

# Pierre Jean Arnoux

## List of Publications by Year in descending order

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112  
papers

1,742  
citations

304743

22  
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395702

33  
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114  
all docs

114  
docs citations

114  
times ranked

1528  
citing authors

#	ARTICLE	IF	CITATIONS
1	Numerical Investigation of Spinal Cord Injury After Flexion-Distraktion Injuries at the Cervical Spine. <i>Journal of Biomechanical Engineering</i> , 2022, 144, .	1.3	7
2	Experimental Bi-axial tensile tests of spinal meningeal tissues and constitutive models comparison. <i>Acta Biomaterialia</i> , 2022, 140, 446-456.	8.3	4
3	The predictive capacity of the MADYMO ellipsoid pedestrian model for pedestrian ground contact kinematics and injury evaluation. <i>Accident Analysis and Prevention</i> , 2021, 149, 105803.	5.7	22
4	Biomechanical comparison of spinal cord compression types occurring in Degenerative Cervical Myelopathy. <i>Clinical Biomechanics</i> , 2021, 81, 105174.	1.2	11
5	An evaluation methodology for motorcyclists's™ wearable airbag protectors based on finite element simulations. <i>International Journal of Crashworthiness</i> , 2021, 26, 99-108.	1.9	3
6	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
7	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
8	Neck Braces and Driving Posture Affect Neck Mobility on Powered Two-Wheelers. <i>Promet - Traffic - Traffico</i> , 2021, 33, 337-345.	0.7	0
9	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
10	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
11	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
12	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
13	Cervical Canal Morphology: Effects of Neck Flexion in Normal Condition. <i>Spine</i> , 2020, 45, 1102-1109.	2.0	7
14	Effect of experimental, morphological and mechanical factors on the murine spinal cord subjected to transverse contusion: A finite element study. <i>PLoS ONE</i> , 2020, 15, e0232975.	2.5	18
15	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
16	Biomechanical analysis of segmental lumbar lordosis and risk of cage subsidence with different cage heights and alternative placements in transforaminal lumbar interbody fusion. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2020, 23, 456-466.	1.6	18
17	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
18	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

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19	Kinematics and dynamics of pedestrian head ground contact: A cadaver study. <i>Safety Science</i> , 2020, 127, 104684.	4.9	13
20	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
21	Mechanical effects of load speed on the human colon. <i>Journal of Biomechanics</i> , 2019, 91, 102-108.	2.1	16
22	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
23	Sacroiliac joint morphologic changes from infancy to adulthood. <i>Spine Journal</i> , 2019, 19, 1730-1738.	1.3	4
24	Thoracic pedicle screw fixation under axial and perpendicular loadings: A comprehensive numerical analysis. <i>Clinical Biomechanics</i> , 2019, 68, 190-196.	1.2	11
25	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
26	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
27	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
28	Experimental assessment of cervical ranges of motion and compensatory strategies. <i>Chiropractic &amp; Manual Therapies</i> , 2019, 27, 9.	1.5	10
29	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
30	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
31	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
32	Mechanical strength and fracture point of a dental implant under certification conditions: A numerical approach by finite element analysis. <i>Journal of Prosthetic Dentistry</i> , 2018, 119, 611-619.	2.8	22
33	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
34	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
35	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
36	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

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37	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
38	Head impact in a snowboarding accident. <i>Scandinavian Journal of Medicine and Science in Sports</i> , 2017, 27, 964-974.	2.9	28
39	Analysis of Injury Mechanisms in Head Injuries in Skiers and Snowboarders. <i>Medicine and Science in Sports and Exercise</i> , 2017, 49, 1-10.	0.4	25
40	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
41	Minimizing Pedicle Screw Pullout Risks. <i>Clinical Spine Surgery</i> , 2017, 30, E226-E232.	1.3	81
42	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
43	Substantial vertebral body osteophytes protect against severe vertebral fractures in compression. <i>PLoS ONE</i> , 2017, 12, e0186779.	2.5	10
44	Pedicle Screw Fixation Under Nonaxial Loads. <i>Spine</i> , 2016, 41, E124-E130.	2.0	13
45	Geometrical variations in white and gray matter affect the biomechanics of spinal cord injuries more than the arachnoid space. <i>Advances in Mechanical Engineering</i> , 2016, 8, 168781401666470.	1.6	19
46	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
47	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
48	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
49	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. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2016, 19, 901-910.	1.6	16
50	Biomechanics of high-grade spondylolisthesis with and without reduction. <i>Medical and Biological Engineering and Computing</i> , 2016, 54, 619-628.	2.8	17
51	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
52	Finite Element Analysis of Sacroiliac Joint Fixation under Compression Loads. <i>International Journal of Spine Surgery</i> , 2016, 10, 16.	1.5	41
53	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
54	Mechanical Characterization of Human Gastrocolic Ligament until Failure. <i>Journal of Applied Biomaterials and Functional Materials</i> , 2015, 13, 106-115.	1.6	1

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55	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
56	Biomechanical analysis of traumatic mesenteric avulsion. <i>Medical and Biological Engineering and Computing</i> , 2015, 53, 187-194.	2.8	11
57	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
58	Characterizing the Importance of Free Space in the Numerical Human Body Models. <i>Journal of Biomechanical Engineering</i> , 2015, 137, .	1.3	0
59	Motion analysis of cardiopulmonary resuscitation. <i>American Journal of Emergency Medicine</i> , 2015, 33, 1350-1353.	1.6	2
60	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
61	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
62	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
63	Biomechanics of thoracolumbar junction vertebral fractures from various kinematic conditions. <i>Medical and Biological Engineering and Computing</i> , 2014, 52, 87-94.	2.8	25
64	Biomechanical analysis of the splenic avulsion mechanism. <i>Medical and Biological Engineering and Computing</i> , 2014, 52, 629-637.	2.8	1
65	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
66	Method to Geometrically Personalize a Detailed Finite-Element Model of the Spine. <i>IEEE Transactions on Biomedical Engineering</i> , 2013, 60, 2014-2021.	4.2	21
67	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
68	Biomechanical analysis of pedicle screw pullout strength. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2013, 16, 246-248.	1.6	13
69	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
70	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
71	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
72	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

