StÃ©phane Avril

List of Publications by Year
in descending order

166 papers	4,844 citations	94269 37 h-index	118652 62 g-index
172 all docs	172 docs citations	172 times ranked	2673 citing authors

#	Article	IF	Citations
1	Overview of Identification Methods of Mechanical Parameters Based on Full-field Measurements. Experimental Mechanics, 2008, 48, 381-402.	1.1	594
2	The Virtual Fields Method for Extracting Constitutive Parameters From Full-Field Measurements: a Review. Strain, 2006, 42, 233-253.	1.4	180
3	Sensitivity of the virtual fields method to noisy data. Computational Mechanics, 2004, 34, 439-452.	2.2	156
4	General framework for the identification of constitutive parameters from full-field measurements in linear elasticity. International Journal of Solids and Structures, 2007, 44, 4978-5002.	1.3	130
5	In Vitro Characterisation of Physiological and Maximum Elastic Modulus of Ascending Thoracic Aortic Aneurysms Using Uniaxial Tensile Testing. European Journal of Vascular and Endovascular Surgery, 2010, 39, 700-707.	0.8	128
6	Anisotropic and hyperelastic identification of in vitro human arteries from full-field optical measurements. Journal of Biomechanics, 2010, 43, 2978-2985.	0.9	126
7	Identification of elasto-visco-plastic parameters and characterization of LÃ¼ders behavior using digital image correlation and the virtual fields method. Mechanics of Materials, 2008, 40, 729-742.	1.7	119
8	Biaxial rupture properties of ascending thoracic aortic aneurysms. Acta Biomaterialia, 2016, 42, 273-285.	4.1	105
9	In vitro analysis of localized aneurysm rupture. Journal of Biomechanics, 2014, 47, 607-616.	0.9	83
10	Identification of the Orthotropic Elastic Stiffnesses of Composites with the Virtual Fields Method: Sensitivity Study and Experimental Validation. Strain, 2007, 43, 250-259.	1.4	81
11	Finite Element Analysis of the Mechanical Performances of 8 Marketed Aortic Stent-Grafts. Journal of Endovascular Therapy, 2013, 20, 523-535.	0.8	80
12	Patient-specific numerical simulation of stent-graft deployment: Validation on three clinical cases. Journal of Biomechanics, 2015, 48, 1868-1875.	0.9	80
13	Computational comparison of the bending behavior of aortic stent-grafts. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 5, 272-282.	1.5	79
14	Novel Methodology for Characterizing Regional Variations in the Material Properties of Murine Aortas. Journal of Biomechanical Engineering, 2016, 138, .	0.6	77
15	Stress Reconstruction and Constitutive Parameter Identification in Plane-Stress Elasto-plastic Problems Using Surface Measurements of Deformation Fields. Experimental Mechanics, 2008, 48, 403-419.	1.1	73
16	Extension of the virtual fields method to elasto-plastic material identification with cyclic loads and kinematic hardening. International Journal of Solids and Structures, 2010, 47, 2993-3010.	1.3	71
17	Identification of Heterogeneous Constitutive Parameters in a Welded Specimen: Uniform Stress and Virtual Fields Methods for Material Property Estimation. Experimental Mechanics, 2008, 48, 451-464.	1.1	70
18	Experimental characterization of rupture in human aortic aneurysms using a full-field measurement technique. Biomechanics and Modeling in Mechanobiology, 2012, 11, 841-853.	1.4	67

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19	Identification of Elasto-Plastic Constitutive Parameters from Statically Undetermined Tests Using the Virtual Fields Method. Experimental Mechanics, 2006, 46, 735-755.	1.1	66
20	A comprehensive study of layer-specific morphological changes in the microstructure of carotid arteries under uniaxial load. Acta Biomaterialia, 2017, 57, 342-351.	4.1	66
21	Experimental identification of a nonlinear model for composites using the grid technique coupled to the virtual fields method. Composites Part A: Applied Science and Manufacturing, 2006, 37, 315-325.	3.8	65
22	Novel experimental approach for longitudinal-radial stiffness characterisation of clear wood by a single test. Holzforschung, 2007, 61, 573-581.	0.9	56
