

Frank A Pintar

List of Publications by Year in descending order

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112
papers

1,320
citations

430874

18
h-index

395702

33
g-index

112
all docs

112
docs citations

112
times ranked

835
citing authors

#	ARTICLE	IF	CITATIONS
1	Contribution of disc degeneration to osteophyte formation in the cervical spine: a biomechanical investigation. <i>Journal of Orthopaedic Research</i> , 2001, 19, 977-984.	2.3	175
2	Directed and enhanced neurite growth with pulsed magnetic field stimulation. <i>Bioelectromagnetics</i> , 2000, 21, 272-286.	1.6	95
3	Effect of Age and Loading Rate on Human Cervical Spine Injury Threshold. <i>Spine</i> , 1998, 23, 1957-1962.	2.0	91
4	Development of Side Impact Thoracic Injury Criteria and Their Application to the Modified ES-2 Dummy with Rib Extensions (ES-2re). <i>Stapp Car Crash Journal</i> , 2003, 47, 189-210.	1.1	79
5	Biomechanical Alterations Induced by Multilevel Cervical Laminectomy. <i>Spine</i> , 1995, 20, 2392-2397.	2.0	50
6	Level-Dependent Coronal and Axial Moment-Rotation Corridors of Degeneration-Free Cervical Spines in Lateral Flexion. <i>Journal of Bone and Joint Surgery - Series A</i> , 2007, 89, 1066-1074.	3.0	49
7	Strength and Kinematic Response of Dynamic Cervical Spine Injuries. <i>Spine</i> , 1991, 16, S511-S517.	2.0	45
8	Deriving injury risk curves using survival analysis from biomechanical experiments. <i>Journal of Biomechanics</i> , 2016, 49, 3260-3267.	2.1	36
9	Optimized Lower Leg Injury Probability Curves From Postmortem Human Subject Tests Under Axial Impacts. <i>Traffic Injury Prevention</i> , 2014, 15, S151-S156.	1.4	34
10	Comparison of PMHS, WorldSID, and THOR-NT responses in simulated far side impact. <i>Stapp Car Crash Journal</i> , 2007, 51, 313-60.	1.1	33
11	Cervical spine injury biomechanics: Applications for under body blast loadings in military environments. <i>Clinical Biomechanics</i> , 2013, 28, 602-609.	1.2	31
12	Vertical accelerator device to apply loads simulating blast environments in the military to human surrogates. <i>Journal of Biomechanics</i> , 2015, 48, 3534-3538.	2.1	30
13	Footâ€“Ankle Fractures and Injury Probability Curves from Post-mortem Human Surrogate Tests. <i>Annals of Biomedical Engineering</i> , 2016, 44, 2937-2947.	2.5	30
14	Normalizing and scaling of data to derive human response corridors from impact tests. <i>Journal of Biomechanics</i> , 2014, 47, 1749-1756.	2.1	29
15	Behavioral Outcomes Differ between Rotational Acceleration and Blast Mechanisms of Mild Traumatic Brain Injury. <i>Frontiers in Neurology</i> , 2016, 7, 31.	2.4	29
16	Male and Female Cervical Spine Biomechanics and Anatomy: Implication for Scaling Injury Criteria. <i>Journal of Biomechanical Engineering</i> , 2017, 139, .	1.3	24
17	Effects of Blast Overpressure on Neurons and Glial Cells in Rat Organotypic Hippocampal Slice Cultures. <i>Frontiers in Neurology</i> , 2015, 6, 20.	2.4	23
18	Lower Leg Injury Reference Values and Risk Curves from Survival Analysis for Male and Female Dummies: Meta-analysis of Postmortem Human Subject Tests. <i>Traffic Injury Prevention</i> , 2015, 16, S100-S107.	1.4	23

