

# Dejan B Popovic

## List of Publications by Year in descending order

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Version: 2024-02-01

131  
papers

3,632  
citations

117625

34  
h-index

144013

57  
g-index

136  
all docs

136  
docs citations

136  
times ranked

2607  
citing authors

#	ARTICLE	IF	CITATIONS
1	Automatic recognition of alertness and drowsiness from EEG by an artificial neural network. Medical Engineering and Physics, 2002, 24, 349-360.	1.7	176
2	Neuroprostheses for grasping. Neurological Research, 2002, 24, 443-452.	1.3	149
3	Clinical evaluation of Functional Electrical Therapy in acute hemiplegic subjects. Journal of Rehabilitation Research and Development, 2003, 40, 443.	1.6	140
4	A multi-pad electrode based functional electrical stimulation system for restoration of grasp. Journal of NeuroEngineering and Rehabilitation, 2012, 9, 66.	4.6	130
5	Optimal control of walking with functional electrical stimulation: a computer simulation study. IEEE Transactions on Rehabilitation Engineering: A Publication of the IEEE Engineering in Medicine and Biology Society, 1999, 7, 69-79.	1.4	124
6	Advances in functional electrical stimulation (FES). Journal of Electromyography and Kinesiology, 2014, 24, 795-802.	1.7	124
7	Cortical excitability changes following grasping exercise augmented with electrical stimulation. Experimental Brain Research, 2008, 191, 57-66.	1.5	118
8	Clinical evaluation of the bionic glove. Archives of Physical Medicine and Rehabilitation, 1999, 80, 299-304.	0.9	108
9	Electrical stimulation for the suppression of pathological tremor. Medical and Biological Engineering and Computing, 2011, 49, 1187-1193.	2.8	103
10	Therapy of paretic arm in hemiplegic subjects augmented with a neural prosthesis: A cross-over study. Canadian Journal of Physiology and Pharmacology, 2004, 82, 749-756.	1.4	101
11	Distributed low-frequency functional electrical stimulation delays muscle fatigue compared to conventional stimulation. Muscle and Nerve, 2010, 42, 556-562.	2.2	98
12	Three machine learning techniques for automatic determination of rules to control locomotion. IEEE Transactions on Biomedical Engineering, 1999, 46, 300-310.	4.2	97
13	Cognitive vision system for control of dexterous prosthetic hands: Experimental evaluation. Journal of NeuroEngineering and Rehabilitation, 2010, 7, 42.	4.6	96
14	Stereovision and augmented reality for closed-loop control of grasping in hand prostheses. Journal of Neural Engineering, 2014, 11, 046001.	3.5	95
15	Sensor fusion and computer vision for context-aware control of a multi degree-of-freedom prosthesis. Journal of Neural Engineering, 2015, 12, 066022.	3.5	89
16	Multi-Field Surface Electrode for Selective Electrical Stimulation. Artificial Organs, 2005, 29, 448-452.	1.9	88
17	Restitution of Reaching and Grasping Promoted by Functional Electrical Therapy. Artificial Organs, 2002, 26, 271-275.	1.9	84
18	Kinematics of Gait: New Method for Angle Estimation Based on Accelerometers. Sensors, 2011, 11, 10571-10585.	3.8	74