23	Patient specific stress and rupture analysis of ascending thoracic aneurysms. Journal of Biomechanics, 2015, 48, 1836-1843.	0.9	55
24	Evaluation of Peak Wall Stress in an Ascending Thoracic Aortic Aneurysm Using FSI Simulations: Effects of Aortic Stiffness and Peripheral Resistance. Cardiovascular Engineering and Technology, 2018, 9, 707-722.	0.7	54
25	Patient-specific simulation of endovascular repair surgery with tortuous aneurysms requiring flexible stent-grafts. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 63, 86-99.	1.5	53
26	Local variations in material and structural properties characterize murine thoracic aortic aneurysm mechanics. Biomechanics and Modeling in Mechanobiology, 2019, 18, 203-218.	1.4	52
27	Estimation of the strain field from full-field displacement noisy data. European Journal of Computational Mechanics, 2008, 17, 857-868.	0.6	51
28	Patient-specific predictions of aneurysm growth and remodeling in the ascending thoracic aorta using the homogenized constrained mixture model. Biomechanics and Modeling in Mechanobiology, 2019, 18, 1895-1913.	1.4	51
29	3D Heterogeneous Stiffness Reconstruction Using MRI and the Virtual Fields Method. Experimental Mechanics, 2008, 48, 479-494.	1.1	48
30	Comparison of two approaches for differentiating full-field data in solid mechanics. Measurement Science and Technology, 2010, 21, 015703.	1.4	46
31	Identification of the material parameters of soft tissues in the compressed leg. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 3-11.	0.9	45
32	Local mechanical properties of human ascending thoracic aneurysms. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 61, 235-249.	1.5	44
33	Variation of transverse and shear stiffness properties of wood in a tree. Composites Part A: Applied Science and Manufacturing, 2009, 40, 1953-1960.	3.8	43
34	Deployment of stent grafts in curved aneurysmal arteries: toward a predictive numerical tool. International Journal for Numerical Methods in Biomedical Engineering, 2015, 31, e02698.	1.0	43
35	Mixed Experimental and Numerical Approach for Characterizing the Biomechanical Response of the Human Leg Under Elastic Compression. Journal of Biomechanical Engineering, 2010, 132, 031006.	0.6	42
36	Fluid- and Biomechanical Analysis of Ascending Thoracic Aorta Aneurysm with Concomitant Aortic Insufficiency. Annals of Biomedical Engineering, 2017, 45, 2921-2932.	1.3	42

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37	Identification of the through-thickness rigidities of a thick laminated composite tube. Composites Part A: Applied Science and Manufacturing, 2006, 37, 326-336.	3.8	41
38	Inverse identification of local stiffness across ascending thoracic aortic aneurysms. Biomechanics and Modeling in Mechanobiology, 2019, 18, 137-153.	1.4	39
39	Mechanical identification of layer-specific properties of mouse carotid arteries using 3D-DIC and a hyperelastic anisotropic constitutive model. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 37-48.	0.9	37
40	Patient-specific stress analyses in the ascending thoracic aorta using a finite-element implementation of the constrained mixture theory. Biomechanics and Modeling in Mechanobiology, 2017, 16, 1765-1777.	1.4	36
41	Kinematics of collagen fibers in carotid arteries under tension-inflation loading. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 77, 718-726.	1.5	36
42	Grid method: Application to the characterization of cracks. Experimental Mechanics, 2004, 44, 37-43.	1.1	35
43	A full-field optical method for the experimental analysis of reinforced concrete beams repaired with composites. Composites Part A: Applied Science and Manufacturing, 2004, 35, 873-884.	3.8	34
44	The Virtual Fields Method for Extracting Constitutive Parameters From Fullâ€Field Measurements: a Review. Strain, 2006, 42, 233-253.	1.4	34
45	Pointwise characterization of the elastic properties of planar soft tissues: application to ascending thoracic aneurysms. Biomechanics and Modeling in Mechanobiology, 2015, 14, 967-978.	1.4	34
46	Severe Bending of Two Aortic Stent-Grafts: An Experimental and Numerical Mechanical Analysis. Annals of Biomedical Engineering, 2012, 40, 2674-2686.	1.3	33
