Tobias Siebert

List of Publications by Year
in descending order

97	1,960	257450 24	315739 38
papers	citations	h-index	g-index

100	100	100	1133
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	How velocity impacts eccentric force generation of fully activated skinned skeletal muscle fibers in long stretches. Journal of Applied Physiology, 2022, 133, 223-233.	2.5	8
2	A pilot study on active and passive ex vivo characterisation of the urinary bladder and its impact on three-dimensional modelling. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 133, 105347.	3.1	2
3	Computational modelling of muscle, tendon, and ligaments biomechanics. , 2021, , 155-186.		5
4	Location- and layer-dependent biomechanical and microstructural characterisation of the porcine urinary bladder wall. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 115, 104275.	3.1	7
5	Power Amplification Increases With Contraction Velocity During Stretch-Shortening Cycles of Skinned Muscle Fibers. Frontiers in Physiology, 2021, 12, 644981.	2.8	13
6	Influence of layer separation on the determination of stomach smooth muscle properties. Pflugers Archiv European Journal of Physiology, 2021, 473, 911-920.	2.8	6
7	Editorial: The Stretch-Shortening Cycle of Active Muscle and Muscle-Tendon Complex: What, Why and How It Increases Muscle Performance?. Frontiers in Physiology, 2021, 12, 693141.	2.8	9
8	Architectural model for muscle growth during maturation. Biomechanics and Modeling in Mechanobiology, 2021, 20, 2031-2044.	2.8	5
9	Age-dependent mechanical and microstructural properties of the rabbit soleus muscle. Acta Biomaterialia, 2021, 134, 453-465.	8.3	3
10	Effect of plyometric training on dynamic leg strength and jumping performance in rhythmic gymnastics: A preliminary study. Isokinetics and Exercise Science, 2021, , 1-9.	0.4	2
11	Cross-bridge mechanics estimated from skeletal musclesâ€™ work-loop responses to impacts in legged locomotion. Scientific Reports, 2021, 11, 23638.	3.3	2
12	Changes in mechanical power output in rowing by varying stroke rate and gearing. European Journal of Sport Science, 2020, 20, 357-365.	2.7	30
13	Intraday and interday reliability of pelvic floor muscles electromyography in continent woman. Neurourology and Urodynamics, 2020, 39, 271-278.	1.5	7
14	Biomechanical and microstructural characterisation of the porcine stomach wall: Location- and layer-dependent investigations. Acta Biomaterialia, 2020, 102, 83-99.	8.3	26
15	Three-dimensional architecture of rabbit M. soleus during growth. Journal of Biomechanics, 2020, 112, 110054.	2.1	7
16	Cross-Bridges and Sarcomeric Non-cross-bridge Structures Contribute to Increased Work in Stretch-Shortening Cycles. Frontiers in Physiology, 2020, 11, 921.	2.8	23
17	Considerations on the human Achilles tendon moment arm for in vivo triceps surae muscleâ€“tendon unit force estimates. Scientific Reports, 2020, 10, 19559.	3.3	15
18	Exhaustion of Skeletal Muscle Fibers Within Seconds: Incorporating Phosphate Kinetics Into a Hill-Type Model. Frontiers in Physiology, 2020, 11, 306.	2.8	14

