Victor Barocas

List of Publications by Year
in descending order

150 papers	5,823 citations	57631 44 h-index	88477 70 g-index
151 all docs	151 docs citations	151 times ranked	4711 citing authors

#	Article	IF	Citations
1	An Anisotropic Biphasic Theory of Tissue-Equivalent Mechanics: The Interplay Among Cell Traction, Fibrillar Network Deformation, Fibril Alignment, and Cell Contact Guidance. Journal of Biomechanical Engineering, 1997, 119, 137-145.	0.6	303
2	Affine Versus Non-Affine Fibril Kinematics in Collagen Networks: Theoretical Studies of Network Behavior. Journal of Biomechanical Engineering, 2006, 128, 259-270.	0.6	189
3	Rheology of reconstituted type I collagen gel in confined compression. Journal of Rheology, 1997, 41, 971-993.	1.3	162
4	Volume-averaging theory for the study of the mechanics of collagen networks. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 2981-2990.	3.4	161
5	Engineered Alignment in Media Equivalents: Magnetic Prealignment and Mandrel Compaction. Journal of Biomechanical Engineering, 1998, 120, 660-666.	0.6	159
6	The Fibroblast-Populated Collagen Microsphere Assay of Cell Traction Forceâ€"Part 2: Measurement of the Cell Traction Parameter. Journal of Biomechanical Engineering, 1995, 117, 161-170.	0.6	157
7	Image-based multiscale modeling predicts tissue-level and network-level fiber reorganization in stretched cell-compacted collagen gels. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 17675-17680.	3.3	135
8	Mechanism Governing Microparticle Morphology during Precipitation by a Compressed Antisolvent:Â Atomization vs Nucleation and Growth. Journal of Physical Chemistry B, 2000, 104, 2725-2735.	1.2	133
9	Microstructural Mechanics of Collagen Gels in Confined Compression: Poroelasticity, Viscoelasticity, and Collapse. Journal of Biomechanical Engineering, 2004, 126, 152-166.	0.6	132
10	Effects of Freezing and Cryopreservation on the Mechanical Properties of Arteries. Annals of Biomedical Engineering, 2006, 34, 823-832.	1.3	124
11	Computational predictions of the tensile properties of electrospun fibre meshes: Effect of fibre diameter and fibre orientation. Journal of the Mechanical Behavior of Biomedical Materials, 2008, 1, 326-335.	1.5	122
12	Permeability and diffusion in vitreous humor: implications for drug delivery. Pharmaceutical Research, 2000, 17, 664-669.	1.7	120
13	Functional Tissue-Engineered Valves from Cell-Remodeled Fibrin with Commissural Alignment of Cell-Produced Collagen. Tissue Engineering - Part A, 2008, 14, 83-95.	1.6	108
14	Comparison of 2D fiber network orientation measurement methods. Journal of Biomedical Materials Research - Part A, 2009, 88A, 322-331.	2.1	105
15	Computer simulation of convective and diffusive transport of controlled-release drugs in the vitreous humor. Pharmaceutical Research, 2003, 20, 96-102.	1.7	104
16	Multiscale, Structure-Based Modeling for the Elastic Mechanical Behavior of Arterial Walls. Journal of Biomechanical Engineering, 2007, 129, 611-618.	0.6	101
17	Temporal Variations in Cell Migration and Traction during Fibroblast-Mediated Gel Compaction. Biophysical Journal, 2003, 84, 4102-4114.	0.2	100
18	Modeling Passive Mechanical Interaction Between Aqueous Humor and Iris. Journal of Biomechanical Engineering, 2001, 123, 540-547.	0.6	97

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19	A Boussinesq Model of Natural Convection in the Human Eye and the Formation of Krukenbergâ€™s Spindle. Annals of Biomedical Engineering, 2002, 30, 392-401.	1.3	94
