

Pierre Jean Arnoux

List of Publications by Year in descending order

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112
papers

1,742
citations

304743

22
h-index

395702

33
g-index

114
all docs

114
docs citations

114
times ranked

1528
citing authors

#	ARTICLE	IF	CITATIONS
1	Finite element investigation of the loading rate effect on the spinal load-sharing changes under impact conditions. <i>Journal of Biomechanics</i> , 2009, 42, 1252-1262.	2.1	125
2	Minimizing Pedicle Screw Pullout Risks. <i>Clinical Spine Surgery</i> , 2017, 30, E226-E232.	1.3	81
3	Finite element analysis of the influence of loading rate on a model of the full lumbar spine under dynamic loading conditions. <i>Medical and Biological Engineering and Computing</i> , 2012, 50, 903-915.	2.8	68
4	A Human Model for Road Safety: From Geometrical Acquisition to Model Validation with Radios. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2003, 6, 263-273.	1.6	57
5	Morphometrics of the Entire Human Spinal Cord and Spinal Canal Measured From In Vivo High-Resolution Anatomical Magnetic Resonance Imaging. <i>Spine</i> , 2014, 39, E262-E269.	2.0	56
6	Diffusion of oxygen in nickel: A variable charge molecular dynamics study. <i>Solid State Communications</i> , 2010, 150, 439-442.	1.9	42
7	Posture and muscular behaviour in emergency braking: An experimental approach. <i>Accident Analysis and Prevention</i> , 2010, 42, 797-801.	5.7	42
8	Finite Element Analysis of Sacroiliac Joint Fixation under Compression Loads. <i>International Journal of Spine Surgery</i> , 2016, 10, 16.	1.5	41
9	Using a Finite Element Model to Evaluate Human Injuries Application to the HUMOS Model in Whiplash Situation. <i>Spine</i> , 2004, 29, 1709-1716.	2.0	37
10	Calibration of the mechanical properties in a finite element model of a lumbar vertebra under dynamic compression up to failure. <i>Medical and Biological Engineering and Computing</i> , 2011, 49, 1371-1379.	2.8	37
11	Calibration of Hyperelastic Material Properties of the Human Lumbar Intervertebral Disc under Fast Dynamic Compressive Loads. <i>Journal of Biomechanical Engineering</i> , 2011, 133, 101007.	1.3	35
12	Effect of Helmet Use on Traumatic Brain Injuries and Other Head Injuries in Alpine Sport. <i>Wilderness and Environmental Medicine</i> , 2018, 29, 151-158.	0.9	32
13	Tonic Finite Element Model of the Lower Limb. <i>Journal of Biomechanical Engineering</i> , 2006, 128, 223-228.	1.3	31
14	A reliable spatially normalized template of the human spinal cord – Applications to automated white matter/gray matter segmentation and tensor-based morphometry (TBM) mapping of gray matter alterations occurring with age. <i>NeuroImage</i> , 2015, 117, 20-28.	4.2	31
15	An Experimental Cadaveric Study for a Better Understanding of Blunt Traumatic Aortic Rupture. <i>Journal of Trauma</i> , 2006, 61, 586-591.	2.3	30
16	A Visco-hyperelastic Model With Damage for the Knee Ligaments Under Dynamic Constraints. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2002, 5, 167-174.	1.6	29
17	Investigation of the injury threshold of knee ligaments by the parametric study of car – pedestrian impact conditions. <i>Safety Science</i> , 2014, 62, 58-67.	4.9	28
18	Head impact in a snowboarding accident. <i>Scandinavian Journal of Medicine and Science in Sports</i> , 2017, 27, 964-974.	2.9	28