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19	Level-Dependent Coronal and Axial Moment-Rotation Corridors of Degeneration-Free Cervical Spines in Lateral Flexion. <i>Journal of Bone and Joint Surgery - Series A</i> , 2007, 89, 1066-1074.	3.0	21
20	Load-Based Lower Neck Injury Criteria for Females from Rear Impact from Cadaver Experiments. <i>Annals of Biomedical Engineering</i> , 2017, 45, 1194-1203.	2.5	19
21	Role of disc area and trabecular bone density on lumbar spinal column fracture risk curves under vertical impact. <i>Journal of Biomechanics</i> , 2018, 72, 90-98.	2.1	19
22	Effects of acceleration level on lumbar spine injuries in military populations. <i>Spine Journal</i> , 2015, 15, 1318-1324.	1.3	18
23	Biomechanical tolerance of whole lumbar spines in straightened posture subjected to axial acceleration. <i>Journal of Orthopaedic Research</i> , 2018, 36, 1747-1756.	2.3	18
24	Lumbar spine endplate fractures: Biomechanical evaluation and clinical considerations through experimental induction of injury. <i>Journal of Orthopaedic Research</i> , 2016, 34, 1084-1091.	2.3	16
25	Finite Element Study of a Lumbar Intervertebral Disc Nucleus Replacement Device. <i>Frontiers in Bioengineering and Biotechnology</i> , 2016, 4, 93.	4.1	15
26	Evaluation of kinematics and injuries to restrained occupants in far-side crashes using full-scale vehicle and human body models. <i>Traffic Injury Prevention</i> , 2016, 17, 116-123.	1.4	14
27	Forces and moments in cervical spinal column segments in frontal impacts using finite element modeling and human cadaver tests. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 90, 681-688.	3.1	14
28	A methodology to condition distorted acoustic emission signals to identify fracture timing from human cadaver spine impact tests. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 40, 156-160.	3.1	13
29	Biomechanics of human thoracolumbar spinal column trauma from vertical impact loading. <i>Annals of Advances in Automotive Medicine</i> , 2013, 57, 155-66.	0.6	13
30	Dynamic Responses of Intact Post Mortem Human Surrogates from Inferior-to-Superior Loading at the Pelvis. <i>Stapp Car Crash Journal</i> , 2014, 58, 123-43.	1.1	13
31	Cervical spine injuries, mechanisms, stability and AIS scores from vertical loading applied to military environments. <i>European Spine Journal</i> , 2016, 25, 2193-2201.	2.2	10
32	Foot-ankle complex injury risk curves using calcaneus bone mineral density data. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 72, 246-251.	3.1	10
33	Role of age and injury mechanism on cervical spine injury tolerance from head contact loading. <i>Traffic Injury Prevention</i> , 2018, 19, 165-172.	1.4	10
34	Facial Fractures in Motor Vehicle Collisions. <i>Archives of Facial Plastic Surgery</i> , 2009, 11, 165-170.	0.7	9
35	An Experimental Technique to Induce and Quantify Complex Cyclic Forces to the Lumbar Spine. <i>Neurosurgery</i> , 1995, 36, 956-964.	1.1	8
36	Wire Fixation Techniques of the Cervical Facets. <i>Spine</i> , 1997, 22, 970-975.	2.0	8

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37	Biomechanical Mechanisms of Whiplash Injury. <i>Traffic Injury Prevention</i> , 2002, 3, 98-104.	1.4	8
38	Prediction of Post-Concussive Behavioral Changes in a Rodent Model Based on Head Rotational Acceleration Characteristics. <i>Annals of Biomedical Engineering</i> , 2016, 44, 3252-3265.	2.5	8
39	Acoustic Emission Signatures During Failure of Vertebra and Long Bone. <i>Annals of Biomedical Engineering</i> , 2017, 45, 1520-1533.	2.5	8
40	Oblique Loading in Post Mortem Human Surrogates from Vehicle Lateral Impact Tests using Chestbands. <i>Stapp Car Crash Journal</i> , 2015, 59, 1-22.	1.1	8
41	Initial analysis of archived non-human primate frontal and rear impact data from the biodynamics data resource. <i>Traffic Injury Prevention</i> , 2018, 19, S44-S49.	1.4	7
42	Instrumented artificial spinal cord for human cervical pressure measurement. <i>Bio-Medical Materials and Engineering</i> , 1996, 6, 219-229.	0.6	6
43	Dynamic Bending Tolerance of the Human Forearm. <i>Traffic Injury Prevention</i> , 2002, 3, 43-48.	1.4	6
44	The Influence of Enhanced Side Impact Protection on Kinematics and Injury Measures of Far- or Center-Seated Children in Forward-Facing Child Restraints. <i>Traffic Injury Prevention</i> , 2015, 16, S9-S15.	1.4	6
45	Protection of children in forward-facing child restraint systems during oblique side impact sled tests: Intrusion and tether effects. <i>Traffic Injury Prevention</i> , 2016, 17, 156-162.	1.4	6
46	Three-dimensional kinematic corridors of the head, spine, and pelvis for small female driver seat occupants in near- and far-side oblique frontal impacts. <i>Traffic Injury Prevention</i> , 2018, 19, S64-S69.	1.4	6
47	Development of a Methodology for Simulating Complex Head Impacts With the Advanced Combat Helmet. <i>Military Medicine</i> , 2019, 184, 237-244.	0.8	6
48	Biomechanics of Lumbar Motion-Segments in Dynamic Compression. <i>Stapp Car Crash Journal</i> , 2017, 61, 1-25.	1.1	6
49	Comparison of NOCSAE head kinematics using the Hybrid III and EuroSID-2 necks. <i>Journal of Biomechanics</i> , 2018, 80, 37-44.	2.1	5
50	THOR dummy chest deflection response in oblique and lateral far-side sled tests. <i>Traffic Injury Prevention</i> , 2019, 20, S32-S37.	1.4	5
51	Oblique lateral impact biofidelity deflection corridors from Post Mortem Human Surrogates. <i>Stapp Car Crash Journal</i> , 2013, 57, 427-40.	1.1	5
52	Responses and Injuries to PMHS in Side-Facing and Oblique Seats in Horizontal Longitudinal Sled Tests per FAA Emergency Landing Conditions. <i>Stapp Car Crash Journal</i> , 2016, 60, 135-163.	1.1	5
53	Biomechanics of Pediatric Cervical Spine: Compression, Flexion and Extension Responses. <i>Traffic Injury Prevention</i> , 2000, 2, 87-101.	0.5	4
54	Methodology to Study Attenuation of a Blast Wave Through the Cranium. , 2011, , .		4