20	Mechanical Behavior of Collagen-Fibrin Co-Gels Reflects Transition From Series to Parallel Interactions With Increasing Collagen Content. Journal of Biomechanical Engineering, 2012, 134, 011004.	0.6	86
21	Deterministic Material-Based Averaging Theory Model of Collagen Gel Micromechanics. Journal of Biomechanical Engineering, 2007, 129, 137-147.	0.6	85
22	Permeability calculations in three-dimensional isotropic and oriented fiber networks. Physics of Fluids, 2008, 20, 123601.	1.6	85
23	Biomechanical and Microstructural Characteristics of a Collagen Film-Based Corneal Stroma Equivalent. Tissue Engineering, 2006, 12, 1565-1575.	4.9	83
24	Confined Compression of a Tissue-Equivalent: Collagen Fibril and Cell Alignment in Response to Anisotropic Strain. Journal of Biomechanical Engineering, 2002, 124, 568-575.	0.6	81
25	Using Channel Depth To Isolate and Control Flow in a Micro Free-Flow Electrophoresis Device. Analytical Chemistry, 2006, 78, 5369-5374.	3.2	81
26	Initial Fiber Alignment Pattern Alters Extracellular Matrix Synthesis in Fibroblast-Populated Fibrin Gel Cruciforms and Correlates with Predicted Tension. Annals of Biomedical Engineering, 2011, 39, 714-729.	1.3	70
27	Computer Modeling of Drug Delivery to the Posterior Eye: Effect of Active Transport and Loss to Choroidal Blood Flow. Pharmaceutical Research, 2008, 25, 2685-2696.	1.7	68
28	Mechanics of a Fiber Network Within a Non-Fibrillar Matrix: Model and Comparison with Collagen-Agarose Co-gels. Annals of Biomedical Engineering, 2012, 40, 2111-2121.	1.3	61
29	Pericellular Conditions Regulate Extent of Cell-Mediated Compaction ofÂCollagen Gels. Biophysical Journal, 2010, 99, 19-28.	0.2	60
30	Coupled Macroscopic and Microscopic Scale Modeling of Fibrillar Tissues and Tissue Equivalents. Journal of Biomechanical Engineering, 2001, 123, 362-369.	0.6	59
31	Mechanical and Structural Contribution of Non-Fibrillar Matrix in Uniaxial Tension: A Collagen-Agarose Co-Gel Model. Annals of Biomedical Engineering, 2011, 39, 1891-1903.	1.3	59
32	Uniaxial and biaxial mechanical behavior of human amnion. Journal of Materials Research, 2005, 20, 2902-2909.	1.2	57
33	Mechanical characterization of the bovine iris. Journal of Biomechanics, 1999, 32, 999-1003.	0.9	55
34	Intrinsic kinetics for rapid decomposition of methane in an aerosol flow reactor. International Journal of Hydrogen Energy, 2002, 27, 377-386.	3.8	55
35	A closed-form structural model of planar fibrous tissue mechanics. Journal of Biomechanics, 2009, 42, 1424-1428.	0.9	54
36	Freezeâ€"Thaw Induced Biomechanical Changes in Arteries: Role of Collagen Matrix and Smooth Muscle Cells. Annals of Biomedical Engineering, 2010, 38, 694-706.	1.3	54

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37	Swelling of Collagen-Hyaluronic Acid Co-Gels: An In Vitro Residual Stress Model. Annals of Biomedical Engineering, 2016, 44, 2984-2993.	1.3	53
38	A Finite Element Solution for the Anisotropic Biphasic Theory of Tissue-Equivalent Mechanics: The Effect of Contact Guidance on Isometric Cell Traction Measurement. Journal of Biomechanical Engineering, 1997, 119, 261-268.	0.6	50
39	Mechanical and Cellular Changes During Compaction of a Collagen-Sponge-Based Corneal Stromal Equivalent. Annals of Biomedical Engineering, 2004, 32, 274-283.	1.3	50
40	Mechanical changes in the rat right ventricle with decellularization. Journal of Biomechanics, 2012, 45, 842-849.	0.9	50
41	Multi-scale Modeling of the Cardiovascular System: Disease Development, Progression, and Clinical Intervention. Annals of Biomedical Engineering, 2016, 44, 2642-2660.	1.3	50