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19	Electrical stimulation as a means for achieving recovery of function in stroke patients. <i>NeuroRehabilitation</i> , 2009, 25, 45-58.	1.3	72
20	Automatic determination of the optimal shape of a surface electrode: Selective stimulation. <i>Journal of Neuroscience Methods</i> , 2009, 178, 174-181.	2.5	69
21	Cloning biological synergies improves control of elbow neuroprostheses. <i>IEEE Engineering in Medicine and Biology Magazine</i> , 2001, 20, 74-81.	0.8	60
22	Surface-á distributed low-á frequency asynchronous stimulation delays fatigue of stimulated muscles. <i>Muscle and Nerve</i> , 2013, 48, 930-937.	2.2	60
23	Properties of implanted electrodes for functional electrical stimulation. <i>Annals of Biomedical Engineering</i> , 1991, 19, 303-316.	2.5	59
24	Control aspects of active above-knee prosthesis. <i>International Journal of Man-Machine Studies</i> , 1991, 35, 751-767.	0.7	54
25	Multi-Pad Electrode for Effective Grasping: Design. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2013, 21, 648-654.	4.9	54
26	Automatic vs hand-controlled walking of paraplegics. <i>Medical Engineering and Physics</i> , 2003, 25, 63-73.	1.7	51
27	Control of a Robotic Hand Using a Tongue Control System-á A Prosthesis Application. <i>IEEE Transactions on Biomedical Engineering</i> , 2016, 63, 1368-1376.	4.2	51
28	Sensor-driven four-channel stimulation of paretic leg: Functional electrical walking therapy. <i>Journal of Neuroscience Methods</i> , 2009, 181, 100-105.	2.5	47
29	Feedback error learning neural network for trans-femoral prosthesis. <i>IEEE Transactions on Rehabilitation Engineering: A Publication of the IEEE Engineering in Medicine and Biology Society</i> , 2000, 8, 71-80.	1.4	46
30	Wearable Neural Prostheses. <i>IEEE Engineering in Medicine and Biology Magazine</i> , 2010, 29, 64-69.	0.8	42
31	Neurorehabilitation of Upper Extremities in Humans with Sensory-Motor Impairment. <i>Neuromodulation</i> , 2002, 5, 54-66.	0.8	41
32	Principal Component Analysis of Gait Kinematics Data in Acute and Chronic Stroke Patients. <i>Computational and Mathematical Methods in Medicine</i> , 2012, 2012, 1-8.	1.3	41
33	Functional postural responses after perturbations in multiple directions in a standing man: a principle of decoupled control. <i>Journal of Biomechanics</i> , 2001, 34, 187-196.	2.1	38
34	Transradial Prosthesis: Artificial Vision for Control of Prehension. <i>Artificial Organs</i> , 2011, 35, 37-48.	1.9	35
35	Walkaround: Mobile Balance Support for Therapy of Walking. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2008, 16, 264-269.	4.9	31
36	Protective effects of anthocyanins from bilberry extract in rats exposed to nephrotoxic effects of carbon tetrachloride. <i>Chemico-Biological Interactions</i> , 2019, 304, 61-72.	4.0	31

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37	Chapter 35 Finite state model of locomotion for functional electrical stimulation systems. Progress in Brain Research, 1993, 97, 397-407.	1.4	30
38	Functional Electrical Therapy (FET): Clinical Trial in Chronic Hemiplegic Subjects. Neuromodulation, 2004, 7, 133-140.	0.8	30
39	Antioxidant and proapoptotic effects of anthocyanins from bilberry extract in rats exposed to hepatotoxic effects of carbon tetrachloride. Life Sciences, 2016, 157, 168-177.	4.3	30
40	A soft wearable robot for tremor assessment and suppression. , 2011, , .		29
41	New controller for functional electrical stimulation systems. Medical Engineering and Physics, 2001, 23, 391-399.	1.7	27
42	Wireless distributed functional electrical stimulation system. Journal of NeuroEngineering and Rehabilitation, 2012, 9, 54.	4.6	27
43	Anthocyanins Protect Hepatocytes against CCl4-Induced Acute Liver Injury in Rats by Inhibiting Pro-inflammatory mediators, Polyamine Catabolism, Lipocalin-2, and Excessive Proliferation of Kupffer Cells. Antioxidants, 2019, 8, 451.	5.1	27
44	Functional Electrical Therapy for Hemiparesis Alleviates Disability and Enhances Neuroplasticity. Tohoku Journal of Experimental Medicine, 2011, 225, 71-76.	1.2	26
45	Accelerometers and Force Sensing Resistors for Optimal Control of Walking of a Hemiplegic. IEEE Transactions on Biomedical Engineering, 2008, 55, 1973-1984.	4.2	25
46	Nonlinear optimization for drift removal in estimation of gait kinematics based on accelerometers. Journal of Biomechanics, 2012, 45, 2849-2854.	2.1	20
47	Controlling hand-assistive devices: utilizing electrooculography as a substitute for vision. IEEE Robotics and Automation Magazine, 2013, 20, 40-52.	2.0	20
48	Assessment of Spasticity by a Pendulum Test in SCI Patients Who Exercise FES Cycling or Receive Only Conventional Therapy. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 181-187.	4.9	19
49	Posture in dentists: Sitting vs. standing positions during dentistry work - an EMG study. Srpski Arhiv Za Celokupno Lekarstvo, 2016, 144, 181-187.	0.2	19
50	E Actitrode: The new selective stimulation interface for functional movements in hemiplegics patients. Serbian Journal of Electrical Engineering, 2004, 1, 21-28.	0.4	19
51	Moving-Window Dynamic Optimization: Design of Stimulation Profiles for Walking. IEEE Transactions on Biomedical Engineering, 2009, 56, 1298-1309.	4.2	18
52	Stimulation map for control of functional grasp based on multi-channel EMG recordings. Medical Engineering and Physics, 2016, 38, 1251-1259.	1.7	18
53	Symmetry of post-movement beta-ERS and motor recovery from stroke: a low-resolution EEG pilot study. European Journal of Neurology, 2006, 13, 1312-1323.	3.3	17
54	The Drawing Test: Assessment of coordination abilities and correlation with clinical measurement of spasticity. Archives of Physical Medicine and Rehabilitation, 2005, 86, 289-295.	0.9	15