47	Assessment of the in-plane biomechanical properties of human skin using a finite element model updating approach combined with an optical full-field measurement on a new tensile device. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 27, 273-282.	1.5	33
48	Predictive Numerical Simulations of Double Branch Stent-Graft Deployment in an Aortic Arch Aneurysm. Annals of Biomedical Engineering, 2019, 47, 1051-1062.	1.3	30
49	Numerical simulation of arterial dissection during balloon angioplasty of atherosclerotic coronary arteries. Journal of Biomechanics, 2014, 47, 878-889.	0.9	29
50	Characterization of composite plates using the virtual fields method with optimized loading conditions. Composite Structures, 2008, 85, 70-82.	3.1	27
51	Local stiffness reduction in impacted composite plates from full-field measurements. Composites Part A: Applied Science and Manufacturing, 2009, 40, 1961-1974.	3.8	27
52	Biomechanical response of varicose veins to elastic compression: A numerical study. Journal of Biomechanics, 2013, 46, 599-603.	0.9	27
53	Nonâ€affine fiber kinematics in arterial mechanics: a continuum micromechanical investigation. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2018, 98, 2101-2121.	0.9	26
54	Prediction of the Biomechanical Effects of Compression Therapy on Deep Veins Using Finite Element Modelling. Annals of Biomedical Engineering, 2015, 43, 314-324.	1.3	25

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55	Deciphering ascending thoracic aortic aneurysm hemodynamics in relation to biomechanical properties. Medical Engineering and Physics, 2020, 82, 119-129.	0.8	25
56	Characteristics of thoracic aortic aneurysm rupture in vitro. Acta Biomaterialia, 2016, 42, 286-295.	4.1	24
57	Predictive Models with Patient Specific Material Properties for the Biomechanical Behavior of Ascending Thoracic Aneurysms. Annals of Biomedical Engineering, 2016, 44, 84-98.	1.3	24
58	Three-Dimensional Full-Field Strain Measurements across a Whole Porcine Aorta Subjected to Tensile Loading Using Optical Coherence Tomographyâ€"Digital Volume Correlation. Frontiers in Mechanical Engineering, 2018, 4, .	0.8	24
59	Mechanics-driven mechanobiological mechanisms of arterial tortuosity. Science Advances, 2020, 6, .	4.7	24
60	Characterization of chemoelastic effects in arteries using digital volume correlation and optical coherence tomography. Acta Biomaterialia, 2020, 102, 127-137.	4.1	23
61	3D Residual Stress Field in Arteries: Novel Inverse Method Based on Optical Fullâ€field Measurements. Strain, 2012, 48, 528-538.	1.4	22
62	A numerical parametric study of the mechanical action of pulsatile blood flow onto axisymmetric stenosed arteries. Medical Engineering and Physics, 2012, 34, 1483-1495.	0.8	22
63	Numerical simulation of arterial remodeling in pulmonary autografts. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2018, 98, 2239-2257.	0.9	22
64	Identifying Local Arterial Stiffness to Assess the Risk of Rupture of Ascending Thoracic Aortic Aneurysms. Annals of Biomedical Engineering, 2019, 47, 1038-1050.	1.3	22
65	Relationship Between Ascending Thoracic Aortic Aneurysms Hemodynamics and Biomechanical Properties. IEEE Transactions on Biomedical Engineering, 2020, 67, 949-956.	2.5	22
66	Biomechanics of Porcine Renal Arteries and Role of Axial Stretch. Journal of Biomechanical Engineering, 2013, 135, 81007.	0.6	21
67	Coupling hemodynamics with mechanobiology in patient-specific computational models of ascending thoracic aortic aneurysms. Computer Methods and Programs in Biomedicine, 2021, 205, 106107.	2.6	21
68	Constrained mixture modeling affects material parameter identification from planar biaxial tests. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 95, 124-135.	1.5	20
69	A new finiteâ€element shell model for arterial growth and remodeling after stent implantation. International Journal for Numerical Methods in Biomedical Engineering, 2020, 36, e3282.	1.0	20
70	Multimodality Imaging-Based Characterization of Regional Material Properties in a Murine Model of Aortic Dissection. Scientific Reports, 2020, 10, 9244.	1.6	20
