

# Joseph Mizrahi

## List of Publications by Year in descending order

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98  
papers

3,755  
citations

117453

34  
h-index

133063

59  
g-index

100  
all docs

100  
docs citations

100  
times ranked

3060  
citing authors

#	ARTICLE	IF	CITATIONS
1	Differential Response of Adult and Embryonic Mesenchymal Progenitor Cells to Mechanical Compression in Hydrogels. <i>Stem Cells</i> , 2007, 25, 2730-2738.	1.4	208
2	The increased swelling and instantaneous deformation of osteoarthritic cartilage is highly correlated with collagen degradation. <i>Arthritis and Rheumatism</i> , 2000, 43, 2202-2210.	6.7	195
3	Effect of fatigue on leg kinematics and impact acceleration in long distance running. <i>Human Movement Science</i> , 2000, 19, 139-151.	0.6	168
4	Joint torques during sit-to-stand in healthy subjects and people with Parkinson's disease. <i>Clinical Biomechanics</i> , 2003, 18, 197-206.	0.5	159
5	Fatigue-Related Loading Imbalance on the Shank in Running: A Possible Factor in Stress Fractures. <i>Annals of Biomedical Engineering</i> , 2000, 28, 463-469.	1.3	132
6	Recruitment, force and fatigue characteristics of quadriceps muscles of paraplegics isometrically activated by surface functional electrical stimulation. <i>Journal of Biomedical Engineering</i> , 1990, 12, 150-156.	0.7	126
7	The "instantaneous" deformation of cartilage: Effects of collagen fiber orientation and osmotic stress. <i>Biorheology</i> , 1986, 23, 311-330.	1.2	120
8	The Dynamics of the Subtalar Joint in Sudden Inversion of the Foot. <i>Journal of Biomechanical Engineering</i> , 1990, 112, 9-14.	0.6	117
9	A biomechanical model of index finger dynamics. <i>Medical Engineering and Physics</i> , 1995, 17, 54-63.	0.8	109
10	Postural stability in stroke patients: Vectorial expression of asymmetry, sway activity and relative sequence of reactive forces. <i>Medical and Biological Engineering and Computing</i> , 1989, 27, 181-190.	1.6	97
11	Dynamic loading on the human musculoskeletal system " effect of fatigue. <i>Clinical Biomechanics</i> , 1998, 13, 515-520.	0.5	97
12	The Relationship Between Bone Density, Mineral Content, and Mechanical Strength in the Femoral Neck. <i>Clinical Orthopaedics and Related Research</i> , 1982, &NA; 272-281.	0.7	96
13	A musculotendon model of the fatigue profiles of paralyzed quadriceps muscle under FES. <i>IEEE Transactions on Biomedical Engineering</i> , 1993, 40, 664-674.	2.5	89
14	Shock accelerations and attenuation in downhill and level running. <i>Clinical Biomechanics</i> , 2000, 15, 15-20.	0.5	81
15	Analysis of Parameters Affecting Impact Force Attenuation during Landing in Human Vertical Free Fall. <i>Engineering in Medicine</i> , 1982, 11, 141-147.	0.6	80
16	Response of the Peroneal Muscles to Sudden Inversion of the Ankle during Standing. <i>International Journal of Sport Biomechanics</i> , 1986, 2, 100-109.	2.0	80
17	Shock Transmission and Fatigue in Human Running. <i>Journal of Applied Biomechanics</i> , 1998, 14, 300-311.	0.3	79
18	Finite-Element Stress Analysis of the Normal and Osteoporotic Lumbar Vertebral Body. <i>Spine</i> , 1993, 18, 2088-2096.	1.0	77

