

Gerhard Sommer

List of Publications by Year in descending order

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32
papers

2,807
citations

331259

21
h-index

395343

33
g-index

33
all docs

33
docs citations

33
times ranked

2334
citing authors

#	ARTICLE	IF	CITATIONS
1	The effects of viscoelasticity on residual strain in aortic soft tissues. <i>Acta Biomaterialia</i> , 2022, 140, 398-411.	4.1	13
2	An ultrastructural 3D reconstruction method for observing the arrangement of collagen fibrils and proteoglycans in the human aortic wall under mechanical load. <i>Acta Biomaterialia</i> , 2022, 141, 300-314.	4.1	7
3	Esophagus stretch tests: Biomechanics for tissue engineering and possible implications on the outcome of esophageal atresia repairs performed under excessive tension. <i>Esophagus</i> , 2021, 18, 346-352.	1.0	8
4	Constitutive modeling using structural information on collagen fiber direction and dispersion in human superficial femoral artery specimens of different ages. <i>Acta Biomaterialia</i> , 2021, 121, 461-474.	4.1	27
5	An active approach of pressure waveform matching for stress-based testing of arteries. <i>Artificial Organs</i> , 2021, 45, 1562-1575.	1.0	6
6	A viscoelastic model for human myocardium. <i>Acta Biomaterialia</i> , 2021, 135, 441-457.	4.1	23
7	Towards microstructure-informed material models for human brain tissue. <i>Acta Biomaterialia</i> , 2020, 104, 53-65.	4.1	57
8	Quantifying stent-induced damage in coronary arteries by investigating mechanical and structural alterations. <i>Acta Biomaterialia</i> , 2020, 116, 285-301.	4.1	10
9	Experimental and mathematical characterization of coronary polyamide-12 balloon catheter membranes. <i>PLoS ONE</i> , 2020, 15, e0234340.	1.1	4
10	An efficient and accurate method for modeling nonlinear fractional viscoelastic biomaterials. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 362, 112834.	3.4	29
11	Mechanical characterization of porcine liver properties for computational simulation of indentation on cancerous tissue. <i>Mathematical Medicine and Biology</i> , 2020, 37, 469-490.	0.8	7
12	Failure properties and microstructure of healthy and aneurysmatic human thoracic aortas subjected to uniaxial extension with a focus on the media. <i>Acta Biomaterialia</i> , 2019, 99, 443-456.	4.1	26
13	Anisotropic residual stresses in arteries. <i>Journal of the Royal Society Interface</i> , 2019, 16, 20190029.	1.5	36
14	Mechanical response of human subclavian and iliac arteries to extension, inflation and torsion. <i>Acta Biomaterialia</i> , 2018, 75, 235-252.	4.1	20
15	2.3 BIOMECHANICAL AND STRUCTURAL QUANTIFICATION OF VASCULAR DAMAGE: A UNIQUE INVESTIGATION OF STENT IMPLANTATION. <i>Artery Research</i> , 2017, 20, 50.	0.3	2
16	Microstructure and mechanics of healthy and aneurysmatic abdominal aortas: experimental analysis and modelling. <i>Journal of the Royal Society Interface</i> , 2016, 13, 20160620.	1.5	137
17	Very large and giant microsurgical bifurcation aneurysms in rabbits: Proof of feasibility and comparability using computational fluid dynamics and biomechanical testing. <i>Journal of Neuroscience Methods</i> , 2016, 268, 7-13.	1.3	5
18	An orthotropic viscoelastic model for the passive myocardium: continuum basis and numerical treatment. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2016, 19, 1647-1664.	0.9	59

#	ARTICLE	IF	CITATIONS
19	Mechanical strength of aneurysmatic and dissected human thoracic aortas at different shear loading modes. <i>Journal of Biomechanics</i> , 2016, 49, 2374-2382.	0.9	75
20	Quantification of Shear Deformations and Corresponding Stresses in the Biaxially Tested Human Myocardium. <i>Annals of Biomedical Engineering</i> , 2015, 43, 2334-2348.	1.3	61
21	Selective enzymatic removal of elastin and collagen from human abdominal aortas: Uniaxial mechanical response and constitutive modeling. <i>Acta Biomaterialia</i> , 2015, 17, 125-136.	4.1	60
22	Biomechanical properties and microstructure of human ventricular myocardium. <i>Acta Biomaterialia</i> , 2015, 24, 172-192.	4.1	217
23	Multiaxial mechanical properties and constitutive modeling of human adipose tissue: A basis for preoperative simulations in plastic and reconstructive surgery. <i>Acta Biomaterialia</i> , 2013, 9, 9036-9048.	4.1	88
24	Multiaxial mechanical response and constitutive modeling of esophageal tissues: Impact on esophageal tissue engineering. <i>Acta Biomaterialia</i> , 2013, 9, 9379-9391.	4.1	60
25	Arterial clamping: Finite element simulation and in vivo validation. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012, 12, 107-118.	1.5	39
26	3D constitutive modeling of the biaxial mechanical response of intact and layer-dissected human carotid arteries. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012, 5, 116-128.	1.5	95
27	Dissection Properties and Mechanical Strength of Tissue Components in Human Carotid Bifurcations. <i>Annals of Biomedical Engineering</i> , 2011, 39, 1703-1719.	1.3	49
28	Biaxial mechanical properties of intact and layer-dissected human carotid arteries at physiological and suprphysiological loadings. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2010, 298, H898-H912.	1.5	146
29	Dissection Properties of the Human Aortic Media: An Experimental Study. <i>Journal of Biomechanical Engineering</i> , 2008, 130, 021007.	0.6	143
30	Layer-Specific 3D Residual Deformations of Human Aortas with Non-Atherosclerotic Intimal Thickening. <i>Annals of Biomedical Engineering</i> , 2007, 35, 530-545.	1.3	192
31	Determination of layer-specific mechanical properties of human coronary arteries with nonatherosclerotic intimal thickening and related constitutive modeling. <i>American Journal of Physiology - Heart and Circulatory Physiology</i> , 2005, 289, H2048-H2058.	1.5	775
32	Anisotropic Mechanical Properties of Tissue Components in Human Atherosclerotic Plaques. <i>Journal of Biomechanical Engineering</i> , 2004, 126, 657-665.	0.6	330