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19	Electromyographic activity of the vastus medialis and gastrocnemius implicates a slow stretch-shortening cycle during rowing in the field. Scientific Reports, 2020, 10, 9451.	3.3	3
20	10% Higher Rowing Power Outputs After Flexion-Extension-Cycle Compared to an Isolated Concentric Contraction in Sub-Elite Rowers. Frontiers in Physiology, 2020, 11, 521.	2.8	3
21	A simple geometrical model accounting for 3D muscle architectural changes across muscle lengths. Journal of Biomechanics, 2020, 103, 109694.	2.1	5
22	Energy Expenditure of Dynamic Submaximal Human Plantarflexion Movements: Model Prediction and Validation by in-vivo Magnetic Resonance Spectroscopy. Frontiers in Bioengineering and Biotechnology, 2020, 8, 622.	4.1	1
23	On a coupled electro-chemomechanical model of gastric smooth muscle contraction. Acta Biomaterialia, 2020, 109, 163-181.	8.3	16
24	The Effect of Multidirectional Loading on Contractions of the M. Medial Gastrocnemius. Frontiers in Physiology, 2020, 11, 601799.	2.8	4
25	Effect of Static Stretching, Dynamic Stretching, and Myofascial Foam Rolling on Range of Motion During Hip Flexion. Journal of Strength and Conditioning Research, 2020, Publish Ahead of Print, .	2.1	6
26	Characterization of Electromechanical Delay Based on a Biophysical Multi-Scale Skeletal Muscle Model. Frontiers in Physiology, 2019, 10, 1270.	2.8	22
27	Extensive eccentric contractions in intact cardiac trabeculae: revealing compelling differences in contractile behaviour compared to skeletal muscles. Proceedings of the Royal Society B: Biological Sciences, 2019, 286, 20190719.	2.6	16
28	On a three-dimensional constitutive model for history effects in skeletal muscles. Biomechanics and Modeling in Mechanobiology, 2019, 18, 1665-1681.	2.8	17
29	Locational and Directional Dependencies of Smooth Muscle Properties in Pig Urinary Bladder. Frontiers in Physiology, 2019, 10, 63.	2.8	14
30	Passive and dynamic muscle architecture during transverse loading for gastrocnemius medialis in man. Journal of Biomechanics, 2019, 86, 160-166.	2.1	17
31	Simulating electromechanical delay across the scales â€“ relating the behavior of single sarcomers on a subâ€cellular scale and the muscleâ€tendon system on the organ scale. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900312.	0.2	0
32	Impact of transversal calf muscle loading on plantarflexion. Journal of Biomechanics, 2019, 85, 37-42.	2.1	9
33	Packing of muscles in the rabbit shank influences three-dimensional architecture of M. soleus. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 83, 20-27.	3.1	17
34	A hill-type muscle model expansion accounting for effects of varying transverse muscle load. Journal of Biomechanics, 2018, 66, 57-62.	2.1	21
35	A phenomenological approach for modelling force enhancement and depression in skeletal muscle tissue. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800900.	0.2	0
36	Location-dependent correlation between tissue structure and the mechanical behaviour of the urinary bladder. Acta Biomaterialia, 2018, 75, 263-278.	8.3	24

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37	Impact of Multidirectional Transverse Calf Muscle Loading on Calf Muscle Force in Young Adults. Frontiers in Physiology, 2018, 9, 1148.	2.8	8
38	Assessment of the Hâ€reflex at two contraction levels before and after fatigue. Scandinavian Journal of Medicine and Science in Sports, 2017, 27, 399-407.	2.9	11
39	Interpretation of pHâ€heterogeneity in human muscle induced by neuromuscular electrical stimulation. Magnetic Resonance in Medicine, 2017, 77, 466-466.	3.0	0
40	Three-dimensional mechano-electrochemical model for smooth muscle contraction of the urinary bladder. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 75, 128-146.	3.1	20
41	The active forceâ€“length relationship is invisible during extensive eccentric contractions in skinned skeletal muscle fibres. Proceedings of the Royal Society B: Biological Sciences, 2017, 284, 20162497.	2.6	37
42	Importance of contraction history on muscle force of porcine urinary bladder smooth muscle. International Urology and Nephrology, 2017, 49, 205-214.	1.4	10
43	Effects of Growth on Muscle, Tendon, and Aponeurosis Tissues in Rabbit Shank Musculature. Anatomical Record, 2017, 300, 1123-1136.	1.4	12
44	Changes in three-dimensional muscle structure of rabbit gastrocnemius, flexor digitorum longus, and tibialis anterior during growth. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 74, 507-519.	3.1	24
45	Strain in shock-loaded skeletal muscle and the time scale of muscular wobbling mass dynamics. Scientific Reports, 2017, 7, 13266.	3.3	11
46	Effects of a paraspinal-lumbar tape application during 7 days on the perceived area of tape contact. Physical Therapy in Sport, 2017, 25, 89-93.	1.9	1
47	The pH heterogeneity in human calf muscle during neuromuscular electrical stimulation. Magnetic Resonance in Medicine, 2017, 77, 2097-2106.	3.0	9
48	Porcine Stomach Smooth Muscle Force Depends on History-Effects. Frontiers in Physiology, 2017, 8, 802.	2.8	19
49	Actuation in Legged Locomotion. , 2017, , 563-622.		10
50	A continuum-mechanical skeletal muscle model including actin-titin interaction predicts stable contractions on the descending limb of the force-length relation. PLoS Computational Biology, 2017, 13, e1005773.	3.2	36
51	Force enhancement and stability of finite element muscle models. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 85-86.	0.2	3
52	Myosin filament sliding through the Z-disc relates striated muscle fibre structure to function. Proceedings of the Royal Society B: Biological Sciences, 2016, 283, 20153030.	2.6	18
53	Intermuscular pressure between synergistic muscles correlates with muscle force. Journal of Experimental Biology, 2016, 219, 2311-2319.	1.7	21
54	Threeâ€dimensional reconstruction of M. gastrocnemius contraction. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 111-112.	0.2	0