42	Microstructural and mechanical differences between digested collagenâ€"fibrin co-gels and pure collagen and fibrin gels. Acta Biomaterialia, 2012, 8, 4031-4042.	4.1	49
43	Simulated remodeling of loaded collagen networks via strain-dependent enzymatic degradation and constant-rate fiber growth. Mechanics of Materials, 2012, 44, 72-82.	1.7	49
44	Image-based biomechanics of collagen-based tissue equivalents. IEEE Engineering in Medicine and Biology Magazine, 2009, 28, 10-18.	1.1	48
45	Identification of Regional Mechanical Anisotropy in Soft Tissue Analogs. Journal of Biomechanical Engineering, 2011, 133, 091011.	0.6	47
46	Cross-linked fiber network embedded in an elastic matrix. Soft Matter, 2013, 9, 6398.	1.2	44
47	Multiscale Model Predicts Tissue-Level Failure From Collagen Fiber-Level Damage. Journal of Biomechanical Engineering, 2012, 134, 091005.	0.6	43
48	A Coupled Fiber-Matrix Model Demonstrates Highly Inhomogeneous Microstructural Interactions in Soft Tissues Under Tensile Load. Journal of Biomechanical Engineering, 2013, 135, 011008.	0.6	43
49	Failure of the Porcine Ascending Aorta: Multidirectional Experiments and a Unifying Microstructural Model. Journal of Biomechanical Engineering, 2017, 139, .	0.6	43
50	Dicer1 Deficiency in the Idiopathic Pulmonary Fibrosis Fibroblastic Focus Promotes Fibrosis by Suppressing MicroRNA Biogenesis. American Journal of Respiratory and Critical Care Medicine, 2018, 198, 486-496.	2.5	42
51	Planar Biaxial Mechanical Behavior of Bioartificial Tissues Possessing Prescribed Fiber Alignment. Journal of Biomechanical Engineering, 2009, 131, 081006.	0.6	41
52	Softening in random networks of non-identical beams. Journal of the Mechanics and Physics of Solids, 2016, 87, 38-50.	2.3	40
53	Measurement of foam modulus via a vane rheometer. Journal of Rheology, 1998, 42, 871-889.	1.3	39
54	Active Iris Mechanics and Pupillary Block: Steady-State Analysis and Comparison with Anatomical Risk Factors. Annals of Biomedical Engineering, 2004, 32, 1276-1285.	1.3	38

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55	Collagenâ€agarose coâ€gels as a model for collagenâ€“matrix interaction in soft tissues subjected to indentation. Journal of Biomedical Materials Research - Part A, 2011, 99A, 507-515.	2.1	37
56	Microscale Fiber Network Alignment Affects Macroscale Failure Behavior in Simulated Collagen Tissue Analogs. Journal of Biomechanical Engineering, 2013, 135, 021026.	0.6	37
57	Assessment of Wall Shear Stress Changes in Arteries and Veins of Arteriovenous Polytetrafluoroethylene Grafts Using Magnetic Resonance Imaging. CardioVascular and Interventional Radiology, 2006, 29, 624-629.	0.9	36
58	Ex vivo porcine iris stiffening due to drug stimulation. Experimental Eye Research, 2009, 89, 456-461.	1.2	35
59	Effect of Fiber Crimp on the Elasticity of Random Fiber Networks With and Without Embedding Matrices. Journal of Applied Mechanics, Transactions ASME, 2016, 83, 0410081-410087.	1.1	35
60	Accommodation-induced changes in iris curvature. Experimental Eye Research, 2008, 86, 220-225.	1.2	33
61	The Modulus of Fibroblast-Populated Collagen Gels is not Determined by Final Collagen and Cell Concentration: Experiments and an Inclusion-Based Model. Journal of Biomechanical Engineering, 2009, 131, 101014.	0.6	31
62	Contribution of Saccadic Motion to Intravitreal Drug Transport: Theoretical Analysis. Pharmaceutical Research, 2011, 28, 1049-1064.	1.7	31
63	Anteriorâ€“posterior asymmetry in iris mechanics measured by indentation. Experimental Eye Research, 2011, 93, 475-481.	1.2	30
