John Rasmussen

List of Publications by Year
in descending order

102 papers	3,873 citations	201385 27 h-index	128067 60 g-index
109 all docs	109 docs citations	109 times ranked	2525 citing authors

#	Article	IF	Citations
1	Analysis of musculoskeletal systems in the AnyBody Modeling System. Simulation Modelling Practice and Theory, 2006, 14, 1100-1111.	2.2	732
2	Muscle recruitment by the min/max criterion â€" a comparative numerical study. Journal of Biomechanics, 2001, 34, 409-415.	0.9	360
3	A generic detailed rigid-body lumbar spine model. Journal of Biomechanics, 2007, 40, 1219-1227.	0.9	240
4	A Subject-Specific Musculoskeletal Modeling Framework to Predict In Vivo Mechanics of Total Knee Arthroplasty. Journal of Biomechanical Engineering, 2015, 137, 020904.	0.6	209
5	On CAD-integrated structural topology and design optimization. Computer Methods in Applied Mechanics and Engineering, 1991, 89, 259-279.	3.4	193
6	Anatomy and Biomechanics of the Back Muscles in the Lumbar Spine With Reference to Biomechanical Modeling. Spine, 2006, 31, 1888-1899.	1.0	166
7	A computationally efficient optimisation-based method for parameter identification of kinematically determinate and over-determinate biomechanical systems. Computer Methods in Biomechanics and Biomedical Engineering, 2010, 13, 171-183.	0.9	156
8	Kinematic analysis of over-determinate biomechanical systems. Computer Methods in Biomechanics and Biomedical Engineering, 2009, 12, 371-384.	0.9	139
9	Do kinematic models reduce the effects of soft tissue artefacts in skin marker-based motion analysis? An in vivo study of knee kinematics. Journal of Biomechanics, 2010, 43, 268-273.	0.9	124
10	Scaling of musculoskeletal models from static and dynamic trials. International Biomechanics, 2015, 2, 1-11.	0.9	116
11	On validation of multibody musculoskeletal models. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2012, 226, 82-94.	1.0	100
12	A Method of â€œExactâ€•Numerical Differentiation for Error Elimination in Finite-Element-Based Semi-Analytical Shape Sensitivity Analyses*. Mechanics Based Design of Structures and Machines, 1993, 21, 1-66.	0.6	87
13	Validation of a musculo-skeletal model of the mandible and its application to mandibular distraction osteogenesis. Journal of Biomechanics, 2007, 40, 1192-1201.	0.9	84
14	Computational analysis of the influence of seat pan inclination and friction on muscle activity and spinal joint forces. International Journal of Industrial Ergonomics, 2009, 39, 52-57.	1.5	69
15	Validation of a musculoskeletal model of wheelchair propulsion and its application to minimizing shoulder joint forces. Journal of Biomechanics, 2008, 41, 2981-2988.	0.9	68
16	On Accuracy Problems for Semi-Analytical Sensitivity Analyses. Mechanics Based Design of Structures and Machines, 1989, 17, 373-384.	0.6	65
17	Uniaxial Cyclic Strain Drives Assembly and Differentiation of Skeletal Myocytes. Tissue Engineering - Part A, 2011, 17, 2543-2550.	1.6	57
18	Missing links in pressure ulcer researchâ€"An interdisciplinary overview. Journal of Applied Physiology, 2010, 108, 1458-1464.	1.2	50