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55	Reproducibility of electromyographic and mechanical parameters of the triceps surae during submaximal and maximal plantar flexions. Muscle and Nerve, 2016, 53, 464-470.	2.2	19
56	Does weightlifting increase residual force enhancement?. Journal of Biomechanics, 2016, 49, 2047-2052.	2.1	16
57	A multi-scale continuum model of skeletal muscle mechanics predicting force enhancement based on actinâ€“titin interaction. Biomechanics and Modeling in Mechanobiology, 2016, 15, 1423-1437.	2.8	39
58	Force reduction induced by unidirectional transversal muscle loading is independent of local pressure. Journal of Biomechanics, 2016, 49, 1156-1161.	2.1	27
59	Contraction dynamics and function of the muscle-tendon complex depend on the muscle fibre-tendon length ratio: a simulation study. Biomechanics and Modeling in Mechanobiology, 2016, 15, 245-258.	2.8	39
60	Assessment of physical activity of the human body considering the thermodynamic system. Computer Methods in Biomechanics and Biomedical Engineering, 2016, 19, 923-933.	1.6	5
61	INFLUENCE OF MUSCLE COMPRESSION ON DYNAMIC MUSCLE PERFORMANCE. , 2016, , .		0
62	Analysis of game variables to predict scoring and performance levels in elite menâ€™s volleyball. International Journal of Performance Analysis in Sport, 2015, 15, 816-829.	1.1	22
63	Influence of joint position on synergistic muscle activity after fatigue of a single muscle head. Muscle and Nerve, 2015, 51, 259-267.	2.2	12
64	Three-Dimensional Muscle Architecture and Comprehensive Dynamic Properties of Rabbit Gastrocnemius, Plantaris and Soleus: Input for Simulation Studies. PLoS ONE, 2015, 10, e0130985.	2.5	54
65	Fast and Powerful: Biomechanics and Bite Forces of the Mandibles in the American Cockroach Periplaneta americana. PLoS ONE, 2015, 10, e0141226.	2.5	33
66	Adjusting the mechanical behavior of embroidered scaffolds to lapin anterior cruciate ligaments by varying the thread materials. Textile Reseach Journal, 2015, 85, 1431-1444.	2.2	19
67	Muscle force compensation among synergistic muscles after fatigue of a single muscle. Human Movement Science, 2015, 42, 273-287.	1.4	34
68	Novel microstructural findings in M. plantaris and their impact during active and passive loading at the macro level. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 51, 25-39.	3.1	33
69	Fast lowâ€angle shot diffusion tensor imaging with stimulated echo encoding in the muscle of rabbit shank. NMR in Biomedicine, 2014, 27, 146-157.	2.8	17
70	Work partitioning of transversally loaded muscle: experimentation and simulation. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 217-229.	1.6	51
71	Force depression decays during shortening in the medial gastrocnemius of the rat. Journal of Biomechanics, 2014, 47, 1099-1103.	2.1	4
72	Computational modeling of muscle biomechanics. , 2014, , 173-204.		15

