

Ciaran K Simms

List of Publications by Year in descending order

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93
papers

2,745
citations

172457

29
h-index

206112

48
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93
all docs

93
docs citations

93
times ranked

2284
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	Configurations of underreported cyclist-motorised vehicle and single cyclist collisions: Analysis of a self-reported survey. <i>Accident Analysis and Prevention</i> , 2021, 159, 106264.	5.7	11
3	It's not all about power: a systematic review and meta-analysis comparing sex-based differences in kicking biomechanics in soccer. <i>Sports Biomechanics</i> , 2021, , 1-44.	1.6	3
4	Kinematics and dynamics of pedestrian head ground contact: A cadaver study. <i>Safety Science</i> , 2020, 127, 104684.	4.9	13
5	Characteristics of pedestrian head injuries observed from real world collision data. <i>Accident Analysis and Prevention</i> , 2019, 129, 362-366.	5.7	18
6	Potential benefits of controlled vehicle braking to reduce pedestrian ground contact injuries. <i>Accident Analysis and Prevention</i> , 2019, 129, 94-107.	5.7	20
7	Anatomy transformed. <i>Journal of Anatomy</i> , 2019, 234, 577-582.	1.5	1
8	Predictive Capacity of the MADYMO Multibody Human Body Model Applied to Head Kinematics During Rugby Union Tackles. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 726.	2.5	13
9	Could lowering the tackle height in rugby union reduce ball carrier inertial head kinematics?. <i>Journal of Biomechanics</i> , 2018, 72, 29-36.	2.1	23
10	The effect of technique on tackle gainline success outcomes in elite level rugby union. <i>International Journal of Sports Science and Coaching</i> , 2018, 13, 16-25.	1.4	24
11	Can tackle height influence tackle gainline success outcomes in elite level rugby union?. <i>International Journal of Sports Science and Coaching</i> , 2018, 13, 415-420.	1.4	3
12	Pathological Movements of the Pelvis and Trunk During Gait in Children With Cerebral Palsy: A Cross-Sectional Study With 3-Dimensional Kinematics and Lower Lumbar Spinal Loading. <i>Physical Therapy</i> , 2018, 98, 86-94.	2.4	9
13	Have pedestrian subsystem tests improved passenger car front shape?. <i>Accident Analysis and Prevention</i> , 2018, 115, 143-150.	5.7	30
14	Mechanisms of ACL injury in professional rugby union: a systematic video analysis of 36 cases. <i>British Journal of Sports Medicine</i> , 2018, 52, 994-1001.	6.7	101
15	Does player time-in-game affect tackle technique in elite level rugby union?. <i>Journal of Science and Medicine in Sport</i> , 2018, 21, 221-225.	1.3	21
16	A continuum model for tension-compression asymmetry in skeletal muscle. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 77, 455-460.	3.1	25
17	Detailed assessment of pedestrian ground contact injuries observed from in-depth accident data. <i>Accident Analysis and Prevention</i> , 2018, 110, 9-17.	5.7	29
18	Assessment of model-based image-matching for future reconstruction of unhelmeted sport head impact kinematics. <i>Sports Biomechanics</i> , 2018, 17, 33-47.	1.6	20

