# 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 | 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 | All leg joints contribute to quiet human stance: A mechanical analysis. Journal of Biomechanics, 2009, 42, 2739-2746. | 2.1 | 64 |
| 4 | Muscle force depends on the amount of transversal muscle loading. Journal of Biomechanics, 2014, 47, 1822-1828. | 2.1 | 63 |
| 5 | ELECTRO-MECHANICAL DELAY IN HILL-TYPE MUSCLE MODELS. Journal of Mechanics in Medicine and Biology, 2012, 12, 1250085. | 0.7 | 58 |
| 6 | 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 |
| 7 | 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 |
| 8 | 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 |
| 9 | 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 |
| 10 | Work partitioning of transversally loaded muscle: experimentation and simulation. Computer Methods in Biomechanics and Biomedical Engineering, 2014, 17, 217-229. | 1.6 | 51 |
| 11 | 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 |
| 12 | 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 |
| 13 | 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 |
| 14 | 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 |
| 15 | 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 |
| 16 | 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 |
| 17 | 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 |
| 18 | Muscle force compensation among synergistic muscles after fatigue of a single muscle. Human Movement Science, 2015, 42, 273-287. | 1.4 | 34 |

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|---|---|---|---|
| 19 | 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 |
| 20 | Fast and Powerful: Biomechanics and Bite Forces of the Mandibles in the American Cockroach Periplaneta americana. PLoS ONE, 2015, 10, e0141226. | 2.5 | 33 |
| 21 | 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 |
| 22 | 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 |
| 23 | 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 |
| 24 | 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 |
| 25 | Force reduction induced by unidirectional transversal muscle loading is independent of local pressure. Journal of Biomechanics, 2016, 49, 1156-1161. | 2.1 | 27 |
| 26 | Biomechanical and microstructural characterisation of the porcine stomach wall: Location- and layer-dependent investigations. Acta Biomaterialia, 2020, 102, 83-99. | 8.3 | 26 |
| 27 | ISOFIT: a model-based method to measure muscleâ€“tendon properties simultaneously. Biomechanics and Modeling in Mechanobiology, 2005, 4, 10-19. | 2.8 | 25 |
| 28 | 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 |
| 29 | Location-dependent correlation between tissue structure and the mechanical behaviour of the urinary bladder. Acta Biomaterialia, 2018, 75, 263-278. | 8.3 | 24 |
| 30 | 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 |
| 31 | A 3D-geometric model for the deformation of a transversally loaded muscle. Journal of Theoretical Biology, 2012, 298, 116-121. | 1.7 | 22 |
| 32 | 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 |
| 33 | Characterization of Electromechanical Delay Based on a Biophysical Multi-Scale Skeletal Muscle Model. Frontiers in Physiology, 2019, 10, 1270. | 2.8 | 22 |
| 34 | 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 |
| 35 | Intermuscular pressure between synergistic muscles correlates with muscle force. Journal of Experimental Biology, 2016, 219, 2311-2319. | 1.7 | 21 |
| 36 | A hill-type muscle model expansion accounting for effects of varying transverse muscle load. Journal of Biomechanics, 2018, 66, 57-62. | 2.1 | 21 |

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|---|---|---|---|
| 37 | 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 |
| 38 | 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 |
| 39 | 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 |
| 40 | Porcine Stomach Smooth Muscle Force Depends on History-Effects. Frontiers in Physiology, 2017, 8, 802. | 2.8 | 19 |
| 41 | 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 |
| 42 | 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 |
| 43 | 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 |
| 44 | On a three-dimensional constitutive model for history effects in skeletal muscles. Biomechanics and Modeling in Mechanobiology, 2019, 18, 1665-1681. | 2.8 | 17 |
| 45 | Passive and dynamic muscle architecture during transverse loading for gastrocnemius medialis in man. Journal of Biomechanics, 2019, 86, 160-166. | 2.1 | 17 |
| 46 | Does weightlifting increase residual force enhancement?. Journal of Biomechanics, 2016, 49, 2047-2052. | 2.1 | 16 |
| 47 | 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 |
| 48 | On a coupled electro-chemomechanical model of gastric smooth muscle contraction. Acta Biomaterialia, 2020, 109, 163-181. | 8.3 | 16 |
| 49 | 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 |
| 50 | Computational modeling of muscle biomechanics. , 2014, , 173-204. | | 15 |
| 51 | 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 |
| 52 | Locational and Directional Dependencies of Smooth Muscle Properties in Pig Urinary Bladder. Frontiers in Physiology, 2019, 10, 63. | 2.8 | 14 |
| 53 | Exhaustion of Skeletal Muscle Fibers Within Seconds: Incorporating Phosphate Kinetics Into a Hill-Type Model. Frontiers in Physiology, 2020, 11, 306. | 2.8 | 14 |
| 54 | Power Amplification Increases With Contraction Velocity During Stretch-Shortening Cycles of Skinned Muscle Fibers. Frontiers in Physiology, 2021, 12, 644981. | 2.8 | 13 |