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19	Pedestrian Lower Limb Injury Criteria Evaluation: A Finite Element Approach. Traffic Injury Prevention, 2005, 6, 288-297.	1.4	27
20	Biomechanics of thoracolumbar junction vertebral fractures from various kinematic conditions. Medical and Biological Engineering and Computing, 2014, 52, 87-94.	2.8	25
21	Analysis of Injury Mechanisms in Head Injuries in Skiers and Snowboarders. Medicine and Science in Sports and Exercise, 2017, 49, 1-10.	0.4	25
22	Biomechanic Study of the Human Liver During a Frontal Deceleration. Journal of Trauma, 2006, 61, 855-861.	2.3	23
23	Biomechanical characterisation of fresh and cadaverous human small intestine: applications for abdominal trauma. Medical and Biological Engineering and Computing, 2012, 50, 1279-1288.	2.8	23
24	Numerical damage models using a structural approach: application in bones and ligaments. EPJ Applied Physics, 2002, 17, 65-73.	0.7	22
25	Mechanical strength and fracture point of a dental implant under certification conditions: A numerical approach by finite element analysis. Journal of Prosthetic Dentistry, 2018, 119, 611-619.	2.8	22
26	The predictive capacity of the MADYMO ellipsoid pedestrian model for pedestrian ground contact kinematics and injury evaluation. Accident Analysis and Prevention, 2021, 149, 105803.	5.7	22
27	Lower Limb: Advanced FE Model and New Experimental Data. , 2001, , .		21
28	Injury tolerance of tibia for the carâ€“pedestrian impact. Accident Analysis and Prevention, 2012, 46, 18-25.	5.7	21
29	Method to Geometrically Personalize a Detailed Finite-Element Model of the Spine. IEEE Transactions on Biomedical Engineering, 2013, 60, 2014-2021.	4.2	21
30	The failure modelling of knee ligaments in the finite element model. International Journal of Crashworthiness, 2012, 17, 630-636.	1.9	20
31	Geometrical variations in white and gray matter affect the biomechanics of spinal cord injuries more than the arachnoid space. Advances in Mechanical Engineering, 2016, 8, 168781401666470.	1.6	19
32	Effect of experimental, morphological and mechanical factors on the murine spinal cord subjected to transverse contusion: A finite element study. PLoS ONE, 2020, 15, e0232975.	2.5	18
33	Biomechanical analysis of segmental lumbar lordosis and risk of cage subsidence with different cage heights and alternative placements in transforaminal lumbar interbody fusion. Computer Methods in Biomechanics and Biomedical Engineering, 2020, 23, 456-466.	1.6	18
34	Biomechanics of high-grade spondylolisthesis with and without reduction. Medical and Biological Engineering and Computing, 2016, 54, 619-628.	2.8	17
35	Patient-specific finite element model of the spine and spinal cord to assess the neurological impact of scoliosis correction: preliminary application on two cases with and without intraoperative neurological complications. Computer Methods in Biomechanics and Biomedical Engineering, 2016, 19, 901-910.	1.6	16
36	Mechanical effects of load speed on the human colon. Journal of Biomechanics, 2019, 91, 102-108.	2.1	16

