Todd Colin Pataky

List of Publications by Year
in descending order

92	4,274	159585 30	118850 62
papers	citations	h-index	g-index

100	100	100	3298
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Simultaneous inference for functional data in sports biomechanics. AStA Advances in Statistical Analysis, 2023, 107, 369-392.	0.9	2
2	Using Monte Carlo Simulation to Propagate Processing Parameter Uncertainty to the Statistical Analyses of Biomechanical Trajectories. Motor Control, 2023, 27, 112-122.	0.6	1
3	Commentary on â€œComparing Groups of Time Dependent Data Using Locally Weighted Scatterplot Smoothing Alpha-Adjusted Serial T-testsâ€•by Niiler (2020)â€•and subsequent letters. Gait and Posture, 2022, 92, 471-476.	1.4	0
4	Simultaneously assessing amplitude and temporal effects in biomechanical trajectories using nonlinear registration and statistical nonparametric mapping. Journal of Biomechanics, 2022, 136, 111049.	2.1	6
5	pyemgpipeline: A Python package for electromyography processing. Journal of Open Source Software, 2022, 7, 4156.	4.6	1
6	Immediate and six-week effects of wearing a knee sleeve following anterior cruciate ligament reconstruction on knee kinematics and kinetics: a cross-over laboratory and randomised clinical trial. BMC Musculoskeletal Disorders, 2022, 23, .	1.9	5
7	Plantar pressures in three types of indigenous footwear, commercial minimal shoes, and conventional Western shoes, compared to barefoot walking. Footwear Science, 2021, 13, 1-17.	2.1	5
8	Relation between frontal plane center of mass position stability and foot elevation during obstacle crossing. Journal of Biomechanics, 2021, 116, 110219.	2.1	13
9	Trunk, pelvis and lower limb coordination between anticipated and unanticipated sidestep cutting in females. Gait and Posture, 2021, 85, 131-137.	1.4	11
10	Timing of gait events affects whole trajectory analyses: A statistical parametric mapping sensitivity analysis of lower limb biomechanics. Journal of Biomechanics, 2021, 119, 110329.	2.1	19
11	Landmark-free, parametric hypothesis tests regarding two-dimensional contour shapes using coherent point drift registration and statistical parametric mapping. PeerJ Computer Science, 2021, 7, e542.	4.5	1
12	Sample size estimation for biomechanical waveforms: Current practice, recommendations and a comparison to discrete power analysis. Journal of Biomechanics, 2021, 122, 110451.	2.1	26
13	Intra-subject sample size effects in plantar pressure analyses. PeerJ, 2021, 9, e11660.	2.0	8
14	Immediate and 6-week effects of wearing a knee sleeve following anterior cruciate ligament reconstruction: a cross-over laboratory and randomised clinical trial. BMC Musculoskeletal Disorders, 2021, 22, 655.	1.9	3
15	StW 573 <i>Australopithecus prometheus</i>: Its Significance for an Australopith Bauplan. Folia Primatologica, 2021, 92, 243-275.	0.7	6
16	Muscle size-scaled shear elastic modulus: A muscle force index independent of maximal voluntary contraction, assessed during elbow extension. Journal of Biomechanics, 2020, 112, 110049.	2.1	1
17	Using directional statistics to test hypotheses regarding rigid body attitude: Comparison to univariate and multivariate Cardan angle tests. Journal of Biomechanics, 2020, 111, 109976.	2.1	1
18	Bayesian vs. least-squares inverse kinematics: Simulation experiments with models of 3D rigid body motion and 2D models including soft-tissue artefacts. Journal of Biomechanics, 2020, 109, 109902.	2.1	6