71	Computational predictions of damage propagation preceding dissection of ascending thoracic aortic aneurysms. International Journal for Numerical Methods in Biomedical Engineering, 2018, 34, e2944.	1.0	20
72	<i>In vivo</i> Identification of the Passive Mechanical Properties of Deep Soft Tissues in the Human Leg. Strain, 2016, 52, 400-411.	1.4	19

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73	Finite Element simulation of buckling-induced vein tortuosity and influence of the wall constitutive properties. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 26, 119-126.	1.5	18
74	MRI strain imaging of the carotid artery: Present limitations and future challenges. Journal of Biomechanics, 2014, 47, 824-833.	0.9	18
75	Prediction of the Biomechanical Effects of Compression Therapy by Finite Element Modeling and Ultrasound Elastography. IEEE Transactions on Biomedical Engineering, 2015, 62, 1011-1019.	2.5	18
76	On improving the accuracy of nonhomogeneous shear modulus identification in incompressible elasticity using the virtual fields method. International Journal of Solids and Structures, 2019, 178-179, 136-144.	1.3	18
77	Patient Specific Computer Modelling for Automated Sizing of Fenestrated Stent Grafts. European Journal of Vascular and Endovascular Surgery, 2020, 59, 237-246.	0.8	18
78	Three-dimensional numerical simulation of soft-tissue wound healing using constrained-mixture anisotropic hyperelasticity and gradient-enhanced damage mechanics. Journal of the Royal Society Interface, 2020, 17, 20190708.	1.5	18
79	Mechanical behavior of RC beams reinforced by externally bonded CFRP sheets. Materials and Structures/Materiaux Et Constructions, 2003, 36, 522-529.	1.3	17
80	A non-invasive methodology for ATAA rupture risk estimation. Journal of Biomechanics, 2018, 66, 119-126.	0.9	17
81	Ascending thoracic aorta aneurysm repair induces positive hemodynamic outcomes in a patient with unchanged bicuspid aortic valve. Journal of Biomechanics, 2018, 81, 145-148.	0.9	17
82	Prediction of local strength of ascending thoracic aortic aneurysms. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 115, 104284.	1.5	17
83	Identification of heterogeneous elastic properties in stenosed arteries: a numerical plane strain study. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 49-58.	0.9	16
84	Patientâ€specific computational modeling of endovascular aneurysm repair: State of the art and future directions. International Journal for Numerical Methods in Biomedical Engineering, 2021, 37, e3529.	1.0	16
85	Identification of the in vivo elastic properties of common carotid arteries from MRI: A study on subjects with and without atherosclerosis. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 27, 184-203.	1.5	15
86	Model reduction methodology for computational simulations of endovascular repair. Computer Methods in Biomechanics and Biomedical Engineering, 2018, 21, 139-148.	0.9	14
87	Gradient-enhanced continuum models of healing in damaged soft tissues. Biomechanics and Modeling in Mechanobiology, 2019, 18, 1443-1460.	1.4	14
88	Fully-Coupled FSI Computational Analyses in the Ascending Thoracic Aorta Using Patient-Specific Conditions and Anisotropic Material Properties. Frontiers in Physiology, 2021, 12, 732561.	1.3	14
89	General Finite-Element Framework of the Virtual Fields Method in Nonlinear Elasticity. Journal of Elasticity, 2021, 145, 265-294.	0.9	13
90	A New Method for the In Vivo Identification of Mechanical Properties in Arteries From Cine MRI Images: Theoretical Framework and Validation. IEEE Transactions on Medical Imaging, 2013, 32, 1448-1461.	5.4	12

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91	Characterisation of Knee Brace Migration and Associated Skin Deformation During Flexion by Full-Field Measurements. Experimental Mechanics, 2015, 55, 349-360.	1.1	12
92	Characterisation of in-vivo mechanical action of knee braces regarding their anti-drawer effect. Knee, 2015, 22, 80-87.	0.8	12
