

Mahdi Navidbakhsh

List of Publications by Year in descending order

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Version: 2024-02-01

103
papers

2,416
citations

172457

29
h-index

243625

44
g-index

104
all docs

104
docs citations

104
times ranked

1920
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhancement of dropwise condensation heat transfer on hydrophilic-hydrophobic hybrid surface using microparticles. <i>Experimental Heat Transfer</i> , 2022, 35, 533-552.	3.2	6
2	Integrated microfluidic system for efficient DNA extraction using on-disk magnetic stirrer micromixer. <i>Sensors and Actuators B: Chemical</i> , 2022, 351, 130919.	7.8	16
3	Heat and mass transfer in the hyperthermia cancer treatment by magnetic nanoparticles. <i>Heat and Mass Transfer</i> , 2022, 58, 1029-1039.	2.1	12
4	Coupling Contraction-expansion Arrays with Spiral Microchannels to Enhance Microfluidic-Based Particle/Cell Separation. <i>International Journal of Computational Fluid Dynamics</i> , 2022, 36, 63-90.	1.2	2
5	New insights into the role of Al ₂ O ₃ nano-supplements in mechanical performance of PMMA and PMMA/HA bone cements using nanoindentation and nanoscratch measurements. <i>Materials Technology</i> , 2021, 36, 212-220.	3.0	4
6	Inertial cell sorting of microparticle-laden flows: An innovative OpenFOAM-based arbitrary Lagrangian-Eulerian numerical approach. <i>Biomicrofluidics</i> , 2021, 15, 014111.	2.4	2
7	Collateral flow at circle of Willis in healthy condition. <i>Perfusion (United Kingdom)</i> , 2021, , 026765912098755.	1.0	1
8	Centrifugal isolation of SARS-CoV-2: numerical simulation for purification of hospitals' air. <i>Biomechanics and Modeling in Mechanobiology</i> , 2021, 20, 1809-1817.	2.8	4
9	Simultaneous Modeling of Young's Modulus, Yield Stress, and Rupture Strain of Gelatin/Cellulose Acetate Microfibrous/Nanofibrous Scaffolds Using RSM. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 718718.	4.1	1
10	Modeling and simulation of magnetic nanoparticles' trajectories through a tumorous and healthy microvasculature. <i>Journal of Magnetism and Magnetic Materials</i> , 2021, 537, 168178.	2.3	4
11	Biomechanical, Structural and Performance Analysis of a Specific Type of Cardiac Assist Device Used in Left Ventricular Failures. <i>Iranian Journal of Science and Technology - Transactions of Mechanical Engineering</i> , 2020, 44, 1053-1064.	1.3	3
12	Frequency dependent multiphase flows on centrifugal microfluidics. <i>Lab on A Chip</i> , 2020, 20, 514-524.	6.0	11
13	Highly stretchable and sensitive strain sensors based on carbon nanotube-elastomer nanocomposites: the effect of environmental factors on strain sensing performance. <i>Journal of Materials Chemistry C</i> , 2020, 8, 6185-6195.	5.5	60
14	Cardiac cell differentiation of muscle satellite cells on aligned composite electrospun polyurethane with reduced graphene oxide. <i>Journal of Polymer Research</i> , 2019, 26, 1.	2.4	13
15	HEMODYNAMIC INVESTIGATION OF SUBCLAVIAN-CORONARY STEAL SYNDROME IN DIALYSIS PATIENTS WITH CORONARY ARTERY OCCLUSION AND DIFFERENT STENOSIS PERCENTAGES IN SUBCLAVIAN ARTERY. <i>Journal of Mechanics in Medicine and Biology</i> , 2019, 19, 1950052.	0.7	2
16	Localized air-mediated heating method for isothermal and rapid thermal processing on lab-on-a-disk platforms. <i>Sensors and Actuators B: Chemical</i> , 2019, 294, 270-282.	7.8	9
17	Demonstration of an efficient, compact and precise pumping method by centrifugal inertia for lab on disk platforms. <i>Journal of Micromechanics and Microengineering</i> , 2019, 29, 075001.	2.6	5
18	Three-dimensional modeling of Marfan syndrome with elastic and hyperelastic materials assumptions using fluid-structure interaction. <i>Bio-Medical Materials and Engineering</i> , 2019, 30, 255-266.	0.6	4