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19	Collagen fibril organization in chicken and porcine skeletal muscle perimysium under applied tension and compression. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018, 77, 734-744.	3.1	22
20	The suture pullout characteristics of human and porcine linea alba. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 68, 103-114.	3.1	15
21	The influence of passenger car front shape on pedestrian injury risk observed from German in-depth accident data. <i>Accident Analysis and Prevention</i> , 2017, 101, 11-21.	5.7	42
22	Three-dimensional lumbar segment movement characteristics during paediatric cerebral palsy gait. <i>Gait and Posture</i> , 2017, 53, 41-47.	1.4	2
23	Safer passenger car front shapes for pedestrians: A computational approach to reduce overall pedestrian injury risk in realistic impact scenarios. <i>Accident Analysis and Prevention</i> , 2017, 100, 97-110.	5.7	39
24	The effects of tackle height on inertial loading of the head and neck in Rugby Union: A multibody model analysis. <i>Brain Injury</i> , 2017, 31, 1925-1931.	1.2	26
25	Parental awareness of schoolbag carriage: A comparative study of Irish and United States parents. <i>Work</i> , 2017, 58, 85-93.	1.1	3
26	The influence of physical dimension on apparent stress-strain behaviour of in vitro passive skeletal muscle samples. <i>Journal of Strain Analysis for Engineering Design</i> , 2017, 52, 3-11.	1.8	5
27	Visualisation of Collagen in fixed skeletal muscle tissue using fluorescently tagged Collagen binding protein CNA35. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2017, 66, 37-44.	3.1	6
28	Guidelines on schoolbag use: Messaging to inform the stakeholders. <i>Work</i> , 2016, 54, 489-492.	1.1	3
29	Guidelines for schoolbag carriage: An appraisal of safe load limits for schoolbag weight and duration of carriage. <i>Work</i> , 2016, 53, 679-688.	1.1	22
30	Assessment of the impact speed and angle conditions for the EN1317 barrier tests. <i>International Journal of Crashworthiness</i> , 2016, 21, 211-221.	1.9	11
31	Children with cerebral palsy experience greater levels of loading at the low back during gait compared to healthy controls. <i>Gait and Posture</i> , 2016, 48, 249-255.	1.4	8
32	Risks associated with significant head impact events in elite rugby union. <i>Brain Injury</i> , 2016, 30, 1350-1361.	1.2	38
33	Uniaxial and biaxial tensile stress-stretch response of human linea alba. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 63, 134-140.	3.1	35
34	The in vitro passive elastic response of chicken pectoralis muscle to applied tensile and compressive deformation. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 62, 468-480.	3.1	41
35	On the feasibility of life-saving locomotive bumpers. <i>Accident Analysis and Prevention</i> , 2016, 89, 103-110.	5.7	2
36	A virtual test system representing the distribution of pedestrian impact configurations for future vehicle front-end optimization. <i>Traffic Injury Prevention</i> , 2016, 17, 515-523.	1.4	13

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37	Control of tensionâ€“compression asymmetry in Ogden hyperelasticity with application to soft tissue modelling. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 56, 218-228.	3.1	41
38	A quantitative comparison of two kinematic protocols for lumbar segment motion during gait. <i>Gait and Posture</i> , 2015, 41, 699-705.	1.4	6
39	Schoolbag carriage and schoolbag-related musculoskeletal discomfort among primary school children. <i>Applied Ergonomics</i> , 2015, 51, 281-290.	3.1	52
40	Biomechanical abdominal wall model applied to hernia repair. <i>British Journal of Surgery</i> , 2015, 102, e133-e139.	0.3	24
41	Impact characteristics of a vehicle population in low speed front to rear collisions. <i>Accident Analysis and Prevention</i> , 2015, 79, 1-12.	5.7	13
42	The influence of vehicle front-end design on pedestrian ground impact. <i>Accident Analysis and Prevention</i> , 2015, 79, 56-69.	5.7	78
43	The influence of gait stance on pedestrian lower limb injury risk. <i>Accident Analysis and Prevention</i> , 2015, 85, 83-92.	5.7	34
44	Editorial. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2015, 41, 221.	3.1	0
45	Gabions: evaluation of potential as low-cost roadside barriers. <i>International Journal of Crashworthiness</i> , 2015, 20, 12-26.	1.9	5
46	The clinical impact of hip joint centre regression equation error on kinematics and kinetics during paediatric gait. <i>Gait and Posture</i> , 2015, 41, 175-179.	1.4	21
47	Uniaxial and biaxial mechanical properties of porcine linea alba. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2015, 41, 68-82.	3.1	44
48	A static test method to assess swivel seat strength in frontal impact. <i>International Journal of Crashworthiness</i> , 2014, 19, 469-483.	1.9	2
49	A 3-dimensional rigid cluster thorax model for kinematic measurements during gait. <i>Journal of Biomechanics</i> , 2014, 47, 1499-1505.	2.1	19
50	Assessing the microstructural response to applied deformation in porcine passive skeletal muscle. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2014, 40, 115-126.	3.1	13
51	The influence of estimated body segment parameters on predicted joint kinetics during diplegic cerebral palsy gait. <i>Journal of Biomechanics</i> , 2014, 47, 284-288.	2.1	26
52	Mechanical characterisation of porcine rectus sheath under uniaxial and biaxial tension. <i>Journal of Biomechanics</i> , 2014, 47, 1876-1884.	2.1	29
53	A structural model of passive skeletal muscle shows two reinforcement processes in resisting deformation. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013, 22, 84-94.	3.1	67
54	Schoolbag Weight Limit: Can It Be Defined?. <i>Journal of School Health</i> , 2013, 83, 368-377.	1.6	49