93	Experimental Characterization of Adventitial Collagen Fiber Kinematics Using Second-Harmonic Generation Imaging Microscopy: Similarities and Differences Across Arteries, Species and Testing Conditions. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2020, , 123-164.	0.7	11
94	Introducing regularization into the virtual fields method (VFM) to identify nonhomogeneous elastic property distributions. Computational Mechanics, 2021, 67, 1581-1599.	2.2	11
95	Estimating aortic thoracic aneurysm rupture risk using tensionâ€“strain data in physiological pressure range: an in vitro study. Biomechanics and Modeling in Mechanobiology, 2021, 20, 683-699.	1.4	10
96	Mechanical action of the blood onto atheromatous plaques: influence of the stenosis shape and morphology. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 527-538.	0.9	9
97	Computational Study of Growth and Remodeling in Ascending Thoracic Aortic Aneurysms Considering Variations of Smooth Muscle Cell Basal Tone. Frontiers in Bioengineering and Biotechnology, 2020, 8, 587376.	2.0	9
98	Computational prediction of hemodynamical and biomechanical alterations induced by aneurysm dilatation in patientâ€specific ascending thoracic aortas. International Journal for Numerical Methods in Biomedical Engineering, 2020, 36, e3326.	1.0	9
99	Multi-view Digital Image Correlation Systems for In Vitro Testing of Arteries from Mice to Humans. Experimental Mechanics, 2021, 61, 1455-1472.	1.1	9
100	In vivo measurements of blood viscosity and wall stiffness in the carotid using PC-MRI. European Journal of Computational Mechanics, 2009, 18, 9-20.	0.6	8
101	Material model calibration from planar tension tests on porcine linea alba. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 43, 26-34.	1.5	8
102	Hyperelasticity of Soft Tissues and Related Inverse Problems. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2017, , 37-66.	0.3	8
103	Hemodynamics alteration in patient-specific dilated ascending thoracic aortas with tricuspid and bicuspid aortic valves. Journal of Biomechanics, 2020, 110, 109954.	0.9	8
104	ROLE OF OXYGEN CONCENTRATION IN THE OSTEOBLASTS BEHAVIOR: A FINITE ELEMENT MODEL. Journal of Mechanics in Medicine and Biology, 2020, 20, 1950064.	0.3	8
105	Patient-specific computational evaluation of stiffness distribution in ascending thoracic aortic aneurysm. Journal of Biomechanics, 2021, 119, 110321.	0.9	8
106	A thermodynamic framework for unified continuum models for the healing of damaged soft biological tissue. Journal of the Mechanics and Physics of Solids, 2022, 158, 104662.	2.3	8
107	In vivo velocity vector imaging and time-resolved strain rate measurements in the wall of blood vessels using MRI. Journal of Biomechanics, 2011, 44, 979-983.	0.9	7
108	Evaluation of the mechanical efficiency of knee braces based on computational modeling. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 646-661.	0.9	7

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109	Inverse problems in the mechanical characterization of elastic arteries. MRS Bulletin, 2015, 40, 317-323.	1.7	7
110	An implicit 3D corotational formulation for frictional contact dynamics of beams against rigid surfaces using discrete signed distance fields. Computer Methods in Applied Mechanics and Engineering, 2020, 371, 113275.	3.4	7
111	A multi-scale approach for crack width prediction in reinforced-concrete beams repaired with composites. Composites Science and Technology, 2005, 65, 445-453.	3.8	6
112	Editorial: Identification of material parameters through inverse finite element modelling. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 1-2.	0.9	6
113	Inverse problems and material identification in tissue biomechanics. Journal of the Mechanical Behavior of Biomedical Materials, 2013, 27, 129-131.	1.5	6
114	Structural intensity assessment on shells via a finite element approximation. Journal of the Acoustical Society of America, 2019, 145, 312-326.	0.5	6
115	Regulation of SMC traction forces in human aortic thoracic aneurysms. Biomechanics and Modeling in Mechanobiology, 2021, 20, 717-731.	1.4	6