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19	seg1d: A Python package for Automated segmentation of one-dimensional (1D) data. Journal of Open Source Software, 2020, 5, 2404.	4.6	0
20	On the validity of statistical parametric mapping for nonuniformly and heterogeneously smooth one-dimensional biomechanical data. Journal of Biomechanics, 2019, 91, 114-123.	2.1	19
21	Smoothing can systematically bias small samples of one-dimensional biomechanical continua. Journal of Biomechanics, 2019, 82, 330-336.	2.1	6
22	Bayesian inverse kinematics vs. least-squares inverse kinematics in estimates of planar postures and rotations in the absence of soft tissue artifact. Journal of Biomechanics, 2019, 82, 324-329.	2.1	5
23	mwarp1d: Manual one-dimensional data warping in Python and PyQt. Journal of Open Source Software, 2019, 4, 1870.	4.6	5
24	Foot pressure distribution in White Rhinoceroses (Ceratotherium simum) during walking. PeerJ, 2019, 7, e6881.	2.0	14
25	A comparison of random-field-theory and false-discovery-rate inference results in the analysis of registered one-dimensional biomechanical datasets. PeerJ, 2019, 7, e8189.	2.0	12
26	The role of pelvis-thorax coupling in controlling within-golf club swing speed. Journal of Sports Sciences, 2018, 36, 2164-2171.	2.0	15
27	A force profile analysis comparison between functional data analysis, statistical parametric mapping and statistical non-parametric mapping in on-water single sculling. Journal of Science and Medicine in Sport, 2018, 21, 1100-1105.	1.3	37
28	A computational framework for estimating statistical power and planning hypothesis-driven experiments involving one-dimensional biomechanical continua. Journal of Biomechanics, 2018, 66, 159-164.	2.1	8
29	Age-related plantar centre of pressure trajectory changes during barefoot walking. Gait and Posture, 2017, 57, 188-192.	1.4	11
30	Analysis of three-dimensional knee kinematics during stair descent two decades post-ACL rupture â€“ Data revisited using statistical parametric mapping. Journal of Electromyography and Kinesiology, 2017, 32, 44-50.	1.7	20
31	Architecture of the sperm whale forehead facilitates ramming combat. PeerJ, 2016, 4, e1895.	2.0	14
32	Literature Review and Comparison of Two Statistical Methods to Evaluate the Effect of Botulinum Toxin Treatment on Gait in Children with Cerebral Palsy. PLoS ONE, 2016, 11, e0152697.	2.5	42
33	The nature of functional variability in plantar pressure during a range of controlled walking speeds. Royal Society Open Science, 2016, 3, 160369.	2.4	20
34	Foot pressure distributions during walking in African elephants (Loxodonta africana). Royal Society Open Science, 2016, 3, 160203.	2.4	28
35	The probability of false positives in zero-dimensional analyses of one-dimensional kinematic, force and EMG trajectories. Journal of Biomechanics, 2016, 49, 1468-1476.	2.1	114
36	Knee and Hip Joint Kinematics Predict Quadriceps and Hamstrings Neuromuscular Activation Patterns in Drop Jump Landings. PLoS ONE, 2016, 11, e0153737.	2.5	29