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19	A linear soft tissue artefact model for human movement analysis: Proof of concept using in vivo data. Gait and Posture, 2012, 35, 606-611.	0.6	50
20	A compact 3-DOF shoulder mechanism constructed with scissors linkages for exoskeleton applications. Mechanism and Machine Theory, 2019, 132, 264-278.	2.7	42
21	Introduction to Force-Dependent Kinematics: Theory and Application to Mandible Modeling. Journal of Biomechanical Engineering, 2017, 139, .	0.6	41
22	Computational method for muscle-path representation in musculoskeletal models. Biological Cybernetics, 2002, 87, 199-210.	0.6	35
23	Combined finite element and multibody musculoskeletal investigation of a fractured clavicle with reconstruction plate. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 740-748.	0.9	35
24	The comminuted midshaft clavicle fracture: A biomechanical evaluation of plating methods. Clinical Biomechanics, 2011, 26, 491-496.	0.5	34
25	Modeling and Design of a Spring-loaded, Cable-driven, Wearable Exoskeleton for the Upper Extremity. Modeling, Identification and Control, 2015, 36, 167-177.	0.6	30
26	The application of musculoskeletal modeling to investigate gender bias in non-contact ACL injury rate during single-leg landings. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 1602-1616.	0.9	28
27	Optimization-based dynamic prediction of kinematic and kinetic patterns for a human vertical jump from a squatting position. Multibody System Dynamics, 2016, 36, 37-65.	1.7	28
28	Sensitivity of lumbar spine loading to anatomical parameters. Journal of Biomechanics, 2016, 49, 953-958.	0.9	27
29	Muscleâ€“tendon unit scaling methods of Hill-type musculoskeletal models: An overview. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2016, 230, 976-984.	1.0	25
30	Measurement of badminton racket deflection during a stroke. Sports Engineering, 2010, 12, 143-153.	0.5	22
31	Investigation of high-speed badminton racket kinematics by motion capture. Sports Engineering, 2011, 13, 57-63.	0.5	22
32	Prediction of the articular eminence shape in a patient with unilateral hypoplasia of the right mandibular ramus before and after distraction osteogenesisâ€”A simulation study. Journal of Biomechanics, 2009, 42, 1049-1053.	0.9	18
33	Modeling of the condyle elements within a biomechanical knee model. Multibody System Dynamics, 2012, 28, 181-197.	1.7	18
34	On the biomechanical relationship between applied hip, knee and ankle joint moments and the internal knee compressive forces. International Biomechanics, 2018, 5, 63-74.	0.9	18
35	Assessing the Importance of Motion Dynamics for Ergonomic Analysis of Manual Materials Handling Tasks using the AnyBody Modeling System. , 2007, , .		16
36	VALIDATION OF MUSCULOSKELETAL GAIT SIMULATION FOR USE IN INVESTIGATION OF TOTAL HIP REPLACEMENT. Journal of Biomechanics, 2008, 41, S488.	0.9	16

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37	Prediction of crank torque and pedal angle profiles during pedaling movements by biomechanical optimization. Structural and Multidisciplinary Optimization, 2015, 51, 251-266.	1.7	16
38	Computational modeling of a forward lunge: towards a better understanding of the function of the cruciate ligaments. Journal of Anatomy, 2012, 221, 590-597.	0.9	15
39	AnyPyTools: A Python package for reproducible research with the AnyBody Modeling System. Journal of Open Source Software, 2019, 4, 1108.	2.0	15
40	Prediction of closed-chain human arm dynamics in a crank-rotation task. Journal of Biomechanics, 2016, 49, 2684-2693.	0.9	14
41	Concurrent Engineering Design Optimization in a CAD Environment. , 1993, , 523-586.		14
42	Musculoskeletal Analysis of Driving Fatigue: The Influence of Seat Adjustments. Advanced Engineering Forum, 0, 10, 373-378.	0.3	12
43	odeling of Human Arm Energy Expenditure for Predicting Energy Optimal Trajectories. Modeling, Identification and Control, 2011, 32, 91-101.	0.6	12
44	THE ISSUE OF GENERALITY IN DESIGN OPTIMIZATION SYSTEMS. Engineering Optimization, 1997, 29, 23-37.	1.5	11
45	Challenges in human body mechanics simulation. Procedia IUTAM, 2011, 2, 176-185.	1.2	11
46	Advanced musculoskeletal simulation as an ergonomic design method. Work, 2012, 41, 6107-6111.	0.6	11
47	The AnyBody Modeling System. , 2019, , 85-96.		11
48	Comparison between a Computational Seated Human Model and Experimental Verification Data. Applied Bionics and Biomechanics, 2014, 11, 175-183.	0.5	10
49	Effect of Chain Wheel Shape on Crank Torque, Freely Chosen Pedal Rate, and Physiological Responses during Submaximal Cycling. Journal of Physiological Anthropology, 2009, 28, 261-267.	1.0	9
50	The effects of bone remodeling on biomechanical behavior in a patient with an implant-supported overdenture. Computers in Biology and Medicine, 2021, 129, 104173.	3.9	9
51	Musculoskeletal Modeling of Egress with the AnyBody Modeling System. , 2005, , .		8
52	COMPARISON OF A MUSCULOSKELETAL SHOULDER MODEL WITH IN-VIVO JOINT FORCES. Journal of Biomechanics, 2007, 40, S67.	0.9	8
53	Design Optimization of Airline Seats. SAE International Journal of Passenger Cars - Electronic and Electrical Systems, 2008, 1, 580-584.	0.3	8
54	Performance optimization by musculoskeletal simulation. Movement and Sports Sciences - Science Et Motricite, 2012, , 73-83.	0.2	8