#	ARTICLE	IF	CITATIONS
55	Fibre orientation of fresh and frozen porcine aorta determined non-invasively using diffusion tensor imaging. <i>Medical Engineering and Physics</i> , 2013, 35, 765-776.	1.7	30
56	A scaling method for modelling the crashworthiness of novel roadside barrier designs. <i>International Journal of Crashworthiness</i> , 2013, 18, 93-102.	1.9	3
57	Passive skeletal muscle response to impact loading: Experimental testing and inverse modelling. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013, 27, 214-225.	3.1	23
58	Special issue on skin mechanobiology. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013, 28, 395-396.	3.1	5
59	Extrusion properties of porcine intestines and surrogate materials for ventral hernia modelling. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013, 18, 57-66.	3.1	5
60	A novel MRI compatible soft tissue indenter and fibre Bragg grating force sensor. <i>Medical Engineering and Physics</i> , 2013, 35, 486-499.	1.7	34
61	Multibody modelling of gabion beams for impact applications. <i>International Journal of Crashworthiness</i> , 2013, 18, 237-250.	1.9	9
62	The anisotropic mechanical behaviour of passive skeletal muscle tissue subjected to large tensile strain. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013, 17, 209-220.	3.1	127
63	A scaling method for modelling the crashworthiness of novel roadside barrier designs. <i>International Journal of Crashworthiness</i> , 2013, 18, 317-317.	1.9	1
64	Multibody modelling of a TB31 and a TB32 crash test with vertical portable concrete barriers: Model verification and sensitivity analysis. <i>Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics</i> , 2013, 227, 245-260.	0.8	2
65	Sagittal plane motion of the lumbar spine during ergometer and single scull rowing. <i>Sports Biomechanics</i> , 2013, 12, 132-142.	1.6	34
66	Predicting the pedestrian pre-impact speed from the pedestrian projection distance and vehicle damage measurements. <i>Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering</i> , 2013, 227, 164-178.	1.9	3
67	Applications and limitations of wrap-around ratio to vehicle speed estimation in pedestrian collision analysis. <i>International Journal of Crashworthiness</i> , 2013, 18, 288-305.	1.9	3
68	Predictive capabilities of the MADYMO multibody pedestrian model: Three-dimensional head translation and rotation, head impact time and head impact velocity. <i>Proceedings of the Institution of Mechanical Engineers, Part K: Journal of Multi-body Dynamics</i> , 2012, 226, 266-277.	0.8	9
69	The effect of rowing to exhaustion on frontal plane angular changes in the lumbar spine of elite rowers. <i>Journal of Sports Sciences</i> , 2012, 30, 1481-1489.	2.0	18
70	Validation of continuously tagged MRI for the measurement of dynamic 3D skeletal muscle tissue deformation. <i>Medical Physics</i> , 2012, 39, 1793-1810.	3.0	21
71	Torsion of monofilament and polyfilament sutures under tension decreases suture strength and increases risk of suture fracture. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012, 12, 168-173.	3.1	12
72	SKELETAL MUSCLE IN COMPRESSION: MODELING APPROACHES FOR THE PASSIVE MUSCLE BULK. <i>International Journal for Multiscale Computational Engineering</i> , 2012, 10, 143-154.	1.2	14