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37	rft1d: Smooth One-Dimensional Random Field Upcrossing Probabilities inPython. Journal of Statistical Software, 2016, 71, .	3.7	56
38	Region-of-interest analyses of one-dimensional biomechanical trajectories: bridging 0D and 1D theory, augmenting statistical power. PeerJ, 2016, 4, e2652.	2.0	107
39	Effects of footwear on driver clubhead speed on in amateur golfers: classical vs. Bayesian inference. Footwear Science, 2015, 7, S166-S167.	2.1	1
40	Correlation between maximum in-shoe plantar pressures and clubhead speed in amateur golfers. Journal of Sports Sciences, 2015, 33, 192-197.	2.0	4
41	Pooling sexes when assessing ground reaction forces during walking: Statistical Parametric Mapping versus traditional approach. Journal of Biomechanics, 2015, 48, 2162-2165.	2.1	3
42	Zero- vs. one-dimensional, parametric vs. non-parametric, and confidence interval vs. hypothesis testing procedures in one-dimensional biomechanical trajectory analysis. Journal of Biomechanics, 2015, 48, 1277-1285.	2.1	232
43	Two-way ANOVA for scalar trajectories, with experimental evidence of non-phasic interactions. Journal of Biomechanics, 2015, 48, 186-189.	2.1	23
44	Statistical Parametric Mapping (SPM) for alpha-based statistical analyses of multi-muscle EMG time-series. Journal of Electromyography and Kinesiology, 2015, 25, 14-19.	1.7	93
45	Vector field statistics for objective center-of-pressure trajectory analysis during gait, with evidence of scalar sensitivity to small coordinate system rotations. Gait and Posture, 2014, 40, 255-258.	1.4	38
46	A cross-sectional study of age-related changes in plantar pressure distribution between 4 and 7 years: A comparison of regional and pixel-level analyses. Gait and Posture, 2014, 39, 154-160.	1.4	20
47	Short-term step-to-step correlation in plantar pressure distributions during treadmill walking, and implications for footprint trail analysis. Gait and Posture, 2013, 38, 1054-1057.	1.4	4
48	Vector field statistical analysis of kinematic and force trajectories. Journal of Biomechanics, 2013, 46, 2394-2401.	2.1	462
49	The evolution of compliance in the human lateral mid-foot. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20131818.	2.6	66
50	Gait Kinematics of Subjects with Ankle Instability Using a Multisegmented Foot Model. Medicine and Science in Sports and Exercise, 2013, 45, 2129-2136.	0.4	57
51	Does footprint depth correlate with foot motion and pressure?. Journal of the Royal Society Interface, 2013, 10, 20130009.	3.4	61
52	Accuracy of an over-the-counter instrumented shoe: maximum pressures during walking. Footwear Science, 2013, 5, S49-S50.	2.1	0
53	Is Power Grasping Contact Continuous or Discrete?. Journal of Applied Biomechanics, 2013, 29, 554-562.	0.8	4
54	One-dimensional statistical parametric mapping in Python. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 295-301.	1.6	506

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55	Statistical parametric mapping of the regional distribution and ontogenetic scaling of foot pressures during walking in Asian elephants (Elephas maximus). Journal of Experimental Biology, 2012, 215, 1584-1593.	1.7	36
56	Gait recognition: highly unique dynamic plantar pressure patterns among 104 individuals. Journal of the Royal Society Interface, 2012, 9, 790-800.	3.4	82
57	Radial force distribution changes associated with tangential force production in cylindrical grasping, and the importance of anatomical registration. Journal of Biomechanics, 2012, 45, 218-224.	2.1	12
58	Spatial resolution in plantar pressure measurement revisited. Journal of Biomechanics, 2012, 45, 2116-2124.	2.1	23
59	The effect of running speed on knee mechanical loading in females during side cutting. Journal of Biomechanics, 2012, 45, 2444-2449.	2.1	107
60	Functional Evolution of the Feeding System in Rodents. PLoS ONE, 2012, 7, e36299.	2.5	146
61	Human-like external function of the foot, and fully upright gait, confirmed in the 3.66 million year old Laetoli hominin footprints by topographic statistics, experimental footprint-formation and computer simulation. Journal of the Royal Society Interface, 2012, 9, 707-719.	3.4	141
62	International scientific consensus on medical plantar pressure measurement devices: technical requirements and performance. Annali Dell'Istituto Superiore Di Sanita, 2012, 48, 259-271.	0.4	38
63	An anatomically unbiased foot template for inter-subject plantar pressure evaluation. Gait and Posture, 2011, 33, 418-422.	1.4	19
64	Spatiotemporal Volumetric Analysis of Dynamic Plantar Pressure Data. Medicine and Science in Sports and Exercise, 2011, 43, 1582-1589.	0.4	6
65	Evolutionary Robotic Approaches in Primate Gait Analysis. International Journal of Primatology, 2010, 31, 321-338.	1.9	28
66	Automated Nonlinear Feature Generation and Classification of Foot Pressure Lesions. IEEE Transactions on Information Technology in Biomedicine, 2010, 14, 418-424.	3.2	13
67	Generalized n-dimensional biomechanical field analysis using statistical parametric mapping. Journal of Biomechanics, 2010, 43, 1976-1982.	2.1	506
68	Dynamics of longitudinal arch support in relation to walking speed: contribution of the plantar aponeurosis. Journal of Anatomy, 2010, 217, 254-261.	1.5	70
69	Registration of pedobarographic image data in the frequency domain. Computer Methods in Biomechanics and Biomedical Engineering, 2010, 13, 731-740.	1.6	34
70	Linear dependence of peak, mean, and pressureâ€“time integral values in plantar pressure images. Gait and Posture, 2010, 31, 140-142.	1.4	48
71	A dynamic model of the windlass mechanism of the foot: evidence for early stance phase preloading of the plantar aponeurosis. Journal of Experimental Biology, 2009, 212, 2491-2499.	1.7	108
72	Stepping Out. Science, 2009, 323, 1174-1175.	12.6	8