64	A Multiscale Approach to Modeling the Passive Mechanical Contribution of Cells in Tissues. Journal of Biomechanical Engineering, 2013, 135, 71007.	0.6	30
65	Three-dimensional simulation of anisotropic cell-driven collagen gel compaction. Biomechanics and Modeling in Mechanobiology, 2008, 7, 53-62.	1.4	27
66	Collagen Organization in Facet Capsular Ligaments Varies With Spinal Region and With Ligament Deformation. Journal of Biomechanical Engineering, 2017, 139, .	0.6	27
67	Modeling and Characterization of a Valved Glaucoma Drainage Device With Implications for Enhanced Therapeutic Efficacy. IEEE Transactions on Biomedical Engineering, 2005, 52, 948-951.	2.5	26
68	Sustained transscleral drug delivery. Expert Opinion on Drug Delivery, 2008, 5, 1-10.	2.4	26
69	Generalized Anisotropic Inverse Mechanics for Soft Tissues. Journal of Biomechanical Engineering, 2010, 132, 081006.	0.6	26
70	Image-based multiscale mechanical modeling shows the importance of structural heterogeneity in the human lumbar facet capsular ligament. Biomechanics and Modeling in Mechanobiology, 2017, 16, 1425-1438.	1.4	26
71	Isotropic Failure Criteria Are Not Appropriate for Anisotropic Fibrous Biological Tissues. Journal of Biomechanical Engineering, 2017, 139, .	0.6	25
72	A Cryoinjury Model Using Engineered Tissue Equivalents for Cryosurgical Applications. Annals of Biomedical Engineering, 2005, 33, 972-982.	1.3	24

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73	Multiscale Mechanical Model of the Pacinian Corpuscle Shows Depth and Anisotropy Contribute to the Receptorâ€™s Characteristic Response to Indentation. PLoS Computational Biology, 2015, 11, e1004370.	1.5	24
74	Tissue loading and microstructure regulate the deformation of embedded nerve fibres: predictions from single-scale and multiscale simulations. Journal of the Royal Society Interface, 2017, 14, 20170326.	1.5	24
75	Computational evaluation of the role of accommodation in pigmentary glaucoma. Investigative Ophthalmology and Visual Science, 2002, 43, 700-8.	3.3	24
76	Mechanics and kinematics of soft tissue under indentation are determined by the degree of initial collagen fiber alignment. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 13, 25-35.	1.5	23
77	Planar biaxial extension of the lumbar facet capsular ligament reveals significant in-plane shear forces. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 65, 127-136.	1.5	23
78	The role of the facet capsular ligament in providing spinal stability. Computer Methods in Biomechanics and Biomedical Engineering, 2018, 21, 712-721.	0.9	20
79	Cellâ€“matrix interaction during strain-dependent remodelling of simulated collagen networks. Interface Focus, 2016, 6, 20150069.	1.5	19
80	A multiphysics model of the Pacinian corpuscle. Integrative Biology (United Kingdom), 2016, 8, 1111-1125.	0.6	19
81	Emergent structure-dependent relaxation spectra in viscoelastic fiber networks in extension. Acta Biomaterialia, 2019, 87, 245-255.	4.1	19
82	Microstructure-Based, Multiscale Modeling for the Mechanical Behavior of Hydrated Fiber Networks. Multiscale Modeling and Simulation, 2008, 7, 22-43.	0.6	18
83	Increased irisâ€“lens contact following spontaneous blinking: Mathematical modeling. Journal of Biomechanics, 2012, 45, 2293-2296.	0.9	18
84	Cellular Microbiaxial Stretching to Measure a Single-Cell Strain Energy Density Function. Journal of Biomechanical Engineering, 2017, 139, .	0.6	17
85	Computer simulation of lumbar flexion shows shear of the facet capsular ligament. Spine Journal, 2017, 17, 109-119.	0.6	17
86	Mechanical response of wild-type and Alport murine lens capsules during osmotic swelling. Experimental Eye Research, 2013, 113, 87-91.	1.2	15