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19	In-Vivo Elastic and Damping Response of the Human Leg to Impact Forces. Journal of Biomechanical Engineering, 1982, 104, 63-66.	0.6	65
20	The differential effect of scaffold composition and architecture on chondrocyte response to mechanical stimulation. Biomaterials, 2009, 30, 518-525.	5.7	64
21	Constant and Variable Stiffness and Damping of the Leg Joints in Human Hopping. Journal of Biomechanical Engineering, 2003, 125, 507-514.	0.6	62
22	Fatigue-induced changes in decline running. Clinical Biomechanics, 2001, 16, 207-212.	0.5	56
23	The influence of biological motifs and dynamic mechanical stimulation in hydrogel scaffold systems on the phenotype of chondrocytes. Biomaterials, 2011, 32, 1508-1516.	5.7	56
24	Title is missing!. Journal of Medical and Biological Engineering, 2011, 31, 1.	1.0	54
25	EMG as an indicator of fatigue in isometrically FES-activated paralyzed muscles. IEEE Transactions on Rehabilitation Engineering: A Publication of the IEEE Engineering in Medicine and Biology Society, 1994, 2, 57-65.	1.4	53
26	Immobilized fibrinogen in PEG hydrogels does not improve chondrocyte-mediated matrix deposition in response to mechanical stimulation. Biotechnology and Bioengineering, 2006, 95, 1061-1069.	1.7	50
27	Some Gait Characteristics of Below-Knee Amputees and Their Reflection on the Ground Reaction Forces. Engineering in Medicine, 1986, 15, 27-34.	0.6	49
28	Stimulus artefact suppressor for EMG recording during FES by a constant-current stimulator. Medical and Biological Engineering and Computing, 1993, 31, 72-75.	1.6	48
29	Fatigue in Muscles Activated by Functional Electrical Stimulation. Critical Reviews in Physical and Rehabilitation Medicine, 1997, 9, 93-129.	0.1	46
30	Simulation of distal tendon transfer of the biceps brachii and the brachialis muscles. Journal of Biomechanics, 1994, 27, 1005-1014.	0.9	44
31	A Model of Fatigue and Recovery in Paraplegic's Quadriceps Muscle Subjected to Intermittent FES. Journal of Biomechanical Engineering, 1996, 118, 357-366.	0.6	41
32	Injuries in attempted suicide by jumping from a height. Injury, 1988, 19, 371-374.	0.7	37
33	Muscle fatigue in interrupted stimulation: Effect of partial recovery on force and EMG dynamics. Journal of Electromyography and Kinesiology, 1997, 7, 51-65.	0.7	36
34	Influence of prosthesis alignment on the standing balance of below-knee amputees. Clinical Biomechanics, 1994, 9, 258-262.	0.5	35
35	Effect of ingested sodium bicarbonate on muscle force, fatigue, and recovery. Journal of Applied Physiology, 1997, 83, 333-337.	1.2	34
36	Objective expression of gait improvement of hemiplegics during rehabilitation by time-distance parameters of the stride. Medical and Biological Engineering and Computing, 1982, 20, 628-634.	1.6	33

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37	In vivo <sup>31</sup> P NMR studies of paraplegics' muscles activated by functional electrical stimulation. <i>Magnetic Resonance in Medicine</i> , 1993, 29, 53-58.	1.9	33
38	Quantitative weightbearing and gait evaluation of paraplegics using functional electrical stimulation. <i>Medical and Biological Engineering and Computing</i> , 1985, 23, 101-107.	1.6	32
39	An iterative model for estimation of the trajectory of center of gravity from bilateral reactive force measurements in standing sway. <i>Gait and Posture</i> , 1996, 4, 89-99.	0.6	32
40	Interaction of array of finite electrodes with layered biological tissue: effect of electrode size and configuration. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2001, 9, 355-361.	2.7	32
41	Mechanical Impedance and Its Relations to Motor Control, Limb Dynamics, and Motion Biomechanics. <i>Journal of Medical and Biological Engineering</i> , 2015, 35, 1-20.	1.0	32
42	Finite element stress analysis of simulated metastatic lesions in the lumbar vertebral body. <i>Journal of Biomedical Engineering</i> , 1992, 14, 467-475.	0.7	31
43	An experimental method for investigating load distribution in the cadaveric human hip. <i>Journal of Bone and Joint Surgery: British Volume</i> , 1981, 63-B, 610-613.	3.4	30
44	Bi-lateral reactive force patterns in postural sway activity of normal subjects. <i>Biological Cybernetics</i> , 1989, 60, 297-305.	0.6	30
45	Investigation of load transfer and optimum pin configuration in the internal fixation, by Muller screws, of fractured femoral necks. <i>Medical and Biological Engineering and Computing</i> , 1980, 18, 319-325.	1.6	29
46	Evaluation of methods for extraction of the volitional EMG in dynamic hybrid muscle activation. <i>Journal of NeuroEngineering and Rehabilitation</i> , 2006, 3, 27.	2.4	28
47	Muscle enhancement using closed-loop electrical stimulation: Volitional versus induced torque. <i>Journal of Electromyography and Kinesiology</i> , 2007, 17, 275-284.	0.7	28
48	Fracture of the human femoral neck: Effect of density of the cancellous core. <i>Journal of Biomedical Engineering</i> , 1984, 6, 56-62.	0.7	24
49	Computer-controlled portable stimulator for paraplegic patients. <i>Journal of Biomedical Engineering</i> , 1993, 15, 333-338.	0.7	23
50	Effect of selective fatiguing of the shank muscles on single-leg-standing sway. <i>Journal of Electromyography and Kinesiology</i> , 2008, 18, 682-689.	0.7	23
51	A Finite Element Model of Cell-Matrix Interactions to Study the Differential Effect of Scaffold Composition on Chondrogenic Response to Mechanical Stimulation. <i>Journal of Biomechanical Engineering</i> , 2011, 133, 041010.	0.6	23
52	Real-time Monitoring of Force Response Measured in Mechanically Stimulated Tissue-engineered Cartilage. <i>Artificial Organs</i> , 2009, 33, 318-327.	1.0	21
53	Rigorous image-series expansions of quasi-static Green's functions for regions with planar stratification. <i>IEEE Transactions on Antennas and Propagation</i> , 2002, 50, 1813-1823.	3.1	19
54	Partition Between Volitional and Induced Forces in Electrically Augmented Dynamic Isometric Muscle Contractions. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2006, 14, 322-335.	2.7	19