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19	To study the effects of nano-additives and nano-indentation variables on viscoplastic behaviour of a polymeric orthopaedic bone cement. <i>Materials Research Express</i> , 2019, 6, 125422.	1.6	3
20	Investigation of a new prototype of multi-balloons LVAD using FSI. <i>Journal of the Brazilian Society of Mechanical Sciences and Engineering</i> , 2018, 40, 1.	1.6	6
21	Numerical modeling of a prototype cardiac assist device by implementing fluid-structure interaction. <i>Artery Research</i> , 2018, 22, 24.	0.6	3
22	Effects of temperature distribution in the tissue around the tumor on the quality of hyperthermia. , 2018, , .		2
23	Performance and biomechanical analysis of an intra-aortic cardiac assist device in different boundary conditions. <i>Journal of Mechanical Science and Technology</i> , 2018, 32, 3995-4002.	1.5	2
24	A comparative finite element analysis of two types of axial and radial functionally graded dental implants with titanium one around implant-bone interface. <i>Science and Engineering of Composite Materials</i> , 2017, 24, 747-754.	1.4	7
25	A Combination of Constitutive Damage Model and Artificial Neural Networks to Characterize the Mechanical Properties of the Healthy and Atherosclerotic Human Coronary Arteries. <i>Artificial Organs</i> , 2017, 41, E103-E117.	1.9	21
26	Computing the influences of different Intraocular Pressures on the human eye components using computational fluid-structure interaction model. <i>Technology and Health Care</i> , 2017, 25, 285-297.	1.2	15
27	Investigating the performance of four specific types of material grafts and their effects on hemodynamic patterns as well as on von Mises stresses in a grafted three-layer aortic model using fluid-structure interaction analysis. <i>Journal of Medical Engineering and Technology</i> , 2017, 41, 630-643.	1.4	3
28	A combination of experimental and numerical methods to investigate the role of strain rate on the mechanical properties and collagen fiber orientations of the healthy and atherosclerotic human coronary arteries. <i>Bioengineered</i> , 2017, 8, 154-170.	3.2	27
29	A Comparative Investigation on the Performance of Different Micro Mixers: Toward Cerebral Microvascular Analysis. <i>Journal of Multiscale Modeling</i> , 2017, 08, 1650008.	1.1	2
30	Haemodynamic of blood flow through stenotic aortic valve. <i>Journal of Medical Engineering and Technology</i> , 2017, 41, 108-114.	1.4	7
31	A New Mechanism for the Plasma Separation from Whole Blood on the Lab-on-a-Disk Systems Based on Moment of Inertia Method. , 2017, , .		1
32	Mechanical Properties of the Human Sclera Under Various Strain Rates: Elastic, Hyperelastic, and Viscoelastic Models. <i>Journal of Biomaterials and Tissue Engineering</i> , 2017, 7, 686-695.	0.1	14
33	Quantifying the injury of the human eye components due to tennis ball impact using a computational fluid-structure interaction model. <i>Sports Engineering</i> , 2016, 19, 105-115.	1.1	20
34	Experimental verification of the healthy and atherosclerotic coronary arteries incompressibility via Digital Image Correlation. <i>Artery Research</i> , 2016, 16, 1.	0.6	41
35	Dynamic finite element simulation of the gunshot injury to the human forehead protected by polyvinyl alcohol sponge. <i>Journal of Materials Science: Materials in Medicine</i> , 2016, 27, 74.	3.6	13
36	Computing the stresses and deformations of the human eye components due to a high explosive detonation using fluid-structure interaction model. <i>Injury</i> , 2016, 47, 1042-1050.	1.7	39