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55	Posterior cervical spine crisscross fixation: Biomechanical evaluation. <i>Clinical Biomechanics</i> , 2018, 55, 18-22.	1.2	4
56	Factors influencing the effectiveness of occupant retention under far-side impacts: A parametric study. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 84, 235-248.	3.1	4
57	Trabecular bone mineral density correlations using QCT: Central and peripheral human skeleton. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2020, 112, 104076.	3.1	4
58	An Improved Method for Developing Injury Risk Curves Using the Brier Metric Score. <i>Annals of Biomedical Engineering</i> , 2021, 49, 3091-3098.	2.5	4
59	Finite Element Analysis of Penetrating Head Injury. , 2003, , 193.		3
60	Influence of ATD versus PMHS reference sensor inputs on computational brain response in frontal impacts to advanced combat helmet (ACH). <i>Traffic Injury Prevention</i> , 2018, 19, S159-S161.	1.4	3
61	Pelvis injury risk curves in side impacts from human cadaver experiments using survival analysis and Brier score metrics. <i>Traffic Injury Prevention</i> , 2019, 20, S137-S142.	1.4	3
62	Comparison of AIS 1990 update 98 versus AIS 2005 for describing PMHS injuries in lateral and oblique sled tests. <i>Annals of Advances in Automotive Medicine</i> , 2013, 57, 197-208.	0.6	3
63	Injury Risk Curves for the Human Cervical Spine from Inferior-to-Superior Loading. <i>Stapp Car Crash Journal</i> , 2018, 62, 271-292.	1.1	3
64	Finite Element Study of the Human Cervical Spine. , 1997, , .		3
65	An Examination of Isolated and Interaction-Based Biomechanical Metrics for Potential Lower Neck Injury Criteria. , 2015, , .		2
66	Preliminary female cervical spine injury risk curves from PMHS tests. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 83, 143-147.	3.1	2
67	Rotational Acceleration Duration Affects Brain Strains in Lateral Impact. , 2007, , .		2
68	Biomechanical Implications of Gender-Dependent Muscle Locations. , 2008, , .		2
69	Worldsid assessment of far side impact countermeasures. <i>Annual Proceedings</i> , 2006, 50, 199-219.	0.2	2
70	Bone Mineral Density of Cervical Spine Vertebrae Using Quantitative Computed Tomography. , 2004, , 229.		1
71	Experimental Study on Non-Exit Ballistic Induced Traumatic Brain Injury. , 2007, , .		1
72	Rate-Dependent Failure Characteristics of Thoraco-Lumbar Vertebrae: Application to the Military Environment. , 2012, , .		1