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55	Human arm posture prediction in response to isometric endpoint forces. Journal of Biomechanics, 2015, 48, 4178-4184.	0.9	8
56	Development and simulation of a passive upper extremity orthosis for amyoplasia. Journal of Rehabilitation and Assistive Technologies Engineering, 2018, 5, 205566831876152.	0.6	8
57	Inverse Dynamics of Musculo-Skeletal Systems Using an Efficient Min/Max Muscle Recruitment Model. , 2001, , .		7
58	Efficient human force transmission tailored for the individual cyclist. Procedia Engineering, 2010, 2, 2543-2548.	1.2	6
59	The importance of being elastic: Deflection of a badminton racket during a stroke. Journal of Sports Sciences, 2010, 28, 505-511.	1.0	6
60	The reachable 3-D workspace volume is a measure of payload and body-mass-index: A quasi-static kinetic assessment. Applied Ergonomics, 2019, 75, 108-119.	1.7	6
61	Development and Functional Testing of an Unloading Concept for Knee Osteoarthritis Patients: A Pilot Study. Journal of Biomechanical Engineering, 2022, 144, .	0.6	6
62	Musculoskeletal computational analysis of the influence of car-seat design/adjustment on fatigue-induced driving. , 2011, , .		5
63	Muscle-Tendon Unit Parameter Estimation of a Hill-Type Musculoskeletal Model Based on Experimentally Obtained Subject-Specific Torque Profiles. Journal of Biomechanical Engineering, 2019, 141, .	0.6	5
64	How Precisely Can Easily Accessible Variables Predict Achilles and Patellar Tendon Forces during Running?. Sensors, 2021, 21, 7418.	2.1	5
65	Posture and Movement Prediction by Means of Musculoskeletal Optimization. , 2006, , .		4
66	Muscle Relaxation and Shear Force Reduction May Be Conflicting: A Computational Model of Seating. , 0, , .		4
67	How Good is Good Enough? Lessons in Musculoskeletal Model Validation With the Anybody Modeling System. Journal of Medical Devices, Transactions of the ASME, 2013, 7, .	0.4	4
68	Development and validation of a rule-based strength scaling method for musculoskeletal modelling. International Journal of Human Factors Modelling and Simulation, 2015, 5, 19.	0.1	4
69	The Development of a Methodology to Determine the Relationship in Grip Size and Pressure to Racket Head Speed in a Tennis Forehand Stroke. Procedia Engineering, 2016, 147, 787-792.	1.2	4
70	Validation of subject-specific musculoskeletal models using the anatomical reachable 3-D workspace. Journal of Biomechanics, 2019, 90, 92-102.	0.9	4
71	An articulated spine and ribcage kinematic model for simulation of scoliosis deformities. Multibody System Dynamics, 2021, 53, 115-134.	1.7	4
72	Running in circles: Describing running kinematics using Fourier series. Journal of Biomechanics, 2021, 115, 110187.	0.9	4