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37	Measurement of the mechanical properties of soccer balls using digital image correlation method. <i>Sport Sciences for Health</i> , 2016, 12, 69-76.	1.3	5
38	A computational fluid-structure interaction model of the blood flow in the healthy and varicose saphenous vein. <i>Vascular</i> , 2016, 24, 254-263.	0.9	16
39	Measurement of the viscoelastic mechanical properties of the skin tissue under uniaxial loading. <i>Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications</i> , 2016, 230, 418-425.	1.1	10
40	A multi-channel acoustics monitor for perioperative respiratory monitoring: preliminary data. <i>Journal of Clinical Monitoring and Computing</i> , 2016, 30, 107-118.	1.6	10
41	Influence of Poly(acrylic acid) on the Mechanical Properties of Composite Hydrogels. <i>Advances in Polymer Technology</i> , 2015, 34, .	1.7	22
42	A combination of histological analyses and uniaxial tensile tests to determine the material coefficients of the healthy and atherosclerotic human coronary arteries. <i>Tissue and Cell</i> , 2015, 47, 152-158.	2.2	40
43	Measurement of the axial and circumferential mechanical properties of rat skin tissue at different anatomical locations. <i>Biomedizinische Technik</i> , 2015, 60, 115-22.	0.8	7
44	Determination of the axial and circumferential mechanical properties of the skin tissue using experimental testing and constitutive modeling. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2015, 18, 1768-1774.	1.6	25
45	Hemodynamic investigation of intraluminal thrombus effect on the wall stress in a stented three-layered aortic aneurysm model under pulsatile flow. <i>Artery Research</i> , 2015, 10, 11.	0.6	21
46	Measurement of the uniaxial mechanical properties of rat skin using different stress-strain definitions. <i>Skin Research and Technology</i> , 2015, 21, 149-157.	1.6	27
47	Cylindrical agar gel with fluid flow subjected to an alternating magnetic field during hyperthermia. <i>International Journal of Hyperthermia</i> , 2015, 31, 33-39.	2.5	22
48	Wall stress in media layer of stented three-layered aortic aneurysm at different intraluminal thrombus locations with pulsatile heart cycle. <i>Journal of Medical Engineering and Technology</i> , 2015, 39, 239-245.	1.4	20
49	MAGNETIC FLUID HYPERTHERMIA IN A CYLINDRICAL GEL CONTAINS WATER FLOW. <i>Journal of Mechanics in Medicine and Biology</i> , 2015, 15, 1550088.	0.7	6
50	Mechanical characterization of the rat and mice skin tissues using histostructural and uniaxial data. <i>Bioengineered</i> , 2015, 6, 153-160.	3.2	30
51	Measurement of the mechanical properties of the handball, volleyball, and basketball using DIC method: a combination of experimental, constitutive, and viscoelastic models. <i>Sport Sciences for Health</i> , 2015, 11, 295-303.	1.3	8
52	A COMBINATION OF EXPERIMENTAL AND NUMERICAL ANALYSES TO MEASURE THE COMPRESSIVE MECHANICAL PROPERTIES OF TENNIS BALL. <i>Biomedical Engineering - Applications, Basis and Communications</i> , 2015, 27, 1550039.	0.6	10
53	A Numerical Modeling of A Vascular Implantable Cardiac Endovascular Assistant (AVICENA). <i>Journal of Multiscale Modeling</i> , 2015, 06, 1550004.	1.1	2
54	A NUMERICAL STUDY ON THE HEMODYNAMIC AND SHEAR STRESS OF DOUBLE ANEURYSM THROUGH S-SHAPED VESSEL. <i>Biomedical Engineering - Applications, Basis and Communications</i> , 2015, 27, 1550033.	0.6	14