116	Mechanical behavior of RC beams reinforced by externally bonded CFRP sheets. Materials and Structures/Materiaux Et Constructions, 2003, 36, 522-529.	1.3	6
117	Fiber Rearrangement and Matrix Compression in Soft Tissues: Multiscale Hypoelasticity and Application to Tendon. Frontiers in Bioengineering and Biotechnology, 2021, 9, 725047.	2.0	6
118	About prestretch in homogenized constrained mixture models simulating growth and remodeling in patient-specific aortic geometries. Biomechanics and Modeling in Mechanobiology, 2022, 21, 455-469.	1.4	6
119	Fluidâ€"Structure Interaction Modeling of Ascending Thoracic Aortic Aneurysms in SimVascular. Biomechanics, 2022, 2, 189-204.	0.5	6
120	Characterisation of failure in human aortic tissue using digital image correlation. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 73-74.	0.9	5
121	Importance of material parameters and strain energy function on the wall stresses in the left ventricle. Computer Methods in Biomechanics and Biomedical Engineering, 2017, 20, 1223-1232.	0.9	5
122	In Vitro Measurement of Strain Localization Preceding Dissection of the Aortic Wall Subjected to Radial Tension. Experimental Mechanics, 2021, 61, 119-130.	1.1	5
123	Stress Analysis in AAA does not Predict Rupture Location Correctly in Patients with Intraluminal Thrombus. Annals of Vascular Surgery, 2022, 79, 279-289.	0.4	5
124	Atomic Force Microscopy Stiffness Mapping in Human Aortic Smooth Muscle Cells. Journal of Biomechanical Engineering, 2022, 144, .	0.6	5
125	The fiber reorientation problem revisited in the context of Eshelbian micromechanics: theory and computations. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 39-42.	0.2	4
126	Regional identification of mechanical properties in arteries. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 1874-1875.	0.9	4

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127	In vitro histomechanical effects of enzymatic degradation in carotid arteries during inflation tests with pulsatile loading. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 103, 103550.	1.5	4
128	Finite-Element Based Image Registration for Endovascular Aortic Aneurysm Repair. Modelling, 2020, 1, 22-38.	0.8	4
129	EndoBeams.jl: A Julia finite element package for beam-to-surface contact problems in cardiovascular mechanics. Advances in Engineering Software, 2022, 171, 103173.	1.8	4
130	Mechanical behavior of cracked beams strengthened with composites: application of a full-field measurement method. Materials and Structures/Materiaux Et Constructions, 2003, 36, 379-385.	1.3	3
131	Patient-Specific Modeling of Leg Compression in the Treatment of Venous Deficiency. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2011, , 217-238.	0.7	3
132	Patient-specific modelling of the calf muscle under elastic compression using magnetic resonance imaging and ultrasound elastography. Computer Methods in Biomechanics and Biomedical Engineering, 2013, 16, 332-333.	0.9	3
133	Evaluation of the mechanical efficiency of knee orthoses: A combined experimentalâ€“numerical approach. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2014, 228, 533-546.	1.0	3
134	Review of the Essential Roles of SMCs in ATAA Biomechanics. , 2019, , 95-114.		3
135	Design, Development, and Temporal Evaluation of a Magnetic Resonance Imaging-Compatible In Vitro Circulation Model Using a Compliant Abdominal Aortic Aneurysm Phantom. Journal of Biomechanical Engineering, 2021, 143, .	0.6	3
136	Evaluation and Verification of Fast Computational Simulations of Stent-Graft Deployment in Endovascular Aneurysmal Repair. Frontiers in Medical Technology, 2021, 3, 704806.	1.3	3
137	Patient-Specific Computational Models: Tools for Improving the Efficiency of Medical Compression Stockings. , 2013, , 25-37.		3
138	Computer Simulation Model May Prevent Thoracic Stent-Graft Collapse Complication. Circulation: Cardiovascular Imaging, 2022, 15, e013764.	1.3	3
139	Evolving Mural Defects, Dilatation, and Biomechanical Dysfunction in Angiotensin IIâ€“Induced Thoracic Aortopathies. Arteriosclerosis, Thrombosis, and Vascular Biology, 2022, 42, 973-986.	1.1	3