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55	Recovery of motor function after stroke: A polymyography-based analysis. Journal of Neuroscience Methods, 2011, 194, 321-328.	2.5	15
56	Control of arm movement: reaching synergies for neuroprosthesis with life-like control. Journal of Automatic Control, 2002, 12, 9-15.	1.0	15
57	Advances in the use of electrical stimulation for the recovery of motor function. Progress in Brain Research, 2011, 194, 215-225.	1.4	14
58	Learning Arm/Hand Coordination with an Altered Visual Input. Computational Intelligence and Neuroscience, 2010, 2010, 1-12.	1.7	13
59	Microsoft Kinect-Based Artificial Perception System for Control of Functional Electrical Stimulation Assisted Grasping. BioMed Research International, 2014, 2014, 1-12.	1.9	13
60	Control of prehension for the transradial prosthesis: Natural-like image recognition system. Journal of Automatic Control, 2009, 19, 27-31.	1.0	12
61	Kinect in neurorehabilitation: Computer vision system for real time hand and object detection and distance estimation. , 2012, , .		11
62	EMG map image processing for recognition of fingers movement. Journal of Electromyography and Kinesiology, 2019, 49, 102364.	1.7	11
63	Two different melatonin treatment regimens prevent an increase in kidney injury marker-1 induced by carbon tetrachloride in rat kidneys. Canadian Journal of Physiology and Pharmacology, 2019, 97, 422-428.	1.4	11
64	Hybrid Assistive Systems for Rehabilitation: Lessons Learned from Functional Electrical Therapy in Hemiplegics. , 2006, 2006, 2146-9.		10
65	Influence of planar manipulandum to the hand trajectory during point to point movement. , 2011, 2011, 5975396.		10
66	Variable structure systems for control of redundant robot. Robotics and Autonomous Systems, 1994, 13, 13-24.	5.1	9
67	Central nervous system lesions leading to disability. Journal of Automatic Control, 2008, 18, 11-23.	1.0	8
68	Neural prostheses for walking restoration. Journal of Automatic Control, 2008, 18, 63-71.	1.0	8
69	A Novel Hand Prosthesis Control Scheme Implementing a Tongue Control System. International Journal of Engineering and Manufacturing, 2012, 2, 14-21.	0.7	8
70	Neurorehabilitation Technologies â€“ Present and Future Possibilities. NeuroRehabilitation, 2009, 25, 1-3.	1.3	7
71	Guest Editorial Motor Skill Learning and Neuro-Rehabilitation. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2012, 20, 237-238.	4.9	7
72	Automatic synthesis of synergies for control of reaching â€” hierarchical clustering. Medical Engineering and Physics, 1999, 21, 329-341.	1.7	6

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73	Peripheral nerve stimulation in neurological rehabilitation. , 0, , .		6
74	Life-like Control for Neural Prostheses: "Proximal Controls Distal". , 2005, 2005, 7648-51.		6
75	Lumbar Stimulation Belt for Therapy of Low Back Pain. Artificial Organs, 2009, 33, 54-60.	1.9	6
76	An EMG system for studying motor control strategies and fatigue. , 2010, , .		6
77	A method for assessing the arm movement performance: probability tube. Medical and Biological Engineering and Computing, 2013, 51, 1315-1323.	2.8	6
78	A principal component analysis (PCA) based assessment of the gait performance. Biomedizinische Technik, 2021, 66, 449-457.	0.8	6
79	Optiwalk. Un nouvel outil pour la conception et la simulation de lois de commande pour le contrôle de la marche de patients atteints de déficits moteurs. Journal European Des Systemes Automatises, 2007, 41, 239-259.	0.4	6
80	Control of the Lower Leg During Walking: A Versatile Model of the Foot. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2009, 17, 63-69.	4.9	5
81	Does galvanic vestibular stimulation decrease spasticity in clinically complete spinal cord injury?. International Journal of Rehabilitation Research, 2018, 41, 251-257.	1.3	5
82	New scale for assessing spasticity based on the pendulum test. Computer Methods in Biomechanics and Biomedical Engineering, 2021, , 1-10.	1.6	5
83	Kinematic redundancy and sensor redundancy for enhancement of robot tracking performance. Journal of Intelligent and Robotic Systems: Theory and Applications, 1996, 15, 263-289.	3.4	4
84	Nonanalytical Control for Assisting Reaching in Humans with Disabilities. , 2000, , 535-550.		4
85	Design of a Control for a Neural Prosthesis for Walking: Use of Artificial Neural Networks. , 2006, , .		4
86	Online adaptation of optimal control of externally controlled walking of a hemiplegic individual. , 2007, , .		4
87	Mapping of sensory representation of walking and EMG of prime joint movers: Control of functional electrical stimulation. , 2010, , .		4
88	Software Tool for the Prosthetic Foot Modeling and Stiffness Optimization. Computational and Mathematical Methods in Medicine, 2012, 2012, 1-8.	1.3	4
89	WiiMote control: Gaming feedback for motivational training of the arm movements. , 2012, , .		4
90	Hybrid FES-robot devices for training of activities of daily living. , 2018, , 277-287.		4