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55	Enhancement of Muscle Activity by Electrical Stimulation in Cerebral Palsy: A Caseâ€”Control Study. <i>Journal of Child Neurology</i> , 2008, 23, 259-267.	0.7	19
56	Transcutaneous FES of the paralyzed quadriceps:. <i>Journal of Electromyography and Kinesiology</i> , 2000, 10, 47-58.	0.7	18
57	Current Distribution in Skeletal Muscle Activated by Functional Electrical Stimulation: Image-Series Formulation and Isometric Recruitment Curve. <i>Annals of Biomedical Engineering</i> , 2000, 28, 1218-1228.	1.3	18
58	Rigorous Green's function formulation for transmembrane potential induced along a 3-D infinite cylindrical cell. <i>IEEE Transactions on Biomedical Engineering</i> , 2002, 49, 1491-1503.	2.5	18
59	Fibrinogenâ€”Based Hydrogel Modulus and Ligand Density Effects on Cell Morphogenesis in Twoâ€”Dimensional and Threeâ€”Dimensional Cell Cultures. <i>Advanced Healthcare Materials</i> , 2019, 8, 1801436.	3.9	16
60	Isotropy and anisotropy of uterine muscle during labor contraction. <i>Journal of Biomechanics</i> , 1980, 13, 211-218.	0.9	15
61	Standing sway: iterative estimation of the kinematics and dynamics of the lower extremities from force-plate measurements. <i>Biological Cybernetics</i> , 1998, 78, 319-327.	0.6	15
62	Alignment procedure for the optimal fitting of lower limb prostheses. <i>Journal of Biomedical Engineering</i> , 1986, 8, 229-234.	0.7	14
63	Predicted and Measured Muscle Forces after Recoveries of Differing Durations Following Fatigue in Functional Electrical Stimulation. <i>Artificial Organs</i> , 1997, 21, 236-239.	1.0	14
64	EMG and metabolite-based prediction of force in paralyzed quadriceps muscle under interrupted stimulation. <i>IEEE Transactions on Rehabilitation Engineering: A Publication of the IEEE Engineering in Medicine and Biology Society</i> , 1999, 7, 301-314.	1.4	14
65	Generalized Cable Equation Model for Myelinated Nerve Fiber. <i>IEEE Transactions on Biomedical Engineering</i> , 2005, 52, 1632-1642.	2.5	13
66	The control of genu recurvatum by combining the Swedish knee-cage and an ankle â€” foot brace. <i>Disability and Rehabilitation</i> , 1992, 14, 187-191.	0.9	12
67	An experimental analysis of the stresses at the surface of Charnley hip prostheses in different anatomical positions. <i>Journal of Biomechanics</i> , 1979, 12, 491-500.	0.9	9
68	Neuro-mechanical aspects of playing-related mobility disorders in orchestra violinists and upper strings players: a review. <i>European Journal of Translational Myology</i> , 2020, 30, 9095.	0.8	9
69	STRAIN LTEROGRAPHY IN LABOUR. <i>BJOG: an International Journal of Obstetrics and Gynaecology</i> , 1977, 84, 930-936.	1.1	8
70	Editorial. <i>Journal of Electromyography and Kinesiology</i> , 1997, 7, 1-2.	0.7	8
71	Biomechanical Sway Measurements in the Evaluation of Stroke Patients1. <i>NeuroRehabilitation</i> , 1992, 2, 27-35.	0.5	7
72	Standing posture of craniocerebral injured patients: bi-lateral reactive force patterns. <i>Clinical Physics and Physiological Measurement: an Official Journal of the Hospital Physicists' Association, Deutsche Gesellschaft Fur Medizinische Physik and the European Federation of Organisations for Medical Physics</i> , 1989, 10, 25-37.	0.5	6

