Benno M Nigg

List of Publications by Year
in descending order

109 papers	6,241 citations	76031 42 h-index	78623 77 g-index
113 all docs	113 docs citations	113 times ranked	3868 citing authors

#	Article	IF	Citations
1	Can changes in midsole bending stiffness of shoes affect the onset of joint work redistribution during a prolonged run?. Journal of Sport and Health Science, 2022, 11, 293-302.	3.3	19
2	Changes in ankle work, foot work, and tibialis anterior activation throughout a long run. Journal of Sport and Health Science, 2022, 11, 330-338.	3.3	5
3	Systematic reduction of leg muscle activity throughout a standard assessment of running footwear. Journal of Sport and Health Science, 2022, 11, 309-318.	3.3	4
4	Estimating Running Ground Reaction Forces from Plantar Pressure during Graded Running. Sensors, 2022, 22, 3338.	2.1	15
5	Addition of a Cognitive Task During Walking Alters Lower Body Muscle Activity. Motor Control, 2022, , 1-10.	0.3	0
6	Teeter-totter effect: a new mechanism to understand shoe-related improvements in long-distance running. British Journal of Sports Medicine, 2021, 55, 462-463.	3.1	31
7	Increasing the midsole bending stiffness of shoes alters gastrocnemius medialis muscle function during running. Scientific Reports, 2021, 11, 749.	1.6	28
8	The effects of shoe upper construction on mechanical ankle joint work during lateral shuffle movements. Journal of Sports Sciences, 2021, 39, 1-9.	1.0	3
9	Individuality decoded by running patterns: Movement characteristics that determine the uniqueness of human running. PLoS ONE, 2021, 16, e0249657.	1.1	14
10	Comparison of two coupling methods regarding coupling patterns, sensitivity to footwear and potential future injury applications. Journal of Biomechanics, 2021, 125, 110591.	0.9	0
11	Isolating the Unique and Generic Movement Characteristics of Highly Trained Runners. Sensors, 2021, 21, 7145.	2.1	2
12	Midsole Properties Affect the Amplitude of Soft Tissue Vibrations in Heelâ€"Toe Runners. Medicine and Science in Sports and Exercise, 2020, 52, 884-891.	0.2	5
13	Influence of running shoes on muscle activity. PLoS ONE, 2020, 15, e0239852.	1.1	9
14	Effects of running shoe construction on performance in long distance running. Footwear Science, 2020, 12, 133-138.	0.8	51
15	The Effects of Increased Midsole Bending Stiffness of Sport Shoes on Muscle-Tendon Unit Shortening and Shortening Velocity: a Randomised Crossover Trial in Recreational Male Runners. Sports Medicine - Open, 2020, 6, 9.	1.3	27
16	Influence of running shoes on muscle activity. , 2020, 15, e0239852.		0
17	Influence of running shoes on muscle activity. , 2020, 15, e0239852.		0
18	Influence of running shoes on muscle activity. , 2020, 15, e0239852.		0