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|---|---|---|---|
| 55 | 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 |
| 56 | Effects of Growth on Muscle, Tendon, and Aponeurosis Tissues in Rabbit Shank Musculature. Anatomical Record, 2017, 300, 1123-1136. | 1.4 | 12 |
| 57 | Alteration of synergistic muscle activity following neuromuscular electrical stimulation of one muscle. Brain and Behavior, 2012, 2, 640-646. | 2.2 | 11 |
| 58 | 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 |
| 59 | Strain in shock-loaded skeletal muscle and the time scale of muscular wobbling mass dynamics. Scientific Reports, 2017, 7, 13266. | 3.3 | 11 |
| 60 | Importance of contraction history on muscle force of porcine urinary bladder smooth muscle. International Urology and Nephrology, 2017, 49, 205-214. | 1.4 | 10 |
| 61 | Actuation in Legged Locomotion. , 2017, , 563-622. | | 10 |
| 62 | 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 |
| 63 | The pH heterogeneity in human calf muscle during neuromuscular electrical stimulation. Magnetic Resonance in Medicine, 2017, 77, 2097-2106. | 3.0 | 9 |
| 64 | Impact of transversal calf muscle loading on plantarflexion. Journal of Biomechanics, 2019, 85, 37-42. | 2.1 | 9 |
| 65 | 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 |
| 66 | Impact of Multidirectional Transverse Calf Muscle Loading on Calf Muscle Force in Young Adults. Frontiers in Physiology, 2018, 9, 1148. | 2.8 | 8 |
| 67 | 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 |
| 68 | Intraday and interday reliability of pelvic floor muscles electromyography in continent woman. Neurourology and Urodynamics, 2020, 39, 271-278. | 1.5 | 7 |
| 69 | Three-dimensional architecture of rabbit M. soleus during growth. Journal of Biomechanics, 2020, 112, 110054. | 2.1 | 7 |
| 70 | 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 |
| 71 | On the relevance of structure preservation to simulations of muscle actuated movements. Biomechanics and Modeling in Mechanobiology, 2012, 11, 543-556. | 2.8 | 6 |
| 72 | 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 |

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|---|---|---|---|
| 73 | 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 |
| 74 | 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 |
| 75 | A simple geometrical model accounting for 3D muscle architectural changes across muscle lengths. Journal of Biomechanics, 2020, 103, 109694. | 2.1 | 5 |
| 76 | Computational modelling of muscle, tendon, and ligaments biomechanics. , 2021, , 155-186. | | 5 |
| 77 | Architectural model for muscle growth during maturation. Biomechanics and Modeling in Mechanobiology, 2021, 20, 2031-2044. | 2.8 | 5 |
| 78 | Force depression decays during shortening in the medial gastrocnemius of the rat. Journal of Biomechanics, 2014, 47, 1099-1103. | 2.1 | 4 |
| 79 | The Effect of Multidirectional Loading on Contractions of the M. Medial Gastrocnemius. Frontiers in Physiology, 2020, 11, 601799. | 2.8 | 4 |
| 80 | Force enhancement and stability of finite element muscle models. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 85-86. | 0.2 | 3 |
| 81 | 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 |
| 82 | 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 |
| 83 | Age-dependent mechanical and microstructural properties of the rabbit soleus muscle. Acta Biomaterialia, 2021, 134, 453-465. | 8.3 | 3 |
| 84 | 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 |
| 85 | Cross-bridge mechanics estimated from skeletal musclesâ€™ work-loop responses to impacts in legged locomotion. Scientific Reports, 2021, 11, 23638. | 3.3 | 2 |
| 86 | 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 |
| 87 | Structure preserving simulation of muscle actuated movements. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 101-102. | 0.2 | 1 |
| 88 | 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 |
| 89 | 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 |
| 90 | 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 |

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|---|---|---|---|
| 91 | 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 |
| 92 | Passive muscle behaviour - experimental and numerical investigations. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 135-136. | 0.2 | 0 |
| 93 | Threeâ€dimensional reconstruction of M. gastrocnemius contraction. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 111-112. | 0.2 | 0 |
| 94 | Interpretation of pHâ€heterogeneity in human muscle induced by neuromuscular electrical stimulation. Magnetic Resonance in Medicine, 2017, 77, 466-466. | 3.0 | 0 |
| 95 | 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 |
| 96 | 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 |
| 97 | INFLUENCE OF MUSCLE COMPRESSION ON DYNAMIC MUSCLE PERFORMANCE. , 2016, , . | | 0 |