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73	Rapid pedobarographic image registration based on contour curvature and optimization. Journal of Biomechanics, 2009, 42, 2620-2623.	2.1	17
74	Nonlinear spatial warping for between-subjects pedobarographic image registration. Gait and Posture, 2009, 29, 477-482.	1.4	8
75	New insights into the plantar pressure correlates of walking speed using pedobarographic statistical parametric mapping (pSPM). Journal of Biomechanics, 2008, 41, 1987-1994.	2.1	113
76	Pedobarographic statistical parametric mapping (pSPM): A pixel-level approach to foot pressure image analysis. Journal of Biomechanics, 2008, 41, 2136-2143.	2.1	82
77	Assessing the significance of pedobarographic signals using random field theory. Journal of Biomechanics, 2008, 41, 2465-2473.	2.1	20
78	Regional peak plantar pressures are highly sensitive to region boundary definitions. Journal of Biomechanics, 2008, 41, 2772-2775.	2.1	30
79	A comparison of seven methods of within-subjects rigid-body pedobarographic image registration. Journal of Biomechanics, 2008, 41, 3085-3089.	2.1	29
80	Multifinger Ab- and Adduction Strength and Coordination. Journal of Hand Therapy, 2008, 21, 377-385.	1.5	12
81	A Device for Testing the Intrinsic Muscles of the Hand. Journal of Hand Therapy, 2007, 20, 345-350.	1.5	9
82	Finger interaction during maximal radial and ulnar deviation efforts: experimental data and linear neural network modeling. Experimental Brain Research, 2007, 179, 301-312.	1.5	12
83	Viscoelastic response of the finger pad to incremental tangential displacements. Journal of Biomechanics, 2005, 38, 1441-1449.	2.1	51
84	Soft tissue strain energy minimization: a candidate control scheme for intra-finger normalâ€“tangential force coordination. Journal of Biomechanics, 2005, 38, 1723-1727.	2.1	9
85	Grip Width and the Organization of Force Output. Journal of Motor Behavior, 2005, 37, 285-294.	0.9	6
86	Tangential load sharing among fingers during prehension. Ergonomics, 2004, 47, 876-889.	2.1	30
87	Prehension synergies during nonvertical grasping, I: experimental observations. Biological Cybernetics, 2004, 91, 148-58.	1.3	38
88	Prehension synergies during nonvertical grasping, II: Modeling and optimization. Biological Cybernetics, 2004, 91, 231-242.	1.3	32
89	A simple method to determine body segment masses in vivo: reliability, accuracy and sensitivity analysis. Clinical Biomechanics, 2003, 18, 364-368.	1.2	35
90	Interaction of discrete and rhythmic movements over a wide range of periods. Experimental Brain Research, 2002, 147, 162-174.	1.5	30

#	Article	IF	Citations
91	Power1D: a Python toolbox for numerical power estimates in experiments involving one-dimensional continua. PeerJ Computer Science, 0, 3, e125.	4.5	15
92	Probabilistic biomechanical finite element simulations: whole-model classical hypothesis testing based on upcrossing geometry. PeerJ Computer Science, 0, 2, e96.	4.5	3