87	Multiscale mechanics of the cervical facet capsular ligament, with particular emphasis on anomalous fiber realignment prior to tissue failure. Biomechanics and Modeling in Mechanobiology, 2018, 17, 133-145.	1.4	15
88	COMPUTATIONAL SIMULATION OF ALTITUDE CHANGE-INDUCED INTRAOCULAR PRESSURE ALTERATION IN PATIENTS WITH INTRAVITREAL GAS BUBBLES. Retina, 2011, 31, 1656-1663.	1.0	14
89	A finite-element model of mechanosensation by a Pacinian corpuscle cluster in human skin. Biomechanics and Modeling in Mechanobiology, 2018, 17, 1053-1067.	1.4	14
90	Ex Vivo Mechanical Tests and Multiscale Computational Modeling Highlight the Importance of Intramural Shear Stress in Ascending Thoracic Aortic Aneurysms. Journal of Biomechanical Engineering, 2019, 141, .	0.6	14

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91	Multiscale computation for bioartificial soft tissues with complex geometries. Engineering With Computers, 2009, 25, 87-95.	3.5	13
92	Lag-after-pulsed-separation microfluidic flowmeter for biomacromolecular solutions. Sensors and Actuators B: Chemical, 2004, 99, 25-29.	4.0	12
93	A dissolutionâ€diffusion model for the TAXUSâ„¢ drugâ€eluting stent with surface burst estimated from continuum percolation. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2009, 90B, 267-274.	1.6	12
94	Combining Displacement Field and Grip Force Information to Determine Mechanical Properties of Planar Tissue With Complicated Geometry. Journal of Biomechanical Engineering, 2014, 136, .	0.6	12
95	Quantification of continuous in vivo flexionâ€"extension kinematics and intervertebral strains. European Spine Journal, 2014, 23, 754-761.	1.0	12
96	Multiscale model of fatigue of collagen gels. Biomechanics and Modeling in Mechanobiology, 2019, 18, 175-187.	1.4	11
97	Investigation of Pathophysiological Aspects of Aortic Growth, Remodeling, and Failure Using a Discrete-Fiber Microstructural Model. Journal of Biomechanical Engineering, 2020, 142, .	0.6	11
98	A Model of Strain-Dependent Glomerular Basement Membrane Maintenance and Its Potential Ramifications in Health and Disease. Journal of Biomechanical Engineering, 2012, 134, 081006.	0.6	10
99	A nonlinear anisotropic inverse method for computational dissection of inhomogeneous planar tissues. Computer Methods in Biomechanics and Biomedical Engineering, 2016, 19, 1630-1646.	0.9	10
100	Biomechanics of human parietal pleura in uniaxial extension. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 75, 330-335.	1.5	10
101	Mechanics of a two-fiber model with one nested fiber network, as applied to the collagen-fibrin system. Acta Biomaterialia, 2018, 72, 306-315.	4.1	10
102	Glomerular filtration and podocyte tensional homeostasis: importance of the minor type IV collagen network. Biomechanics and Modeling in Mechanobiology, 2020, 19, 2433-2442.	1.4	10
103	Effects of Collagen Heterogeneity on Myocardial Infarct Mechanics in a Multiscale Fiber Network Model. Journal of Biomechanical Engineering, 2019, 141, .	0.6	10
104	Crack Propagation Versus Fiber Alignment in Collagen Gels: Experiments and Multiscale Simulation. Journal of Biomechanical Engineering, 2015, 137, 121002.	0.6	8
105	Image-based multi-scale mechanical analysis of strain amplification in neurons embedded in collagen gel. Computer Methods in Biomechanics and Biomedical Engineering, 2019, 22, 113-129.	0.9	8
106	Marker-Free Tracking of Facet Capsule Motion Using Polarization-Sensitive Optical Coherence Tomography. Annals of Biomedical Engineering, 2015, 43, 2953-2966.	1.3	7