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73	Pedestrian head translation, rotation and impact velocity: The influence of vehicle speed, pedestrian speed and pedestrian gait. <i>Accident Analysis and Prevention</i> , 2012, 45, 342-353.	5.7	56
74	The fracture toughness of soft tissues. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012, 6, 139-147.	3.1	126
75	Validation of SPAMM tagged MRI based measurement of 3D soft tissue deformation. <i>Medical Physics</i> , 2011, 38, 1248-1260.	3.0	14
76	Editorial. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 1571.	3.1	0
77	Imaging Arterial Fibres Using Diffusion Tensor Imaging—Feasibility Study and Preliminary Results. <i>Eurasip Journal on Advances in Signal Processing</i> , 2010, 2010, .	1.7	17
78	A 12-month prospective cohort study of injury in international rowers. <i>British Journal of Sports Medicine</i> , 2010, 44, 207-214.	6.7	97
79	Digital image correlation and finite element modelling as a method to determine mechanical properties of human soft tissue in vivo. <i>Journal of Biomechanics</i> , 2009, 42, 1150-1153.	2.1	116
80	Viscoelastic properties of passive skeletal muscle in compression—Cyclic behaviour. <i>Journal of Biomechanics</i> , 2009, 42, 1038-1048.	2.1	77
81	Non-collision injuries in urban buses—Strategies for prevention. <i>Accident Analysis and Prevention</i> , 2009, 41, 1-9.	5.7	47
82	Evaluation of a Validation Method for MR Imaging-Based Motion Tracking Using Image Simulation. <i>Eurasip Journal on Advances in Signal Processing</i> , 2009, 2010, .	1.7	5
83	Rear-impact neck protection devices for adult wheelchair users. <i>Journal of Rehabilitation Research and Development</i> , 2009, 46, 499.	1.6	2
84	Viscoelastic properties of passive skeletal muscle in compression: Stress-relaxation behaviour and constitutive modelling. <i>Journal of Biomechanics</i> , 2008, 41, 1555-1566.	2.1	181
85	Limits for survivability in frontal collisions: Theory and real-life data combined. <i>Accident Analysis and Prevention</i> , 2007, 39, 679-687.	5.7	11
86	A validated model of passive muscle in compression. <i>Journal of Biomechanics</i> , 2006, 39, 2999-3009.	2.1	175
87	Effects of pre-impact pedestrian position and motion on kinematics and injuries from vehicle and ground contact. <i>International Journal of Crashworthiness</i> , 2006, 11, 345-355.	1.9	66
88	Pedestrian Risk from Cars and Sport Utility Vehicles - A Comparative Analytical Study. <i>Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering</i> , 2006, 220, 1085-1100.	1.9	43
89	Vehicle-pedestrian collisions: Validated models for pedestrian impact and projection. <i>Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering</i> , 2005, 219, 183-195.	1.9	40
90	Frontal collision behaviour: Comparison of onboard collision recorder data with car population characteristics. <i>International Journal of Crashworthiness</i> , 2005, 10, 61-73.	1.9	3

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91	Confidence limits for impact speed estimation from pedestrian projection distance. International Journal of Crashworthiness, 2004, 9, 219-228.	1.9	21
92	Car size and injury risk: a model for injury risk in frontal collisions. Accident Analysis and Prevention, 2002, 34, 93-99.	5.7	39
93	A hybrid model for pedestrian impact and projection. International Journal of Crashworthiness, 2000, 5, 393-404.	1.9	14