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19	Influence of running shoes on muscle activity. , 2020, 15, e0239852.		0
20	Influence of running shoes on muscle activity. , 2020, 15, e0239852.		0
21	Influence of running shoes on muscle activity. , 2020, 15, e0239852.		0
22	Influence of running shoes on muscle activity. , 2020, 15, e0239852.		0
23	Does increased midsole bending stiffness of sport shoes redistribute lower limb joint work during running?. Journal of Science and Medicine in Sport, 2019, 22, 1272-1277.	0.6	36
24	Soft tissue vibration dynamics after an unexpected impact. Physiological Reports, 2019, 7, e13990.	0.7	8
25	The Submaximal Lateral Shuffle Test: A reliability and sensitivity analysis. Journal of Sports Sciences, 2019, 37, 2066-2074.	1.0	3
26	Classification of gait muscle activation patterns according to knee injury history using a support vector machine approach. Human Movement Science, 2019, 66, 335-346.	0.6	13
27	Quadriceps-hamstrings intermuscular coherence during single-leg squatting 3â€"12â€¯years following a youth sport-related knee injury. Human Movement Science, 2019, 66, 273-284.	0.6	3
28	Force measurements during running on different instrumented treadmills. Journal of Biomechanics, 2019, 84, 263-268.	0.9	11
29	The effect of torsional shoe sole stiffness on knee moment and gross efficiency in cycling. Journal of Sports Sciences, 2019, 37, 1457-1463.	1.0	5
30	The effects of midsole bending stiffness on ball speed during maximum effort soccer kicks. Footwear Science, 2019, 11, 153-160.	0.8	1
31	Influence of footwear comfort on the variability of running kinematics. Footwear Science, 2018, 10, 29-38.	0.8	20
32	Reliability of the knee muscle co-contraction index during gait in young adults with and without knee injury history. Journal of Electromyography and Kinesiology, 2018, 38, 17-27.	0.7	11
33	Intermuscular Coherence Between Surface EMG Signals Is Higher for Monopolar Compared to Bipolar Electrode Configurations. Frontiers in Physiology, 2018, 9, 566.	1.3	20
34	Age Effects in Postural Control Analyzed via a Principal Component Analysis of Kinematic Data and Interpreted in Relation to Predictions of the Optimal Feedback Control Theory. Frontiers in Aging Neuroscience, 2018, 10, 22.	1.7	48
35	Motor Unit Action Potential Clusteringâ€"Theoretical Consideration for Muscle Activation during a Motor Task. Frontiers in Human Neuroscience, 2018, 12, 15.	1.0	14
36	Beta, gamma band, and high-frequency coherence of EMGs of vasti muscles caused by clustering of motor units. Experimental Brain Research, 2018, 236, 3065-3075.	0.7	14

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37	A wavelet based time frequency analysis of electromyograms to group steps of runners into clusters that contain similar muscle activation patterns. PLoS ONE, 2018, 13, e0195125.	1.1	20
38	The Preferred Movement Path Paradigm. Medicine and Science in Sports and Exercise, 2017, 49, 1641-1648.	0.2	48
39	Older adults show higher increases in lower-limb muscle activity during whole-body vibration exercise. Journal of Biomechanics, 2017, 52, 55-60.	0.9	25
40	Intra-rater reliability of footwear-related comfort assessments. Footwear Science, 2016, 8, 155-163.	0.8	17
41	Soccer shoe bending stiffness significantly alters game-specific physiology in a 25-minute continuous field-based protocol. Footwear Science, 2016, 8, 83-90.	0.8	9
42	Changes in cortical activity measured with EEG during a high-intensity cycling exercise. Journal of Neurophysiology, 2016, 115, 379-388.	0.9	56
43	Measuring human locomotor control using EMG and EEG: Current knowledge, limitations and future considerations. European Journal of Sport Science, 2016, 16, 416-426.	1.4	31
44	Increased Vertical Impact Forces and Altered Running Mechanics with Softer Midsole Shoes. PLoS ONE, 2015, 10, e0125196.	1.1	80
45	Footwear Decreases Gait Asymmetry during Running. PLoS ONE, 2015, 10, e0138631.	1.1	21
46	The impact of previous knee injury on force plate and field-based measures of balance. Clinical Biomechanics, 2015, 30, 832-838.	0.5	12
47	An On-Ice Measurement Approach to Analyse the Biomechanics of Ice Hockey Skating. PLoS ONE, 2015, 10, e0127324.	1.1	51
48	Vibration transmission to lower extremity soft tissues during whole-body vibration. Journal of Biomechanics, 2014, 47, 2858-2862.	0.9	22
49	Quantification and reliability of center of pressure movement during balance tasks of varying difficulty. Gait and Posture, 2014, 40, 327-332.	0.6	43
50	The effects of preferred and non-preferred running strike patterns on tissue vibration properties. Journal of Science and Medicine in Sport, 2014, 17, 218-222.	0.6	25
51	Comparison of electromyographic signals from monopolar current and potential amplifiers derived from a penniform muscle, the gastrocnemius medialis. Journal of Electromyography and Kinesiology, 2013, 23, 1044-1051.	0.7	17
52	Speed-dependent variation in the Piper rhythm. Journal of Electromyography and Kinesiology, 2013, 23, 673-678.	0.7	19
53	Walking in an unstable Masai Barefoot Technology (MBT) shoe introduces kinematic and kinetic changes at the hip, knee and ankle before and after a 6-week accommodation period: a comprehensive analysis using principal component analysis (PCA). Footwear Science, 2012, 4, 101-114.	0.8	11
54	Quantification of the manifestations of fatigue during treadmill running. European Journal of Sport Science, 2012, 12, 418-424.	1.4	4