107	Computational Parametric Analysis of the Mechanical Response of Structurally Varying Pacinian Corpuscles. Journal of Biomechanical Engineering, 2017, 139, .	0.6	7
108	Micropipette aspiration of the Pacinian corpuscle. Journal of Biomechanics, 2017, 63, 104-109.	0.9	7

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109	Modeling distributed forces within cell adhesions of varying size on continuous substrates. Cytoskeleton, 2019, 76, 571-585.	1.0	7
110	Coupled lubrication and Stokes flow finite elements. International Journal for Numerical Methods in Fluids, 2003, 43, 129-146.	0.9	6
111	Image-based multiscale structural models of fibrous engineered tissues. , 2009, 2009, 4270-2.		6
112	Pigment Dispersion Syndrome Patients Do Not Have Larger-than-normal Irides. Journal of Glaucoma, 2010, 19, 493-496.	0.8	6
113	Automatic Segmentation of Mechanically Inhomogeneous Tissues Based on Deformation Gradient Jump. IEEE Transactions on Medical Imaging, 2016, 35, 29-41.	5.4	6
114	Multiscale modelling of the human lumbar facet capsular ligament: analysing spinal motion from the joint to the neurons. Journal of the Royal Society Interface, 2018, 15, 20180550.	1.5	6
115	Computational and Psychophysical Experiments on the Pacinian Corpuscle's Ability to Discriminate Complex Stimuli. IEEE Transactions on Haptics, 2019, 12, 635-644.	1.8	6
116	Mechanical Performance of Posterior Spinal Instrumentation and Growing Rod Implants. Spine, 2019, 44, 1270-1278.	1.0	6
117	An Experimental-Computational Approach to Quantify Blood Rheology in Sickle Cell Disease. Biophysical Journal, 2020, 119, 2307-2315.	0.2	6
118	Asymmetric in-plane shear behavior of isolated cadaveric lumbar facet capsular ligaments: Implications for subject specific biomechanical models. Journal of Biomechanics, 2020, 105, 109814.	0.9	6
119	Local tissue heterogeneity may modulate neuronal responses via altered axon strain fields: insights about innervated joint capsules from a computational model. Biomechanics and Modeling in Mechanobiology, 2021, 20, 2269-2285.	1.4	6
120	Functional Tissue-Engineered Valves from Cell-Remodeled Fibrin with Commissural Alignment of Cell-Produced Collagen. Tissue Engineering, 2008, 14, 83-95.	4.9	6
121	Adaptive Finite Element Analysis of the Anisotropic Biphasic Theory of Tissue-Equivalent Mechanics. Computer Methods in Biomechanics and Biomedical Engineering, 2000, 3, 215-229.	0.9	5
122	Proteinâ^'Saltâ^'Water Solution Phase Diagram Determination by a Combined Experimentalâ^'Computational Scheme. Crystal Growth and Design, 2008, 8, 4208-4214.	1.4	5
123	Vascular biomechanical properties in mice with smooth muscle specific deletion of Ndst1. Molecular and Cellular Biochemistry, 2014, 385, 225-238.	1.4	5
124	Effect of Supercoiling on the Mechanical and Permeability Properties of Model Collagen IV Networks. Annals of Biomedical Engineering, 2015, 43, 1695-1705.	1.3	5
125	Quantification of iris concavity. Journal of Ophthalmic and Vision Research, 2010, 5, 211-2.	0.7	5
126	Application of the lag-after-pulsed-separation (LAPS) flow meter to different protein solutions. Analyst, The, 2005, 130, 171.	1.7	4

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127	Posterior chamber volume does not change significantly during dilation. British Journal of Ophthalmology, 2009, 93, 1514-1517.	2.1	4
128	An inter-species computational analysis of vibrotactile sensitivity in Pacinian and Herbst corpuscles. Royal Society Open Science, 2020, 7, 191439.	1.1	4
