Steve A Maas

List of Publications by Year
in descending order

24 papers	1,807 citations	566801 15 h-index	610482 24 g-index
24 all docs	24 docs citations	24 times ranked	1840 citing authors

#	Article	IF	Citations
1	FEBio: Finite Elements for Biomechanics. Journal of Biomechanical Engineering, 2012, 134, 011005.	0.6	779
2	Validation of Finite Element Predictions of Cartilage Contact Pressure in the Human Hip Joint. Journal of Biomechanical Engineering, 2008, 130, 051008.	0.6	214
3	Effects of idealized joint geometry on finite element predictions of cartilage contact stresses in the hip. Journal of Biomechanics, 2010, 43, 1351-1357.	0.9	160
4	Micromechanical models of helical superstructures in ligament and tendon fibers predict large Poisson's ratios. Journal of Biomechanics, 2010, 43, 1394-1400.	0.9	118
5	Accuracy and Feasibility of Dual Fluoroscopy and Model-Based Tracking to Quantify in Vivo Hip Kinematics During Clinical Exams. Journal of Applied Biomechanics, 2014, 30, 461-470.	0.3	70
6	Strain measurement in the left ventricle during systole with deformable image registration. Medical Image Analysis, 2009, 13, 354-361.	7.0	59
7	A new discrete element analysis method for predicting hip joint contact stresses. Journal of Biomechanics, 2013, 46, 1121-1127.	0.9	49
8	Continuum description of the Poisson×³s ratio of ligament and tendon under finite deformation. Journal of Biomechanics, 2014, 47, 3201-3209.	0.9	45
9	Specimen-specific predictions of contact stress under physiological loading in the human hip: validation and sensitivity studies. Biomechanics and Modeling in Mechanobiology, 2014, 13, 387-400.	1.4	43
10	A general framework for application of prestrain to computational models of biological materials. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 61, 499-510.	1.5	40
11	FEBio: History and Advances. Annual Review of Biomedical Engineering, 2017, 19, 279-299.	5.7	40
12	Finite element simulation of articular contact mechanics with quadratic tetrahedral elements. Journal of Biomechanics, 2016, 49, 659-667.	0.9	35
13	A coupled model of neovessel growth and matrix mechanics describes and predicts angiogenesis in vitro. Biomechanics and Modeling in Mechanobiology, 2015, 14, 767-782.	1.4	23
14	Finite Element Framework for Computational Fluid Dynamics in FEBio. Journal of Biomechanical Engineering, 2018, 140, .	0.6	21
15	Hip chondrolabral mechanics during activities of daily living: Role of the labrum and interstitial fluid pressurization. Journal of Biomechanics, 2018, 69, 113-120.	0.9	17
16	Perspectives on Sharing Models and Related Resources in Computational Biomechanics Research. Journal of Biomechanical Engineering, 2018, 140, .	0.6	16
17	Threeâ€dimensional femoral head coverage in the standing position represents that measured in vivo during gait. Clinical Anatomy, 2018, 31, 1177-1183.	1.5	15
18	A Formulation for Fluidâ€“Structure Interactions in febio Using Mixture Theory. Journal of Biomechanical Engineering, 2019, 141, .	0.6	15

#	Article	IF	Citations
19	A Plugin Framework for Extending the Simulation Capabilities of FEBio. Biophysical Journal, 2018, 115, 1630-1637.	0.2	14
20	Finite Element Formulation of Multiphasic Shell Elements for Cell Mechanics Analyses in FEBio. Journal of Biomechanical Engineering, 2018, 140, .	0.6	11
21	Finite Element Implementation of Biphasic-Fluid Structure Interactions in <scp>febio</scp>. Journal of Biomechanical Engineering, 2021, 143, .	0.6	10
22	A Computational Framework for Atrioventricular Valve Modeling Using Open-Source Software. Journal of Biomechanical Engineering, 2022, 144, .	0.6	7
23	A Finite Element Algorithm for Large Deformation Biphasic Frictional Contact Between Porous-Permeable Hydrated Soft Tissues. Journal of Biomechanical Engineering, 2022, 144, .	0.6	4
24	A Numerical Scheme for Anisotropic Reactive Nonlinear Viscoelasticity. Journal of Biomechanical Engineering, 2023, 145, .	0.6	2