correlation. <i>International Journal of Biomedical Engineering and Science</i> , 2017, 4, 01-06.	1.0	1
17	The Restoration of Passive Rotational Tibio-Femoral Laxity after Anterior Cruciate Ligament Reconstruction. <i>PLoS ONE</i> , 2016, 11, e0159600.	1.1	19
18	Exploring inter-subject anatomic variability using a population of patient-specific femurs and a statistical shape and intensity model. <i>Medical Engineering and Physics</i> , 2015, 37, 995-1007.	0.8	22

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19	Inter-subject variability effects on the primary stability of a short cementless femoral stem. <i>Journal of Biomechanics</i> , 2015, 48, 1032-1042.	0.9	23
20	Standardized Loads Acting in Knee Implants. <i>PLoS ONE</i> , 2014, 9, e86035.	1.1	262
21	Towards understanding knee joint laxity: Errors in non-invasive assessment of joint rotation can be corrected. <i>Medical Engineering and Physics</i> , 2014, 36, 889-895.	0.8	11
22	European Society of Biomechanics S.M. Perren Award 2014: Safety factor of the proximal femur during gait: A population-based finite element study. <i>Journal of Biomechanics</i> , 2014, 47, 3433-3440.	0.9	23
23	Modulation of the Relationship Between External Knee Adduction Moments and Medial Joint Contact Forces Across Subjects and Activities. <i>Arthritis and Rheumatology</i> , 2014, 66, 1218-1227.	2.9	73
24	Insight from direct in vivo measurements on the force distribution across the human knee in flexion: can it be modified, and can the internal loads be predicted from external measurements?. <i>Osteoarthritis and Cartilage</i> , 2014, 22, S100.	0.6	1
25	Omnidirectional displacements for deformable surfaces. <i>Medical Image Analysis</i> , 2013, 17, 429-441.	7.0	18
26	ACL Deficient Patients With Passive Knee Joint Instability Overcompensate During Active Movements. <i>Arthroscopy - Journal of Arthroscopic and Related Surgery</i> , 2013, 29, e181-e182.	1.3	0
27	Motor control retraining exercises for shoulder impingement: effects on function, muscle activation, and biomechanics in young adults. <i>Journal of Shoulder and Elbow Surgery</i> , 2013, 22, e11-e19.	1.2	138
28	Real time visualization of femoroacetabular impingement and subluxation using 320â€ slice computed tomography. <i>Journal of Orthopaedic Research</i> , 2013, 31, 275-281.	1.2	54
29	Anterior Cruciate Ligamentâ€ Deficient Patients With Passive Knee Joint Laxity Have a Decreased Range of Anterior-Posterior Motion During Active Movements. <i>American Journal of Sports Medicine</i> , 2013, 41, 1051-1057.	1.9	46
30	Magnetic Resonance Imaging Analysis of Rotational Alignment in Patients With Patellar Dislocations. <i>American Journal of Sports Medicine</i> , 2013, 41, 51-57.	1.9	136
31	Knee Adduction Moment and Medial Contact Force â€ Facts about Their Correlation during Gait. <i>PLoS ONE</i> , 2013, 8, e81036.	1.1	180
32	IN VIVO GLUTEUS MEDIUS VOLUME AND SHAPE VARIATIONS ACROSS GENDER AND DISEASE STATUS. <i>Journal of Biomechanics</i> , 2012, 45, S358.	0.9	0
33	The difference between stretching and splitting muscle trauma during THA seems not to play a dominant role in influencing periprosthetic BMD changes. <i>Clinical Biomechanics</i> , 2012, 27, 813-818.	0.5	11
34	Effective marker placement for functional identification of the centre of rotation at the hip. <i>Gait and Posture</i> , 2012, 36, 482-486.	0.6	33
35	The quality of bone surfaces may govern the use of model based fluoroscopy in the determination of joint laxity. <i>Medical Engineering and Physics</i> , 2012, 34, 1427-1432.	0.8	13
36	Paper 82: Regulation of Joint Contact Area is an Essential Mechanism for Maintaining Physiological Patellofemoral Joint Mechanics. <i>Arthroscopy - Journal of Arthroscopic and Related Surgery</i> , 2012, 28, e382-e383.	1.3	0