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37	Implant-supported overdentures with different clinical configurations: Mechanical resistance using a numerical approach. <i>Journal of Prosthetic Dentistry</i> , 2019, 121, 546.e1-546.e10.	2.8	15
38	Pregnant woman and road safety: experimental crash test with post mortem human subject. <i>Surgical and Radiologic Anatomy</i> , 2008, 30, 185-189.	1.2	14
39	Temporal bone fracture under lateral impact: biomechanical and macroscopic evaluation. <i>Medical and Biological Engineering and Computing</i> , 2016, 54, 351-360.	2.8	14
40	A variable charge molecular dynamics study of the initial stage of nickel oxidation. <i>Applied Surface Science</i> , 2010, 256, 5968-5972.	6.1	13
41	Biomechanical analysis of pedicle screw pullout strength. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2013, 16, 246-248.	1.6	13
42	Coupling Lateral Bending and Shearing Mechanisms to Define Knee Injury Criteria for Pedestrian Safety. <i>Traffic Injury Prevention</i> , 2013, 14, 378-386.	1.4	13
43	Pedicle Screw Fixation Under Nonaxial Loads. <i>Spine</i> , 2016, 41, E124-E130.	2.0	13
44	Strain rate dependent behavior of the porcine spinal cord under transverse dynamic compression. <i>Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine</i> , 2016, 230, 858-866.	1.8	13
45	A finite element model of the lower limb during stance phase of gait cycle including the muscle forces. <i>BioMedical Engineering OnLine</i> , 2017, 16, 138.	2.7	13
46	Analysis of trunk impact conditions in motorcycle road accidents based on epidemiological, accidentological data and multibody simulations. <i>Accident Analysis and Prevention</i> , 2019, 127, 223-230.	5.7	13
47	Effect of impact velocity and ligament mechanical properties on lumbar spine injuries in posterior-anterior impact loading conditions: a finite element study. <i>Medical and Biological Engineering and Computing</i> , 2019, 57, 1381-1392.	2.8	13
48	A Framework of a Lower Limb Musculoskeletal Model With Implemented Natural Proprioceptive Feedback and Its Progressive Evaluation. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2020, 28, 1866-1875.	4.9	13
49	Kinematics and dynamics of pedestrian head ground contact: A cadaver study. <i>Safety Science</i> , 2020, 127, 104684.	4.9	13
50	Finite element analysis of cyclist lower limb response in carâ€”bicycle accident. <i>International Journal of Crashworthiness</i> , 2006, 11, 115-130.	1.9	12
51	Development of a finite element model of the shoulder: application during a side impact. <i>International Journal of Crashworthiness</i> , 2008, 13, 301-312.	1.9	12
52	Biomechanical analysis of spino-pelvic postural configurations in spondylolysis subjected to various sport-related dynamic loading conditions. <i>European Spine Journal</i> , 2018, 27, 2044-2052.	2.2	12
53	Liver injuries in frontal crash situations a coupled numericalâ€”experimental approach. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2008, 11, 189-203.	1.6	11
54	Injury criteria implementation and evaluation in FE models applications to lower limb segments. <i>International Journal of Crashworthiness</i> , 2008, 13, 653-665.	1.9	11

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55	Biomechanical analysis of traumatic mesenteric avulsion. <i>Medical and Biological Engineering and Computing</i> , 2015, 53, 187-194.	2.8	11
56	Geometry reconstruction method for patient-specific finite element models for the assessment of tibia fracture risk in osteogenesis imperfecta. <i>Medical and Biological Engineering and Computing</i> , 2017, 55, 549-560.	2.8	11
57	Biomechanical Simulation of Stresses and Strains Exerted on the Spinal Cord and Nerves During Scoliosis Correction Maneuvers. <i>Spine Deformity</i> , 2018, 6, 12-19.	1.5	11
58	Thoracic pedicle screw fixation under axial and perpendicular loadings: A comprehensive numerical analysis. <i>Clinical Biomechanics</i> , 2019, 68, 190-196.	1.2	11
59	Biomechanical comparison of spinal cord compression types occurring in Degenerative Cervical Myelopathy. <i>Clinical Biomechanics</i> , 2021, 81, 105174.	1.2	11
60	Evaluation of knee injury threshold in pedestrian car crash loading using numerical approach. <i>International Journal of Crashworthiness</i> , 2007, 12, 381-399.	1.9	10
61	Investigation of Motorcyclist Cervical Spine Trauma Using HUMOS Model. <i>Traffic Injury Prevention</i> , 2012, 13, 519-528.	1.4	10
62	Experimental assessment of cervical ranges of motion and compensatory strategies. <i>Chiropractic & Manual Therapies</i> , 2019, 27, 9.	1.5	10
63	Substantial vertebral body osteophytes protect against severe vertebral fractures in compression. <i>PLoS ONE</i> , 2017, 12, e0186779.	2.5	10
64	3D reconstruction of the diaphragm for virtual traumatology. <i>Surgical and Radiologic Anatomy</i> , 2006, 28, 235-240.	1.2	9
65	Comparison of the Biomechanical Behavior of the Liver During Frontal and Lateral Deceleration. <i>Journal of Trauma</i> , 2009, 67, 40-44.	2.3	9
66	Incidences of various passenger vehicle front-end designs on pedestrian lower limb injuries. <i>International Journal of Crashworthiness</i> , 2015, 20, 337-347.	1.9	9
67	High-speed video analysis improves the accuracy of spinal cord compression measurement in a mouse contusion model. <i>Journal of Neuroscience Methods</i> , 2018, 293, 1-5.	2.5	9
68	Numerical Reconstruction of Traumatic Brain Injury in Skiing and Snowboarding. <i>Medicine and Science in Sports and Exercise</i> , 2018, 50, 2322-2329.	0.4	9
69	Inverse analysis and robustness evaluation for biological structure behaviour in FE simulation: application to the liver. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2012, 15, 993-999.	1.6	8
70	Analysis of the influence of passenger vehicles front-end design on pedestrian lower extremity injuries by means of the LLMS model. <i>Traffic Injury Prevention</i> , 2018, 19, 535-541.	1.4	8
71	Traumatic Spinal Cord Injuries with Fractures in a Québec Level I Trauma Center. <i>Canadian Journal of Neurological Sciences</i> , 2019, 46, 727-734.	0.5	8
72	Injury Thresholds of Knee Ligaments Under Lateral Medial Shear Loading: An Experimental Study. <i>Traffic Injury Prevention</i> , 2013, 14, 623-629.	1.4	7

