Christian Rode

List of Publications by Year
in descending order

39 papers	1,076 citations	361388 20 h-index	434170 31 g-index
40 all docs	40 docs citations	40 times ranked	664 citing authors

#	Article	IF	Citations
1	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
2	Nonlinearities make a difference: comparison of two common Hill-type models with real muscle. Biological Cybernetics, 2008, 98, 133-143.	1.3	88
3	A new biarticular actuator design facilitates control of leg function in BioBiped3. Bioinspiration and Biomimetics, 2016, 11, 046003.	2.9	69
4	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
5	Trunk orientation causes asymmetries in leg function in small bird terrestrial locomotion. Proceedings of the Royal Society B: Biological Sciences, 2014, 281, 20141405.	2.6	52
6	Stable and robust walking with compliant legs. , 2010, , .		49
7	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
8	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
9	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
10	Grounded running in quails: Simulations indicate benefits of observed fixed aperture angle between legs before touch-down. Journal of Theoretical Biology, 2013, 335, 97-107.	1.7	37
11	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
12	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
13	Force direction patterns promote whole body stability even in hip-flexed walking, but not upper body stability in human upright walking. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20170404.	2.1	34
14	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
15	Reconstruction of human swing leg motion with passive biarticular muscle models. Human Movement Science, 2017, 52, 96-107.	1.4	28
16	Force reduction induced by unidirectional transversal muscle loading is independent of local pressure. Journal of Biomechanics, 2016, 49, 1156-1161.	2.1	27
17	Biarticular muscles in light of template models, experiments and robotics: a review. Journal of the Royal Society Interface, 2020, 17, 20180413.	3.4	27
18	Biarticular muscles are most responsive to upper-body pitch perturbations in human standing. Scientific Reports, 2019, 9, 14492.	3.3	26

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19	Positioning the hip with respect to the COM: Consequences for leg operation. Journal of Theoretical Biology, 2015, 382, 187-197.	1.7	25
20	Limb dynamics in agility jumps of beginner and advanced dogs. Journal of Experimental Biology, 2020, 223, .	1.7	23
21	Increasing trunk flexion morphs human leg function into that of birds despite different leg morphology. Journal of Experimental Biology, 2017, 220, 478-486.	1.7	22
22	A hill-type muscle model expansion accounting for effects of varying transverse muscle load. Journal of Biomechanics, 2018, 66, 57-62.	2.1	21
23	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
24	Design and control of compliantly actuated bipedal running robots: Concepts to exploit natural system dynamics. , 2014, , .		17
25	Posture alteration as a measure to accommodate uneven ground in able-bodied gait. PLoS ONE, 2017, 12, e0190135.	2.5	15
26	Analyzing Moment Arm Profiles in a Full-Muscle Rat Hindlimb Model. Biomimetics, 2019, 4, 10.	3.3	12
27	Minimizing the cost of locomotion with inclined trunk predicts crouched leg kinematics of small birds at realistic levels of elastic recoil. Journal of Experimental Biology, 2015, 219, 485-90.	1.7	11
28	Actuation in Legged Locomotion. , 2017, , 563-622.		10
29	Effects of altered sagittal trunk orientation on kinetic pattern in able-bodied walking on uneven ground. Biology Open, 2017, 6, 1000-1007.	1.2	9
30	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
31	Grounded Running: An Overlooked Strategy for Robots. Informatik Aktuell, 2012, , 79-87.	0.6	7
32	Low leg compliance permits grounded running at speeds where the inverted pendulum model gets airborne. Journal of Theoretical Biology, 2020, 494, 110227.	1.7	7
33	A simple geometrical model accounting for 3D muscle architectural changes across muscle lengths. Journal of Biomechanics, 2020, 103, 109694.	2.1	5
34	Computational modelling of muscle, tendon, and ligaments biomechanics. , 2021, , 155-186.		5
35	Dynamic bipedal walking by controlling only the equilibrium of intrinsic elasticities. , 2016, , .		4
36	Maximum striking velocities in strikes with steel rodsâ€"the influence of rod length, rod mass and volunteer parameters. International Journal of Legal Medicine, 2018, 132, 499-508.	2.2	4

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37	Force enhancement and stability of finite element muscle models. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 85-86.	0.2	3
38	Influence of striking technique on maximum striking velocitiesâ€"experimental and statistical investigation. International Journal of Legal Medicine, 2018, 132, 1341-1347.	2.2	2
39	Uneven running: How does trunkâ€leaning affect the lowerâ€limb joint mechanics and energetics?. European Journal of Sport Science, 2022, 22, 1188-1195.	2.7	2