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37	Generic Rules of Mechano-Regulation Combined with Subject Specific Loading Conditions Can Explain Bone Adaptation after THA. PLoS ONE, 2012, 7, e36231.	1.1	27
38	Extreme Levels of Noise Constitute a Key Neuromuscular Deficit in the Elderly. PLoS ONE, 2012, 7, e48449.	1.1	28
39	Ultrasound-based computer navigation: An accurate measurement tool for determining combined anteversion?. Technology and Health Care, 2012, 20, 565-573.	0.5	2
40	Standardized AP radiographs do not provide reliable diagnostic measures for the assessment of acetabular retroversion. Journal of Orthopaedic Research, 2012, 30, 1369-1376.	1.2	56
41	Ultrasound-based computer navigation of the acetabular component: a feasibility study. Archives of Orthopaedic and Trauma Surgery, 2012, 132, 517-525.	1.3	10
42	The direct lateral approach: impact on gait patterns, foot progression angle and pain in comparison with a minimally invasive anterolateral approach. Archives of Orthopaedic and Trauma Surgery, 2012, 132, 725-731.	1.3	27
43	Patellofemoral joint contact forces during activities with high knee flexion. Journal of Orthopaedic Research, 2012, 30, 408-415.	1.2	77
44	Kinematic measures for assessing gait stability in elderly individuals: a systematic review. Journal of the Royal Society Interface, 2011, 8, 1682-1698.	1.5	310
45	Paper # 101: Rotational Malalignment of the Femur Constitutes a Dominating Factor in Patients with Patellofemoral Instability. Arthroscopy - Journal of Arthroscopic and Related Surgery, 2011, 27, e134-e135.	1.3	0
46	Predicted knee kinematics and kinetics during functional activities using motion capture and musculoskeletal modelling in healthy older people. Gait and Posture, 2011, 33, 268-273.	0.6	39
47	Validation of a CT image based software for three-dimensional measurement of acetabular cup orientation. Technology and Health Care, 2011, 19, 185-193.	0.5	7
48	Collateral ligament length change patterns after joint line elevation may not explain midflexion instability following TKA. Medical Engineering and Physics, 2011, 33, 1303-1308.	0.8	25
49	Influence of prosthesis design and implantation technique on implant stresses after cementless revision THR. Journal of Orthopaedic Surgery and Research, 2011, 6, 20.	0.9	16
50	Reverse shoulder arthroplasty leads to significant biomechanical changes in the remaining rotator cuff. Journal of Orthopaedic Surgery and Research, 2011, 6, 42.	0.9	47
51	The medial-lateral force distribution in the ovine stifle joint during walking. Journal of Orthopaedic Research, 2011, 29, 567-571.	1.2	23
52	The weighted optimal common shape technique improves identification of the hip joint center of rotation in vivo. Journal of Orthopaedic Research, 2011, 29, 1470-1475.	1.2	43
53	The SCoRE residual: A quality index to assess the accuracy of joint estimations. Journal of Biomechanics, 2011, 44, 1400-1404.	0.9	52
54	Joint line elevation in revision TKA leads to increased patellofemoral contact forces. Journal of Orthopaedic Research, 2010, 28, 1-5.	1.2	88

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55	Effect of fatigue on force fluctuations in knee extensors in young adults. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 2783-2798.	1.6	25
56	Regulation of the patellofemoral contact area: An essential mechanism in patellofemoral joint mechanics?. Journal of Biomechanics, 2010, 43, 3237-3239.	0.9	12
57	Realistic loads for testing hip implants. Bio-Medical Materials and Engineering, 2010, 20, 65-75.	0.4	138
58	Re: The Effect of Running Shoes on Lower Extremity Joint Torques. PM and R, 2010, 2, 310-311.	0.9	0
59	Frontal plane alignment: An imageless method to predict the mechanical femoral-tibial angle (mFTA) based on functional determination of joint centres and axes. Gait and Posture, 2010, 31, 204-208.	0.6	14
60	Repeatability and reproducibility of OSSCA, a functional approach for assessing the kinematics of the lower limb. Gait and Posture, 2010, 32, 231-236.	0.6	72
61	Automatic extraction of anatomical landmarks from medical image data: An evaluation of different methods. , 2009, , .		5
62	A comparison of techniques for fixation of the quadriceps muscle-tendon complex for in vitro biomechanical testing of the knee joint in sheep. Medical Engineering and Physics, 2009, 31, 69-75.	0.8	7
63	Stair climbing results in more challenging patellofemoral contact mechanics and kinematics than walking at early knee flexion under physiological-like quadriceps loading. Journal of Biomechanics, 2009, 42, 2590-2596.	0.9	37
64	Navigated Ultrasound in Total Hip Arthroplasty. IFMBE Proceedings, 2009, , 63-66.	0.2	1
65	Femoral Neck Cut Level Affects Positioning of Modular Short-Stem Implant. Orthopedics, 2009, 32, 18-21.	0.5	19
66	Publisher's note-Correction. Journal of Biomechanics, 2008, 41, 2332-2335.	0.9	6
67	Biomechanical, Microvascular, and Cellular Factors Promote Muscle and Bone Regeneration. Exercise and Sport Sciences Reviews, 2008, 36, 64-70.	1.6	22
68	Influence of changes in stem positioning on femoral loading after THR using a short-stemmed hip implant. Clinical Biomechanics, 2007, 22, 431-439.	0.5	57
69	A survey of formal methods for determining functional joint axes. Journal of Biomechanics, 2007, 40, 2150-2157.	0.9	225
70	Physiologically based boundary conditions in finite element modelling. Journal of Biomechanics, 2007, 40, 2318-2323.	0.9	173
71	A new model to predict in vivo human knee kinematics under physiological-like muscle activation. Journal of Biomechanics, 2007, 40, S45-S53.	0.9	18
72	Interaction of mechanics and biology in knee joint restoration and regeneration. Journal of Biomechanics, 2007, 40, S1-S3.	0.9	0