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73	Cervical Canal Morphology: Effects of Neck Flexion in Normal Condition. <i>Spine</i> , 2020, 45, 1102-1109.	2.0	7
74	Tensile mechanical properties of the cervical, thoracic and lumbar porcine spinal meninges. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021, 115, 104280.	3.1	7
75	Numerical Investigation of Spinal Cord Injury After Flexion-Distractor Injuries at the Cervical Spine. <i>Journal of Biomechanical Engineering</i> , 2022, 144, .	1.3	7
76	How to Decrease Pedestrian Injuries: Conceptual Evolutions Starting From 137 Crash Tests. <i>Journal of Trauma</i> , 2007, 62, 512-519.	2.3	6
77	Petrous Bone Fracture. <i>Otology and Neurotology</i> , 2012, 33, 651-654.	1.3	6
78	Anteroposterior compression of the spinal cord leading to cervical myelopathy: a finite element analysis. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2015, 18, 2070-2071.	1.6	6
79	Using an inertial navigation algorithm and accelerometer to monitor chest compression depth during cardiopulmonary resuscitation. <i>Medical Engineering and Physics</i> , 2016, 38, 1028-1034.	1.7	6
80	Influence of gender, age, shelf-life, and conservation method on the biomechanical behavior of colon tissue under dynamic solicitation. <i>Clinical Biomechanics</i> , 2019, 65, 34-40.	1.2	6
81	Biomechanical analysis of two insertion sites for the fixation of the sacroiliac joint via an oblique lateral approach. <i>Clinical Biomechanics</i> , 2020, 74, 118-123.	1.2	6
82	Knee ligaments mechanics. <i>Revue Europeenne Des Elements</i> , 2005, 14, 577-600.	0.1	5
83	Implementation of reflex loops in a biomechanical finite element model. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2016, 19, 1578-1582.	1.6	5
84	Radioss finite element model of the Thor dummy. <i>International Journal of Crashworthiness</i> , 2003, 8, 529-541.	1.9	4
85	Influence of loading speed on the mechanical properties of the colon. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2013, 16, 189-190.	1.6	4
86	Sacroiliac joint morphologic changes from infancy to adulthood. <i>Spine Journal</i> , 2019, 19, 1730-1738.	1.3	4
87	Assessing the Global Range of Motion of the Helmeted Head Through Rotational and Translational Measurements. <i>International Journal of Crashworthiness</i> , 2020, 25, 321-327.	1.9	4
88	Descriptive analysis of the effect of back protector on the prevention of vertebral and thoracolumbar injuries in serious motorcycle accident. <i>Accident Analysis and Prevention</i> , 2020, 135, 105331.	5.7	4
89	Contribution of injured posterior ligamentous complex and intervertebral disc on post-traumatic instability at the cervical spine. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2020, 23, 832-843.	1.6	4
90	Experimental Bi-axial tensile tests of spinal meningeal tissues and constitutive models comparison. <i>Acta Biomaterialia</i> , 2022, 140, 446-456.	8.3	4