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73	Injury criteria of knee joint regarding carâ€pedestrian impact environments. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 301-302.	1.6	1
74	Quasi-static failure properties of the human gastro-colic ligament. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 283-284.	1.6	0
75	Investigation of Motorcyclist Cervical Spine Trauma Using HUMOS Model. Traffic Injury Prevention, 2012, 13, 519-528.	1.4	10
76	Experimental multiscale analysis of liver damage and failure process under compression. Journal of Trauma, 2012, 72, 727-732.	2.3	3
77	Petrous Bone Fracture. Otology and Neurotology, 2012, 33, 651-654.	1.3	6
78	The failure modelling of knee ligaments in the finite element model. International Journal of Crashworthiness, 2012, 17, 630-636.	1.9	20
79	Finite element analysis of the influence of loading rate on a model of the full lumbar spine under dynamic loading conditions. Medical and Biological Engineering and Computing, 2012, 50, 903-915.	2.8	68
80	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
81	Investigation of motorcyclist safety systems contributions to prevent cervical spine injuries using HUMOS model. International Journal of Crashworthiness, 2012, 17, 571-581.	1.9	2
82	Injury tolerance of tibia for the carâ€pedestrian impact. Accident Analysis and Prevention, 2012, 46, 18-25.	5.7	21
83	Calibration of the mechanical properties in a finite element model of a lumbar vertebra under dynamic compression up to failure. Medical and Biological Engineering and Computing, 2011, 49, 1371-1379.	2.8	37
84	Calibration of Hyperelastic Material Properties of the Human Lumbar Intervertebral Disc under Fast Dynamic Compressive Loads. Journal of Biomechanical Engineering, 2011, 133, 101007.	1.3	35
85	Diffusion of oxygen in nickel: A variable charge molecular dynamics study. Solid State Communications, 2010, 150, 439-442.	1.9	42
86	Posture and muscular behaviour in emergency braking: An experimental approach. Accident Analysis and Prevention, 2010, 42, 797-801.	5.7	42
87	A variable charge molecular dynamics study of the initial stage of nickel oxidation. Applied Surface Science, 2010, 256, 5968-5972.	6.1	13
88	Finite element investigation of the loading rate effect on the spinal load-sharing changes under impact conditions. Journal of Biomechanics, 2009, 42, 1252-1262.	2.1	125
89	Comparison of the Biomechanical Behavior of the Liver During Frontal and Lateral Deceleration. Journal of Trauma, 2009, 67, 40-44.	2.3	9
90	Pregnant woman and road safety: experimental crash test with post mortem human subject. Surgical and Radiologic Anatomy, 2008, 30, 185-189.	1.2	14

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91	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
92	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
93	Liver injuries in frontal crash situations a coupled numerical and experimental approach. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2008, 11, 189-203.	1.6	11
94	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
95	How to Decrease Pedestrian Injuries: Conceptual Evolutions Starting From 137 Crash Tests. <i>Journal of Trauma</i> , 2007, 62, 512-519.	2.3	6
96	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
97	Finite element analysis of cyclist lower limb response in car bicycle accident. <i>International Journal of Crashworthiness</i> , 2006, 11, 115-130.	1.9	12
98	Biomechanic Study of the Human Liver During a Frontal Deceleration. <i>Journal of Trauma</i> , 2006, 61, 855-861.	2.3	23
99	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
100	3D reconstruction of the diaphragm for virtual traumatology. <i>Surgical and Radiologic Anatomy</i> , 2006, 28, 235-240.	1.2	9
101	Tonic Finite Element Model of the Lower Limb. <i>Journal of Biomechanical Engineering</i> , 2006, 128, 223-228.	1.3	31
102	Pedestrian lower limb injury criteria evaluation. <i>Revue Europeenne Des Elements</i> , 2005, 14, 487-515.	0.1	3
103	Knee ligaments mechanics. <i>Revue Europeenne Des Elements</i> , 2005, 14, 577-600.	0.1	5
104	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
105	Pedestrian Lower Limb Injury Criteria Evaluation: A Finite Element Approach. <i>Traffic Injury Prevention</i> , 2005, 6, 288-297.	1.4	27
106	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
107	Radioss finite element model of the Thor dummy. <i>International Journal of Crashworthiness</i> , 2003, 8, 529-541.	1.9	4
108	A Human Model for Road Safety: From Geometrical Acquisition to Model Validation with Radioss. <i>Computer Methods in Biomechanics and Biomedical Engineering</i> , 2003, 6, 263-273.	1.6	57

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109	A Visco-hyperelastic Model With Damage for the Knee Ligaments Under Dynamic Constraints. Computer Methods in Biomechanics and Biomedical Engineering, 2002, 5, 167-174.	1.6	29
110	Numerical damage models using a structural approach: application in bones and ligaments. EPJ Applied Physics, 2002, 17, 65-73.	0.7	22
111	Lower Limb: Advanced FE Model and New Experimental Data. , 2001, , .		21
112	Thermal recovery of LMJ amplifiers. , 1999, 3492, 660.		1