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55	Assessment of lower body toning with quantitative variables. Footwear Science, 2012, 4, 159-166.	0.8	1
56	Impact of Biomechanics Research on Society. Kinesiology Review, 2012, 1, 5-16.	0.4	3
57	Analysis of damped tissue vibrations in time-frequency space: A wavelet-based approach. Journal of Biomechanics, 2012, 45, 2855-2859.	0.9	29
58	Shoe midsole hardness, sex and age effects on lower extremity kinematics during running. Journal of Biomechanics, 2012, 45, 1692-1697.	0.9	112
59	Tissue vibration in prolonged running. Journal of Biomechanics, 2011, 44, 116-120.	0.9	38
60	Gender, age and midsole hardness effects on lower extremity muscle activity during running. Footwear Science, 2011, 3, 3-12.	0.8	11
61	Quantification of Soft-Tissue Vibrations in Running: Accelerometry versus High-Speed Motion Capture. Journal of Applied Biomechanics, 2010, 26, 367-372.	0.3	10
62	Gender differences in lower extremity gait biomechanics during walking using an unstable shoe. Clinical Biomechanics, 2010, 25, 1047-1052.	0.5	28
63	Eulogy. Footwear Science, 2009, 1, 3-4.	0.8	1
64	Resultant knee joint moments for lateral movement tasks on sliding and non-sliding sport surfaces. Journal of Sports Sciences, 2009, 27, 427-435.	1.0	25
65	The Effectiveness of an Unstable Sandal on Low Back Pain and Golf Performance. Clinical Journal of Sport Medicine, 2009, 19, 464-470.	0.9	41
66	Point:Counterpoint: Spectral properties of the surface EMG can characterize/do not provide information about motor unit recruitment strategies and muscle fiber type. Journal of Applied Physiology, 2008, 105, 1671-1673.	1.2	52
67	Changes in Muscle Activity in Response to Different Impact Forces Affect Soft Tissue Compartment Mechanical Properties. Journal of Biomechanical Engineering, 2007, 129, 594-602.	0.6	52
68	Quantification of the input signal for soft tissue vibration during running. Journal of Biomechanics, 2007, 40, 1877-1880.	0.9	28
69	Foot orthoses affect frequency components of muscle activity in the lower extremity. Gait and Posture, 2006, 23, 295-302.	0.6	73
70	Unstable Shoe Construction and Reduction of Pain in Osteoarthritis Patients. Medicine and Science in Sports and Exercise, 2006, 38, 1701-1708.	0.2	78
71	Soft tissue vibrations within one soft tissue compartment. Journal of Biomechanics, 2006, 39, 645-651.	0.9	43
72	Muscle Tuning During Running: Implications of an Un-tuned Landing. Journal of Biomechanical Engineering, 2006, 128, 815-822.	0.6	40