140	Optimization of the Unnotched Iosipescu Test on Composites for Identification from Full-Field Measurements. Applied Mechanics and Materials, 2006, 5-6, 125-134.	0.2	2
141	The concept of frozen elastic energy as a consequence of changes in microstructure morphology. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 1966-1967.	0.9	2
142	Sensitivity analysis of nonâ€local damage in soft biological tissues. International Journal for Numerical Methods in Biomedical Engineering, 2021, 37, e3427.	1.0	2
143	A Chemomechanobiological Model of the Long-Term Healing Response of Arterial Tissue to a Clamping Injury. Frontiers in Bioengineering and Biotechnology, 2020, 8, 589889.	2.0	2
144	Material characterization of curved shells under finite deformation using the virtual fields method. Strain, 2021, 57, e12398.	1.4	2

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145	Material Identification on Thin Shells Using the Virtual Fields Method, Demonstrated on the Human Eardrum. Journal of Biomechanical Engineering, 2022, 144, .	0.6	2
146	Characterization of the Nonlinear Shear Behaviour of UD Composite Materials Using the Virtual Fields Method. Applied Mechanics and Materials, 2005, 3-4, 185-190.	0.2	1
147	Identification of the Through-Thickness Orthotropic Stiffness of Composite Tubes from Full-Field Measurements. Applied Mechanics and Materials, 2005, 3-4, 161-166.	0.2	1
148	Viscoelastic material properties' identification using full field measurements on vibrating plates. , 2008, , .		1
149	Efficiency of Knee Braces: A Biomechanical Approach Based on Computational Modeling. , 2012, , .		1
150	Mechanical characterization of aortic valve tissues using an inverse analysis approach. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 1976-1977.	0.9	1
151	â€˜Advances in Experimental Mechanics for Biomedical Soft Tissues and Materialsâ€™. Strain, 2016, 52, 371-371.	1.4	1
152	Subject-Specific Computational Prediction of the Effects of Elastic Compression in the Calf. , 2017, , 523-544.		1
153	Multiscale Mechanical Behavior of Large Arteries. , 2019, , 180-202.		1
154	Significance of Hemodynamics Biomarkers, Tissue Biomechanics and Numerical Simulations in the Pathogenesis of Ascending Thoracic Aortic Aneurysms. Current Pharmaceutical Design, 2021, 27, 1890-1898.	0.9	1
155	A Fast Method of Virtual Stent Graft Deployment for Computer Assisted EVAR. , 2020, , 147-169.		1
156	Software Implementation of the Virtual Fields Method. Applied Mechanics and Materials, 2007, 7-8, 57-62.	0.2	0
157	Ã‰tude mÃ©canique des articles de contention et de leurs effets sur la jambe humaine. Mecanique Et Industries, 2009, 10, 7-13.	0.2	0
158	Inverse methods for characterizing the anisotropic hyperelastic behaviour of arteries in vitro. EPJ Web of Conferences, 2010, 6, 18001.	0.1	0
159	Patient-Specific Simulation of Devices-Tissues Interactions for Endovascular Aneurysm Repair. , 2013, , .		0
160	Future directions for personalized computer simulations in endovascular aneurysms repair. International Journal of Cardiology, 2020, 304, 152-153.	0.8	0
161	Identification of 3-D Heterogeneous Modulus Distribution With the Virtual Fields Method. , 2007, , 663-664.		0
162	Comparing the Passive Biomechanics of Tension-Pressure Loading of Porcine Renal Artery and Its First Branch. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 35-40.	0.3	0

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163	Structural Intensity Assessment on Shells via the Projection of Experimental Data on a Finite-Element Mesh. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 53-58.	0.3	0
164	3D finiteâ€element modelling of vascular adaptation after endovascular aneurysm repair. International Journal for Numerical Methods in Biomedical Engineering, 2021, , e3547.	1.0	0
165	Local Stiffness Estimation of the Human Eardrum via the Virtual Fields Method. Lecture Notes in Computational Vision and Biomechanics, 2020, , 248-255.	0.5	0
166	Evaluation of image registration for measuring deformation fields in soft tissue mechanics. Strain, 0, , .	1.4	0