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73	The CAOS System. , 1993, , 75-96.		4
74	Multiple linear regression to develop strength scaled equations for knee and elbow joints based on age, gender and segment mass. International Journal of Human Factors Modelling and Simulation, 2012, 3, 32.	0.1	3
75	Elliptical posts allow for detailed control of non-equibiaxial straining of cell cultures. Journal of Tissue Viability, 2013, 22, 52-56.	0.9	3
76	Dynamic Model of a Badminton Stroke (P254). , 2008, , 563-571.		3
77	The Influence of Muscle Forces on the Stress Distribution in the Lumbar Spine. Open Spine Journal, 2011, 3, 21-26.	0.4	3
78	Using Musculoskeletal Modeling for Estimating the Most Important Muscular Output â€“ Force. Lecture Notes in Computer Science, 2009, , 62-70.	1.0	2
79	A model to compensate for soft tissue artifact during gait. Gait and Posture, 2009, 30, S5.	0.6	2
80	Projection of anthropometric correlation for virtual population modelling. International Journal of Human Factors Modelling and Simulation, 2018, 6, 16.	0.1	2
81	A Simulation of the Effects of Badminton Serve Release Height. Applied Sciences (Switzerland), 2021, 11, 2903.	1.3	2
82	Computational Investigation of Two Interventions for Neck and Upper Extremity Pain in Office Workers. IFMBE Proceedings, 2010, , 64-66.	0.2	2
83	Triceps surae strength balancing as a management option for early-stage knee osteoarthritis: A patient case. Clinical Biomechanics, 2022, 95, 105651.	0.5	2
84	Computer Simulations of the Active Motion System with Musculo-skeletal Models. , 0, , .		1
85	Performance optimization by musculoskeletal simulation. Science Et Motricite, 2012, , 75-75.	0.3	1
86	Free kick goals in football: an unlikely success between failure and embarrassment. Sports Engineering, 2018, 21, 103-114.	0.5	1
87	Method of Error Elimination for a Class of Semi-Analytical Sensitivity Analysis Problems. , 1993, , 385-396.		1
88	Prediction of Knee Loads Using a Lower Extremity Model Based on the Klein Horsman Data Set. , 2010, , .		1
89	Biomechanical modeling of the shoulder anatomy. , 2007, , .		1
90	Integrating Topology and Boundary Variations Design Methods in a CAD System. , 1993, , 483-499.		1

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91	Prediction of Human Posture and Movement by Musculoskeletal Optimization. , 2008, , .		0
92	Application of an Optimization-Based Method for the Kinematic Analysis of a Badminton Stroke From Motion Capture Data. , 2008, , .		0
93	B-5 Hip Joint Kinematics in Activities of Daily Living. Journal of Biomechanics, 2010, 43, S25.	0.9	0
94	The Effect of Muscle Loading on Internal Mechanical Parameters of the Lumbar Spine: A Finite Element Study. , 2011, , .		0
95	Peak forces of the rotator cuff muscles during activity of daily livings performed by a wheelchair user. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 199-201.	0.9	0
96	Is a computerâ€based measurement method superior to a recommended manual method by the ROHO‹sup›Â®‹/sup› Group to assess pressure in the sitting position?. Australian Occupational Therapy Journal, 2013, 60, 350-355.	0.6	0
97	Letter to the Editor. Journal of Theoretical Biology, 2012, 298, 154-155.	0.8	0
98	How Good is Good Enough? Lessons in Musculoskeletal Model Validation With the Anybody Modeling System. , 2013, , .		0
99	Predictive Models in Biomechanics. Advances in Intelligent Systems and Computing, 2019, , 98-106.	0.5	0
100	Biomechanical Evaluation of the Effect of Minimally Invasive Spine Surgery Compared with Traditional Approaches in Lifting Tasks. Frontiers in Bioengineering and Biotechnology, 2021, 9, 724854.	2.0	0
101	An information management system for the formulation and solution of multidisciplinary optimization problems. , 1994, , .		0
102	A Case Study on Designing a Passive Feeding-Assistive Orthosis for Arthrogryposis. Journal of Medical Devices, Transactions of the ASME, 2020, 14, .	0.4	0