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55	An experimental-nonlinear finite element study of a balloon expandable stent inside a realistic stenotic human coronary artery to investigate plaque and arterial wall injury. <i>Biomedizinische Technik</i> , 2015, 60, 593-602.	0.8	10
56	A comparative study on the mechanical properties of the healthy and varicose human saphenous vein under uniaxial loading. <i>Journal of Medical Engineering and Technology</i> , 2015, 39, 490-497.	1.4	8
57	A lumped parameter mathematical model to analyze the effects of tachycardia and bradycardia on the cardiovascular system. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , 2015, 28, 346-357.	1.9	30
58	Measurement of the circumferential mechanical properties of the umbilical vein: experimental and numerical analyses. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2015, 18, 1418-1426.	1.6	38
59	An Experimental Study on the Structural and Mechanical Properties of Polyvinyl Alcohol Sponge Using Different Stress-Strain Definitions. <i>Advances in Polymer Technology</i> , 2014, 33, .	1.7	24
60	A computational fluid-structure interaction model for plaque vulnerability assessment in atherosclerotic human coronary arteries. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	69
61	STUDY OF PLAQUE VULNERABILITY IN CORONARY ARTERY USING MOONEY-RIVLIN MODEL: A COMBINATION OF FINITE ELEMENT AND EXPERIMENTAL METHOD. <i>Biomedical Engineering - Applications, Basis and Communications</i> , 2014, 26, 1450013.	0.6	61
62	MODELING OF CORONARY ARTERY BALLOON-ANGIOPLASTY USING EQUIVALENT ELECTRICAL CIRCUIT. <i>Biomedical Engineering - Applications, Basis and Communications</i> , 2014, 26, 1450039.	0.6	5
63	Dynamic simulation and finite element analysis of the human mandible injury protected by polyvinyl alcohol sponge. <i>Materials Science and Engineering C</i> , 2014, 42, 608-614.	7.3	38
64	A comparative study on the uniaxial mechanical properties of the umbilical vein and umbilical artery using different stress-strain definitions. <i>Australasian Physical and Engineering Sciences in Medicine</i> , 2014, 37, 645-654.	1.3	29
65	Plaque and arterial vulnerability investigation in a three-layer atherosclerotic human coronary artery using computational fluid-structure interaction method. <i>Journal of Applied Physics</i> , 2014, 116, .	2.5	42
66	A morphology-based method for the diagnosis of red blood cells parasitized by <i>Plasmodium malariae</i> and <i>Plasmodium ovale</i> . <i>Scandinavian Journal of Infectious Diseases</i> , 2014, 46, 368-375.	1.5	1
67	A NONLINEAR HYPERELASTIC BEHAVIOR TO IDENTIFY THE MECHANICAL PROPERTIES OF RAT SKIN UNDER UNIAXIAL LOADING. <i>Journal of Mechanics in Medicine and Biology</i> , 2014, 14, 1450075.	0.7	37
68	A comparative study on the elastic modulus of polyvinyl alcohol sponge using different stress-strain definitions. <i>Biomedizinische Technik</i> , 2014, 59, 439-46.	0.8	25
69	Material properties in unconfined compression of gelatin hydrogel for skin tissue engineering applications. <i>Biomedizinische Technik</i> , 2014, 59, 479-86.	0.8	41
70	Measurement of the nonlinear mechanical properties of a poly(vinyl alcohol) sponge under longitudinal and circumferential loading. <i>Journal of Applied Polymer Science</i> , 2014, 131, .	2.6	26
71	An experimental study on the mechanical properties of rat brain tissue using different stress-strain definitions. <i>Journal of Materials Science: Materials in Medicine</i> , 2014, 25, 1623-1630.	3.6	37
72	A finite element study of balloon expandable stent for plaque and arterial wall vulnerability assessment. <i>Journal of Applied Physics</i> , 2014, 116, 044701.	2.5	46