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91	Pedestrian lower limb injury criteria evaluation. <i>Revue Europeenne Des Elements</i> , 2005, 14, 487-515.	0.1	3
92	Experimental multiscale analysis of liver damage and failure process under compression. <i>Journal of Trauma</i> , 2012, 72, 727-732.	2.3	3
93	Spinal injury analysis for typical snowboarding backward falls. <i>Scandinavian Journal of Medicine and Science in Sports</i> , 2018, 29, 450-459.	2.9	3
94	Load-sharing biomechanics at the thoracolumbar junction under dynamic loadings are modified by anatomical features in adolescent and pediatric vs adult functional spinal units. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 88, 78-91.	3.1	3
95	Isometric osteopathic manipulation influences on cervical ranges of motion and correlation with osteopathic palpatory diagnosis: A randomized trial. <i>Complementary Therapies in Medicine</i> , 2020, 48, 102278.	2.7	3
96	An evaluation methodology for motorcyclists'™ wearable airbag protectors based on finite element simulations. <i>International Journal of Crashworthiness</i> , 2021, 26, 99-108.	1.9	3
97	Instrumentation of the sacroiliac joint with cylindrical threaded implants: A detailed finite element study of patient characteristics affecting fixation performance. <i>Journal of Orthopaedic Research</i> , 2021, 39, 2693-2702.	2.3	3
98	About some factors influencing safety mattress performances in head impact collisions: A pilot study. <i>Journal of Science and Medicine in Sport</i> , 2021, 24, 1067-1072.	1.3	3
99	Investigation of motorcyclist safety systems contributions to prevent cervical spine injuries using HUMOS model. <i>International Journal of Crashworthiness</i> , 2012, 17, 571-581.	1.9	2
100	Motion analysis of cardiopulmonary resuscitation. <i>American Journal of Emergency Medicine</i> , 2015, 33, 1350-1353.	1.6	2
101	Thermal recovery of LMJ amplifiers. , 1999, 3492, 660.		1
102	Injury criteria of knee joint regarding car's™ pedestrian impact environments. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2012, 15, 301-302.	1.6	1
103	Biomechanical analysis of the splenic avulsion mechanism. <i>Medical and Biological Engineering and Computing</i> , 2014, 52, 629-637.	2.8	1
104	INVESTIGATION ON THE KNEE STIFFNESS UNDER THE LATERAL IMPACT FOR THE DESIGN OF PEDESTRIAN LEGFORM IMPACTOR. <i>Journal of Mechanics in Medicine and Biology</i> , 2015, 15, 1550060.	0.7	1
105	Mechanical Characterization of Human Gastrocolic Ligament until Failure. <i>Journal of Applied Biomaterials and Functional Materials</i> , 2015, 13, 106-115.	1.6	1
106	A behaviour law for bone to describe damage and fracture. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2005, 8, 155-156.	1.6	0
107	Considerations in the finite element modelling of vertebrae in children and adults: a preliminary study. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2008, 11, 99-100.	1.6	0
108	Quasi-static failure properties of the human gastro-colic ligament. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2012, 15, 283-284.	1.6	0

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109	Prediction of bone anisotropic mechanical properties in osteoporotic human vertebral body from microstructural parameters. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2013, 16, 326-327.	1.6	0
110	Characterizing the Importance of Free Space in the Numerical Human Body Models. <i>Journal of Biomechanical Engineering</i> , 2015, 137, .	1.3	0
111	Biomechanical response of colonic tissue under high-speed traction. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2015, 18, 1998-1999.	1.6	0
112	Neck Braces and Driving Posture Affect Neck Mobility on Powered Two-Wheelers. <i>Promet - Traffic - Traffico</i> , 2021, 33, 337-345.	0.7	0