129	The Ring-Pull Assay for Mechanical Properties of Fibrous Soft Tissues â€" an Analysis of the Uniaxial Approximation and a Correction for Nonlinear Thick-Walled Tissues. Experimental Mechanics, 2021, 61, 53-66.	1.1	4
130	Characterizing Tissue Remodeling and Mechanical Heterogeneity in Cerebral Aneurysms. Journal of Vascular Research, 2022, 59, 34-42.	0.6	4
131	Thin-domain modeling of mass transport in microchannels, with application to diffusive mixing. Journal of Applied Physics, 2004, 95, 6435-6443.	1.1	3
132	Simulation of flow around a thin, flexible obstruction by means of a deforming grid overlapping a fixed grid. International Journal for Numerical Methods in Fluids, 2008, 56, 723-738.	0.9	3
133	A computational model of flow and species transport in the mesangium. American Journal of Physiology - Renal Physiology, 2016, 310, F222-F229.	1.3	3
134	Through-thickness regional variation in the mechanical characteristics of the lumbar facet capsular ligament. Biomechanics and Modeling in Mechanobiology, 2021, 20, 1445-1457.	1.4	3
135	A Hybrid Microstructural-Continuum Multiscale Approach for Modeling Hyperelastic Fibrous Soft Tissue. Journal of Elasticity, 2021, 145, 295-319.	0.9	3
136	Experimental and Mouse-Specific Computational Models of the Fbln4SMKO Mouse to Identify Potential Biomarkers for Ascending Thoracic Aortic Aneurysm. Cardiovascular Engineering and Technology, 2022, 13, 558-572.	0.7	3
137	Concentration control for protein crystallization via a continuously-fed crystallization chamber. Lab on A Chip, 2008, 8, 1398.	3.1	2
138	A Paradigm for Materials Design for Surgical Simulators, With Specific Application to the Pleura and Needle Decompression1. Journal of Medical Devices, Transactions of the ASME, 2016, 10, .	0.4	2
139	Fiber-Network Modeling in Biomechanics: Theoretical and Analytical Approaches. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2017, , 271-307.	0.7	2
140	Residual stress and osmotic swelling of the periodontal ligament. Biomechanics and Modeling in Mechanobiology, 2021, 20, 2047-2059.	1.4	2
141	Uniaxial and Biaxial Mechanical Behavior of Human Amnion. Materials Research Society Symposia Proceedings, 2004, 844, 1.	0.1	1
142	In Situ Lumbar Facet Capsular Ligament Strains Due to Joint Pressure and Residual Strain. Journal of Biomechanical Engineering, 2022, , .	0.6	1
143	Elucidating the signal for contact guidance contained in aligned fibrils with a microstructuralâ€"mechanical model. Journal of the Royal Society Interface, 2022, 19, 20210951.	1.5	1
144	Telescopic timeâ€scale bridging for modeling dispersion in rapidly oscillating flows. AICHE Journal, 2012, 58, 1987-1997.	1.8	0

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145	PC028 The Effect of Rigid Stent Grafts on the Propagation of Pressures in Aortic Dissection: A Lumped-Parameter Mathematical Model of Flow Through the Descending Thoracic Aorta. Journal of Vascular Surgery, 2017, 65, 147S-148S.	0.6	0
146	ANNUAL SPECIAL ISSUE â€œBiomechanical Engineering: Year in Reviewâ€• Journal of Biomechanical Engineering, 2017, 139, .	0.6	0
147	ANNUAL SPECIAL ISSUE â€œBiomechanical Engineeringâ€"2018 Year in Reviewâ€• Journal of Biomechanical Engineering, 2019, 141, .	0.6	0
148	Vibrotactile perception in Dupuytren disease. Journal of Plastic Surgery and Hand Surgery, 2021, 55, 32-40.	0.4	0
149	Conceptual Framework Development for a Double-Walled Aortic Stent-Graft to Manage Blood Pressure. Journal of Medical Devices, Transactions of the ASME, 2020, 14, 031005.	0.4	0
150	Finite Element Modeling Using Patient-Specific Geometry to Predict Aortic Valve Insufficiency During Percutaneous Pulmonary Valve Implantation. , 2022, , .		0