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73	Response to Letter to the Editor on "Deriving injury risk curves using survival analysis from biomechanical experiments", Journal of Biomechanics (in press). Journal of Biomechanics, 2017, 52, 189-190.	2.1	1
74	The influence of child restraint lower attachment method on protection offered by forward facing child restraint systems in oblique loading conditions. Traffic Injury Prevention, 2018, 19, S139-S145.	1.4	1
75	A Novel Competing Risk Analysis Model to Determine the Role of Cervical Lordosis in Bony and Ligamentous Injuries. World Neurosurgery, 2018, 119, e962-e967.	1.3	1
76	â€œA method to measure predictive ability of an injury risk curve using an observation-adjusted area under the receiver operating characteristic curveâ€ by A.M. Baker, F.C. Hsu, F.S. Gayzik (2018). Journal of Biomechanics, 2020, 100, 109087.	2.1	1
77	Pelvic Injury Risk Curves for the Military Populations From Lateral Impact. Military Medicine, 2021, 186, 424-429.	0.8	1
78	Determination of Diffuse Brain Injury Thresholds Using Retrospective Analysis. , 2007, , .		1
79	Injury patterns to other body regions and load vectors in nearside impact occupants with and without shoulder injuries. Annals of Advances in Automotive Medicine, 2013, 57, 133-44.	0.6	1
80	Facet Joint Local Component Kinetics in Whiplash Trauma. , 1997, , .		1
81	Biodynamics of Cervical Spine Hyperflexion Injuries. , 1997, , .		1
82	Repeated measures analysis of projectile penetration in porcine legs as a function of storage condition. Journal of Clinical Forensic and Legal Medicine, 2022, 90, 102395.	1.0	1
83	Effect of Head Restraint Position and Neck Injury Criteria in Rear Impact. , 2002, , 329.		0
84	Analysis of Penetrating Head Impact. , 2004, , 257.		0
85	Posterolateral Chest Deformations From Seat-Mounted Side Airbag Deployments. , 2009, , .		0
86	Lumbar Spinal Mechanics in Pure Bending: Influence of Gender, Spinal Level, and Degeneration Grade. , 2009, , .		0
87	A Finite Element Study of Blast Overpressure on the Skull With and Without Helmet. , 2010, , .		0
88	Effects of Treatment for Cervical Disc Degenerative Disease in Military Populations. , 2011, , .		0
89	Unilateral atlanto-axial fractures in near side impact collisions: An under recognized entity in cervical trauma. Journal of Craniovertebral Junction and Spine, 2014, 5, 33.	0.8	0
90	Age-Infusion Approach to Derive Injury Risk Curves for Dummies from Human Cadaver Tests. Frontiers in Bioengineering and Biotechnology, 2015, 3, 196.	4.1	0

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91	Non-Destructive and Failure Responses of Cervical Spine Artificial Disc Surgery for Military Applications. , 2016, , .		0
92	Ranking of Biomechanical Metrics to Describe Human Response to Impact-Induced Damage. , 2018, , .		0
93	Novel learning framework (knockoff technique) to evaluate metric ranking algorithms to describe human response to injury. Traffic Injury Prevention, 2018, 19, S121-S126.	1.4	0
94	Segmental Cervical Spine Kinematics Due to Posteroanterior Impact Acceleration. , 2002, , .		0
95	Effects of Vertebral Body Changes on Cervical Spine Load Sharing. , 2002, , .		0
96	Occupant Extrication in Vehicular Crashes: NASS and CIREN Analyses. , 2003, , .		0
97	Spinal Posture Affects Whiplash Biomechanics. , 2003, , .		0
98	Effects of Thoracic Ramping on Whiplash Kinematics. , 2004, , .		0
99	Gender Specific Material Properties in the Thoracic Spine. , 2007, , .		0
100	Three-Dimensional Segmental Coupling Responses of the Cervical Spine. , 2008, , .		0
101	Translational and Rotational Head Kinematics in Side Impact. , 2009, , .		0
102	Block-Fixation Finite Element Lumbar Spine Model to Examine Load-Sharing, Bone-Screw Interaction, and Stress in Carbon Fiber Reinforced PEEK Construct. , 2009, , .		0
103	Are Pure Lateral Chest Deflections a Hallmark for Side Airbag Boundary Condition?. , 2010, , .		0
104	Experimental Induction of Lumbar Spine Compression-Flexion Injuries. , 2010, , .		0
105	A Thoraco-Abdominal Model for Visceral Response to Experimentally Measured Deformations. , 2011, , .		0
106	Level- and Region-Specific Properties of Young Human Lumbar Annulus. , 2011, , .		0
107	Sensitivity of Cervical Spine Finite Element Model to Material Property Variations. , 1997, , .		0
108	Geriatric Cervical Spine Biomechanics: Effect of Degeneration Severity on Biomechanical Response. , 1998, , .		0

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109	Development of a Biomechanically Analogous Cervical Spine Physical Model. , 1998, , .		0
110	Regional Load Sharing in Cervical Spine Intervertebral Disc. , 1998, , .		0
111	Dynamic Bending Strength of the Human Forearm. , 1998, , .		0
112	Continuous Static and Dynamic Moment-Rotation Curves of the Human Cervical Intervertebral Joint. , 1998, , .		0