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73	A nonlinear finite element simulation of balloon expandable stent for assessment of plaque vulnerability inside a stenotic artery. <i>Medical and Biological Engineering and Computing</i> , 2014, 52, 589-599.	2.8	53
74	An experimental-finite element analysis on the kinetic energy absorption capacity of polyvinyl alcohol sponge. <i>Materials Science and Engineering C</i> , 2014, 39, 253-258.	7.3	44
75	A visco-hyperelastic constitutive approach for modeling polyvinyl alcohol sponge. <i>Tissue and Cell</i> , 2014, 46, 97-102.	2.2	67
76	Mechanical properties of polyvinyl alcohol sponge under different strain rates. <i>International Journal of Materials Research</i> , 2014, 105, 404-408.	0.3	41
77	Response to the Letter to the Editor: Measurement of the uniaxial mechanical properties of healthy and atherosclerotic human coronary arteries. <i>Materials Science and Engineering C</i> , 2014, 42, 421.	7.3	5
78	Finite element simulation of an artificial intervertebral disk using fiber reinforced laminated composite model. <i>Tissue and Cell</i> , 2014, 46, 299-303.	2.2	14
79	Effect of exercise on blood flow through the aortic valve: a combined clinical and numerical study. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2014, 17, 1821-1834.	1.6	16
80	Measurement of the Mechanical Failure of Polyvinyl Alcohol Sponge Using Biaxial Puncture Test. <i>Journal of Biomaterials and Tissue Engineering</i> , 2014, 4, 46-50.	0.1	33
81	Mechanical Characterization of Peritoneum/Fascia Under Uniaxial Loading. <i>Journal of Biomaterials and Tissue Engineering</i> , 2014, 4, 189-193.	0.1	24
82	Numerical Evaluation of Stenosis Location Effects on Hemodynamics and Shear Stress Through Curved Artery. <i>Journal of Biomaterials and Tissue Engineering</i> , 2014, 4, 358-366.	0.1	25
83	A 3D Finite Element Study for Stress Analysis in Bone Tissue Around Single Implants with Different Materials and Various Bone Qualities. <i>Journal of Biomaterials and Tissue Engineering</i> , 2014, 4, 632-637.	0.1	6
84	A Three-Dimensional Finite Element Study to Characterize the Influence of Load Direction on Stress Distribution in Bone Around Dental Implant. <i>Journal of Biomaterials and Tissue Engineering</i> , 2014, 4, 693-699.	0.1	5
85	Modeling of Balloon Part of a New Cardiac Assist Device Known as AVICENA. <i>Journal of Biomaterials and Tissue Engineering</i> , 2014, 4, 772-777.	0.1	6
86	A comparative study on the mechanical properties of the umbilical vein and umbilical artery under uniaxial loading. <i>Artery Research</i> , 2013, 8, 51.	0.6	59
87	Measurement of the uniaxial mechanical properties of healthy and atherosclerotic human coronary arteries. <i>Materials Science and Engineering C</i> , 2013, 33, 2550-2554.	7.3	197
88	Four E analysis and multi-objective optimization of an ice storage system incorporating PCM as the partial cold storage for air-conditioning applications. <i>Applied Thermal Engineering</i> , 2013, 58, 30-41.	6.0	84
89	A finite element investigation on plaque vulnerability in realistic healthy and atherosclerotic human coronary arteries. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2013, 227, 148-161.	1.8	79
90	THE EFFECTS OF IMPLANTING DIFFERENT STENTS ON THE BLOOD HEMODYNAMIC IN CORONARY ARTERIES. <i>Biomedical Engineering - Applications, Basis and Communications</i> , 2013, 25, 1350056.	0.6	0

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91	Measurement of the uniaxial mechanical properties of rat brains infected by <i>Plasmodium berghei</i> ANKA. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2013, 227, 609-614.	1.8	48
92	Modeling the Circle of Willis Using Electrical Analogy Method under both Normal and Pathological Circumstances. Journal of Biomedical Physics and Engineering, 2013, 3, 45-56.	0.9	6
93	Comparison between mechanical properties of human saphenous vein and umbilical vein. BioMedical Engineering OnLine, 2012, 11, 59.	2.7	42
94	COMPARISON BETWEEN ULTRAFILTRATION AND MICROFILTRATION IN THE CLARIFICATION OF POMEGRANATE JUICE. Journal of Food Process Engineering, 2012, 35, 424-436.	2.9	28
95	Modelling the membrane clarification of pomegranate juice with computational fluid dynamics. European Food Research and Technology, 2011, 232, 671-677.	3.3	6
96	Alteration in the Mechanical Properties of Human Ovum Zona Pellucida Following Fertilization: Experimental and Analytical Studies. Experimental Mechanics, 2011, 51, 175-182.	2.0	19
97	Mathematical Modelling and Electrical Analog Equivalent of the Human Cardiovascular System. Cardiovascular Engineering (Dordrecht, Netherlands), 2010, 10, 45-51.	1.0	28
98	Clarification of pomegranate juice by microfiltration with PVDF membranes. Desalination, 2010, 264, 243-248.	8.2	78
99	Mathematical modelling of mass transfer in the concentration polarisation layer of flat-sheet membranes during clarification of pomegranate juice. International Journal of Food Science and Technology, 2010, 45, 2096-2100.	2.7	9
100	Estimating Young's modulus of zona pellucida by micropipette aspiration in combination with theoretical models of ovum. Journal of the Royal Society Interface, 2010, 7, 687-694.	3.4	77
101	Mathematical modelling of intra-aortic balloon pump. Computer Methods in Biomechanics and Biomedical Engineering, 2010, 13, 567-576.	1.6	7
102	Changes in blocking mechanisms during membrane processing of pomegranate juice. International Journal of Food Science and Technology, 2009, 44, 2135-2141.	2.7	31
103	Numerical study of centrifuge-trapping technique for generating gas-liquid flows in microchannels. Physics of Fluids, 0, , .	4.0	1