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73	A Swedish knee-cage for stabilizing short below-knee stumps. <i>Prosthetics and Orthotics International</i> , 1992, 16, 114-117.	0.5	6
74	Methods for Dynamic Characterization of the Major Muscles Activating the Lower Limb Joints in Cycling Motion. <i>European Journal of Translational Myology</i> , 2014, 24, 3317.	0.8	6
75	Partial Immobilization of the Ankle and Talar Joints Complex and its Effect on the Ground-Foot Force Characteristics. <i>Engineering in Medicine</i> , 1984, 13, 5-10.	0.6	5
76	Objective measurement of knee extension force based on computer adaptive testing. <i>Journal of Electromyography and Kinesiology</i> , 2007, 17, 41-48.	0.7	5
77	Minimization of the gliding index: Criterion for the generation of the surfaces of a knee endoprosthesis. <i>Journal of Biomechanics</i> , 1987, 20, 851-862.	0.9	4
78	Bilateral Postural Sway in Stroke Patients: New Parameters for Assessing and Predicting Locomotor Outcome. <i>Neurorehabilitation and Neural Repair</i> , 1991, 5, 175-179.	1.4	4
79	Muscle Strength and Geometrical Changes in A Paralysed Muscle Following FES. <i>Hong Kong Physiotherapy Journal</i> , 2000, 18, 3-11.	0.3	4
80	Reduction of Lower Limb Model Indeterminacy by Force Redundancy in Sit-to-Stand Motion. <i>Journal of Applied Biomechanics</i> , 2004, 20, 95-102.	0.3	4
81	Muscle Force Augmentation by Low-Intensity Electrical Stimulation. , 2005, 2005, 5808-11.		4
82	Open-chain analysis of single stance. <i>Journal of Automatic Control</i> , 2002, 12, 46-55.	1.0	4
83	A kinematic analysis of uterine deformation during labor. <i>Journal of the Franklin Institute</i> , 1978, 306, 119-132.	1.9	3
84	FES system for self-activation: an electrical stimulator and instrumented walker. <i>Clinical Rehabilitation</i> , 1993, 7, 39-44.	1.0	3
85	Methods for dynamic characterization of the major muscles activating the lower limb joints in cycling motion. <i>European Journal of Translational Myology</i> , 2014, 24, .	0.8	3
86	IMAGE THEORY AND APPLICATIONS IN BIOELECTROMAGNETICS. , 2006, , 315-357.		2
87	Mechanical Impedance Control in the Human Arm While Manually Transporting an Open-Top Fluid Filled Dish. <i>Applied Bionics and Biomechanics</i> , 2011, 8, 429-440.	0.5	2
88	Identifying and Evaluating Vocation-Related Neuro-Musculoskeletal Deficiencies in Professional Musicians: A Review. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 2035.	1.3	1
89	Point strain measurement of the pulse. <i>Journal of Medical Engineering and Technology</i> , 1980, 4, 294-295.	0.8	0
90	Self-generated dynamic signals for the control of two-degree of freedom artificial arms. , 0, , .		0

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91	Weight-bearing patterns on the knees of preterm infants. Medical Engineering and Physics, 1998, 20, 625-628.	0.8	0
92	Transmission-Line Model for Myelinated Nerve Fiber. , 2005, 2005, 4231-4.		0
93	Dr. Nisim Benjuya November 21, 1954â€“May 23, 2008. Journal of Electromyography and Kinesiology, 2008, 18, 705-706.	0.7	0
94	Review on Fatigue in Muscles by Functional Electrical Stimulation. Critical Reviews in Physical and Rehabilitation Medicine, 2017, 29, 91-127.	0.1	0
95	Special Issue â€œOrthopaedic and Rehabilitation Engineeringâ€ Applied Sciences (Switzerland), 2020, 10, 3556.	1.3	0
96	Modulation of Impedance and Muscle Activation of the Upper Limb Joints while Simultaneously Controlling Manual-grasping and Walking. , 2017, , .		0
97	Muscle Force Assessment in the Presence of Indeterminate Deficiency. , 2019, , .		0
98	Neuro-mechanical aspects of playing-related mobility disorders in orchestra violinists and upper strings players: a review. European Journal of Translational Myology, 0, , .	0.8	0