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73	Muscle force depends on the amount of transversal muscle loading. Journal of Biomechanics, 2014, 47, 1822-1828.	2.1	63
74	Correct, fake and absent pre-information does not affect the occurrence and magnitude of the bilateral force deficit. Journal of Sports Science and Medicine, 2014, 13, 439-43.	1.6	1
75	Three-dimensional surface geometries of the rabbit soleus muscle during contraction: input for biomechanical modelling and its validation. Biomechanics and Modeling in Mechanobiology, 2013, 12, 1205-1220.	2.8	51
76	Determination of threeâ€dimensional muscle architectures: validation of the <scp>DTI</scp>â€based fiber tractography method by manual digitization. Journal of Anatomy, 2013, 223, 61-68.	1.5	57
77	Exercise Reveals the Interrelation of Physical Fitness, Inflammatory Response, Psychopathology, and Autonomic Function in Patients With Schizophrenia. Schizophrenia Bulletin, 2013, 39, 1139-1149.	4.3	37
78	ELECTRO-MECHANICAL DELAY IN HILL-TYPE MUSCLE MODELS. Journal of Mechanics in Medicine and Biology, 2012, 12, 1250085.	0.7	58
79	Muscle Preactivation Control: Simulation of Ankle Joint Adjustments at Touchdown During Running on Uneven Ground. Journal of Applied Biomechanics, 2012, 28, 718-725.	0.8	27
80	A three-dimensional chemo-mechanical continuum model for smooth muscle contraction. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 13, 215-229.	3.1	33
81	A numerical validation approach of a finite element muscle model using optical data. Proceedings in Applied Mathematics and Mechanics, 2012, 12, 127-128.	0.2	1
82	Compressive properties of passive skeletal muscleâ€”The impact of precise sample geometry on parameter identification in inverse finite element analysis. Journal of Biomechanics, 2012, 45, 2673-2679.	2.1	56
83	Alteration of synergistic muscle activity following neuromuscular electrical stimulation of one muscle. Brain and Behavior, 2012, 2, 640-646.	2.2	11
84	On the relevance of structure preservation to simulations of muscle actuated movements. Biomechanics and Modeling in Mechanobiology, 2012, 11, 543-556.	2.8	6
85	A 3D-geometric model for the deformation of a transversally loaded muscle. Journal of Theoretical Biology, 2012, 298, 116-121.	1.7	22
86	Structure preserving simulation of muscle actuated movements. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 101-102.	0.2	1
87	Passive muscle behaviour - experimental and numerical investigations. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 135-136.	0.2	0
88	Cupiennius salei: biomechanical properties of the tibiaâ€“metatarsus joint and its flexing muscles. Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology, 2010, 180, 199-209.	1.5	30
89	A mechanism accounting for independence on starting length of tension increase in ramp stretches of active skeletal muscle at short half-sarcomere lengths. Journal of Theoretical Biology, 2010, 266, 117-123.	1.7	9
90	THE EFFECTS OF PARALLEL AND SERIES ELASTIC COMPONENTS ON THE ACTIVE CAT SOLEUS FORCE-LENGTH RELATIONSHIP. Journal of Mechanics in Medicine and Biology, 2009, 09, 105-122.	0.7	42

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91	All leg joints contribute to quiet human stance: A mechanical analysis. Journal of Biomechanics, 2009, 42, 2739-2746.	2.1	64
92	Titin-induced force enhancement and force depression: A â€˜sticky-springâ€™ mechanism in muscle contractions?. Journal of Theoretical Biology, 2009, 259, 350-360.	1.7	124
93	Nonlinearities make a difference: comparison of two common Hill-type models with real muscle. Biological Cybernetics, 2008, 98, 133-143.	1.3	88
94	Characterization of isovelocity extension of activated muscle: A Hill-type model for eccentric contractions and a method for parameter determination. Journal of Theoretical Biology, 2008, 255, 176-187.	1.7	47
95	An improved method to determine neuromuscular properties using force laws â€“ From single muscle to applications in human movements. Human Movement Science, 2007, 26, 320-341.	1.4	21
96	ISOFIT: a model-based method to measure muscleâ€“tendon properties simultaneously. Biomechanics and Modeling in Mechanobiology, 2005, 4, 10-19.	2.8	25
97	NOT ALL OSCILLATIONS ARE RUBBISH: FORWARD SIMULATION OF QUICK-RELEASE EXPERIMENTS. Journal of Mechanics in Medicine and Biology, 2003, 03, 107-122.	0.7	15