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73	Muscle activity in the leg is tuned in response to impact force characteristics. Journal of Biomechanics, 2004, 37, 1583-1588.	0.9	107
74	Consistent Immediate Effects of Foot Orthoses on Comfort and Lower Extremity Kinematics, Kinetics, and Muscle Activity. Journal of Applied Biomechanics, 2004, 20, 71-84.	0.3	34
75	Muscle activity reduces soft-tissue resonance at heel-strike during walking. Journal of Biomechanics, 2003, 36, 1761-1769.	0.9	131
76	Orthotic Comfort Is Related to Kinematics, Kinetics, and EMG in Recreational Runners. Medicine and Science in Sports and Exercise, 2003, 35, 1710-1719.	0.2	106
77	Effect of Shoe Inserts on Kinematics, Center of Pressure, and Leg Joint Moments during Running. Medicine and Science in Sports and Exercise, 2003, 35, 314-319.	0.2	119
78	Muscle activity damps the soft tissue resonance that occurs in response to pulsed and continuous vibrations. Journal of Applied Physiology, 2002, 93, 1093-1103.	1.2	191
79	Altering muscle activity in the lower extremities by running with different shoes. Medicine and Science in Sports and Exercise, 2002, 34, 1529-1532.	0.2	92
80	Development of a reliable method to assess footwear comfort during running. Gait and Posture, 2002, 16, 38-45.	0.6	211
81	The effect of changes in foot sensation on plantar pressure and muscle activity. Clinical Biomechanics, 2001, 16, 719-727.	0.5	230
82	Modification of soft tissue vibrations in the leg by muscular activity. Journal of Applied Physiology, 2001, 90, 412-420.	1.2	162
83	Muscle activity in the leg is tuned in response to ground reaction forces. Journal of Applied Physiology, 2001, 91, 1307-1317.	1.2	96
84	Relationship between footwear comfort of shoe inserts and anthropometric and sensory factors. Medicine and Science in Sports and Exercise, 2001, 33, 1939-1945.	0.2	182
85	The Role of Impact Forces and Foot Pronation: A New Paradigm. Clinical Journal of Sport Medicine, 2001, 11, 2-9.	0.9	346
86	Surface EMG shows distinct populations of muscle activity when measured during sustained sub-maximal exercise. European Journal of Applied Physiology, 2001, 86, 40-47.	1.2	81
87	Soft-tissue vibrations in the quadriceps measured with skin mounted transducers. Journal of Biomechanics, 2001, 34, 539-543.	0.9	66
88	The Effect of Axial Load on the In Vivo Anterior Drawer Test of the Ankle Joint Complex. Foot and Ankle International, 2000, 21, 420-426.	1.1	15
89	Influence of Foot, Leg and Shoe Characteristics on Subjective Comfort. Foot and Ankle International, 2000, 21, 759-767.	1.1	129
90	The effect of muscle stiffness and damping on simulated impact force peaks during running. Journal of Biomechanics, 1999, 32, 849-856.	0.9	178

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91	Shoe inserts and orthotics for sport and physical activities. Medicine and Science in Sports and Exercise, 1999, 31, S421-S428.	0.2	221
92	Pronation in Runners. Sports Medicine, 1998, 26, 169-176.	3.1	145
93	Prevention of Ankle Injuries. Sports Medicine, 1998, 26, 59-59.	3.1	1
94	Effect of shoe insert construction on foot and leg movement. Medicine and Science in Sports and Exercise, 1998, 30, 550-555.	0.2	85
95	Impact forces in running. Current Opinion in Orthopaedics, 1997, 8, 43-47.	0.3	76
96	Influence of Ankle Ligaments on Tibial Rotation: An In Vitro Study. Foot and Ankle International, 1996, 17, 79-84.	1.1	30
97	Influence of Arthrodeses on Kinematics of the Axially Loaded Ankle Complex during Dorsiflexion/Plantarflexion. Foot and Ankle International, 1995, 16, 633-636.	1.1	46
98	Direct dynamics simulation of the impact phase in heel-toe running. Journal of Biomechanics, 1995, 28, 661-668.	0.9	256
99	Influence of Ligament Transection on Tibial and Calcaneal Rotation with Loading and Dorsi-Plantarflexion. Foot and Ankle International, 1995, 16, 567-571.	1.1	56
100	Foot Movement and Tendon Excursion: An In Vitro Study. Foot and Ankle International, 1994, 15, 386-395.	1.1	116
101	In vivo determination of the anatomical axes of the ankle joint complex: An optimization approach. Journal of Biomechanics, 1994, 27, 1477-1488.	0.9	172
102	Effects of arch height of the foot on angular motion of the lower extremities in running. Journal of Biomechanics, 1993, 26, 909-916.	0.9	234
103	Mechanical analysis of the landing phase in heel-toe running. Journal of Biomechanics, 1992, 25, 223-234.	0.9	132
104	Calculation of vertical ground reaction force estimates during running from positional data. Journal of Biomechanics, 1991, 24, 1095-1105.	0.9	138
105	Surface-Related Injuries in Soccer. Sports Medicine, 1989, 8, 56-62.	3.1	151
106	Biomechanics of running shoes. Journal of Biomechanics, 1988, 21, 887.	0.9	35
107	Editorial. Journal of Sports Sciences, 1987, 5, 185-186.	1.0	0
108	Biomechanical aspects of playing surfaces. Journal of Sports Sciences, 1987, 5, 117-145.	1.0	160

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109	Biomechanics, Load Analysis and Sports Injuries in the Lower Extremities. Sports Medicine, 1985, 2, 367-379.	3.1	110