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73	Mechanical conditions in the initial phase of bone healing. <i>Clinical Biomechanics</i> , 2006, 21, 646-655.	0.5	90
74	Tibio-femoral joint contact forces in sheep. <i>Journal of Biomechanics</i> , 2006, 39, 791-798.	0.9	109
75	A survey of formal methods for determining the centre of rotation of ball joints. <i>Journal of Biomechanics</i> , 2006, 39, 2798-2809.	0.9	342
76	Response to: "Stair climbing is more critical than walking in pre-clinical assessment of primary stability in cementless THA in vitro". <i>Journal of Biomechanics</i> , 2006, 39, 3087-3090.	0.9	5
77	Atlas-basierte 3D-Rekonstruktion des Beckens aus 2D-Projektionsbildern. , 2006, , 26-30.		2
78	On the influence of soft tissue coverage in the determination of bone kinematics using skin markers. <i>Journal of Orthopaedic Research</i> , 2005, 23, 726-734.	1.2	146
79	On the influence of mechanical conditions in osteochondral defect healing. <i>Journal of Biomechanics</i> , 2005, 38, 843-851.	0.9	54
80	Determination of muscle loading at the hip joint for use in pre-clinical testing. <i>Journal of Biomechanics</i> , 2005, 38, 1155-1163.	0.9	285
81	Stair climbing is more critical than walking in pre-clinical assessment of primary stability in cementless THA in vitro. <i>Journal of Biomechanics</i> , 2005, 38, 1143-1154.	0.9	84
82	Muskuloskeletale Belastungen im Schafshinterlauf: Mechanische Rahmenbedingungen der Heilung. <i>Materialwissenschaft Und Werkstofftechnik</i> , 2005, 36, 775-780.	0.5	7
83	Surgical Approach Influences Periprosthetic Femoral Bone Density. <i>Clinical Orthopaedics and Related Research</i> , 2005, 432, 153-159.	0.7	26
84	Musculoskeletal loading database: loading conditions of the proximal femur. <i>Theoretical Issues in Ergonomics Science</i> , 2005, 6, 287-292.	1.0	4
85	Cementless stem fixation and primary stability under physiological-like loads in vitro / Zementfreie Schaftverankerung und Primärstabilität unter angenähert physiologischer Belastung in vitro. <i>Biomedizinische Technik</i> , 2005, 50, 394-399.	0.9	14
86	Tibio-femoral loading during human gait and stair climbing. <i>Journal of Orthopaedic Research</i> , 2004, 22, 625-632.	1.2	311
87	Comparison of unreamed nailing and external fixation of tibial diastases"mechanical conditions during healing and biological outcome. <i>Journal of Orthopaedic Research</i> , 2004, 22, 1072-1078.	1.2	65
88	The influence of alignment on the musculo-skeletal loading conditions at the knee. <i>Langenbeck's Archives of Surgery</i> , 2003, 388, 291-297.	0.8	54
89	Straining of the intact and fractured proximal humerus under physiological-like loading. <i>Journal of Biomechanics</i> , 2003, 36, 1865-1873.	0.9	54
90	The initial phase of fracture healing is specifically sensitive to mechanical conditions. <i>Journal of Orthopaedic Research</i> , 2003, 21, 662-669.	1.2	224

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91	THA loading arising from increased femoral anteversion and offset may lead to critical cement stresses. <i>Journal of Orthopaedic Research</i> , 2003, 21, 767-774.	1.2	68
92	Mechanical conditions in the internal stabilization of proximal tibial defects. <i>Clinical Biomechanics</i> , 2002, 17, 64-72.	0.5	46
93	Influence of femoral anteversion on proximal femoral loading: measurement and simulation in four patients. <i>Clinical Biomechanics</i> , 2001, 16, 644-649.	0.5	116
94	Musculo-skeletal loading conditions at the hip during walking and stair climbing. <i>Journal of Biomechanics</i> , 2001, 34, 883-893.	0.9	389
95	Mechanical boundary conditions of fracture healing: borderline indications in the treatment of unreamed tibial nailing. <i>Journal of Biomechanics</i> , 2001, 34, 639-650.	0.9	111
96	Hip contact forces and gait patterns from routine activities. <i>Journal of Biomechanics</i> , 2001, 34, 859-871.	0.9	1,839
97	Influence of muscle forces on femoral strain distribution. <i>Journal of Biomechanics</i> , 1998, 31, 841-846.	0.9	302