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91	Hybrid Tongue - Myoelectric Control Improves Functional Use of a Robotic Hand Prosthesis. IEEE Transactions on Biomedical Engineering, 2021, 68, 2011-2020.	4.2	4
92	Improved Control for Functional Electrical Stimulation to Restore Walking. Hong Kong Physiotherapy Journal, 2000, 18, 12-20.	1.0	3
93	Functional Electrical Stimulation: A MatLab Based Tool for Designing Stimulation Patterns. , 2006, 2006, 5404-7.		3
94	Reproducibility of BUDA; multisensor system for gait analysis. , 2009, , .		3
95	Action representation for Wii bowling: Classification. , 2010, , .		3
96	Action representation of point to point movements: Classification with probability tube. , 2011, , .		3
97	GammaKey system for improved diagnostics with gamma cameras. Computers in Biology and Medicine, 2014, 50, 97-106.	7.0	3
98	Recording and assessment of evoked potentials with electrode arrays. Medical and Biological Engineering and Computing, 2015, 53, 857-867.	2.8	3
99	A comparative study of virtual hand prosthesis control using an inductive tongue control system. Assistive Technology, 2016, 28, 22-29.	2.0	3
100	Control of current and future neural prostheses. Medical Engineering and Physics, 2003, 25, 1-2.	1.7	2
101	Reliability of Discrete-Event Control at Coordination Level for a Powered Transfemoral Prosthesis. , 0, , .		2
102	Control Aspects of Motor Neural Prosthesis: Sensory Interface. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 4361-3.	0.5	2
103	Functional electrical stimulation for walking: rule based controller using accelerometers. , 2008, , .		2
104	Rule-based control of walking by using decision trees and practical sensors. , 2008, , .		2
105	Control of robot assistant for rehabilitation of upper extremities. , 2012, 2012, 3918-21.		2
106	EMG based biofeedback with the smarting system. , 2014, , .		2
107	Influence of alumina addition on structural and catalytic properties of sulphated zirconia in isomerization of n-hexane. Processing and Application of Ceramics, 2021, 15, 111-119.	0.8	2
108	Pendulum test: Quantified assessment of the type and level of spasticity in persons with central nervous system lesions. Serbian Journal of Electrical Engineering, 2018, 15, 1-12.	0.4	2

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109	CONTROL ISSUES FOR MOTOR NEUROPROSTHESES. Series on Bioengineering and Biomedical Engineering, 2004, , 809-843.	0.1	2
110	Strategies for Functional Electrical Stimulation: Implications for Control. Advances in Psychology, 1991, 78, 413-438.	0.1	1
111	Finite State Model of Walking Determined by Adaptive Logic Networks. , 2006, , .		1
112	External control of movements and artificial neural networks. , 2008, , .		1
113	New generation of assistive systems for humans with disability: New tool for neurorehabilitation. , 2011, , .		1
114	H-reflex recorded by multi-pad EMG electrodes. , 2012, , .		1
115	Third-party application for quantitative salivary gland scintigraphy. , 2013, , .		1
116	Computer vision with Microsoft Kinect for control of functional electrical stimulation: ANN classification of the grasping intentions. , 2014, , .		1
117	Functional Electric Stimulation Therapy. , 2019, , 614-620.		1
118	The assessment of spasticity: Pendulum test based smart phone movie of passive markers. Serbian Journal of Electrical Engineering, 2018, 15, 29-39.	0.4	1
119	Control of leg movements driven by electrically stimulated muscles. Journal of Automatic Control, 2003, 13, 35-41.	1.0	1
120	Assisting Persons after Stroke to Restore Gait: Hybrid System. Biosystems and Biorobotics, 2013, , 209-213.	0.3	1
121	Restoration of Movement by Implantable Neural Motor Prostheses. , 0, , 227-241.		0
122	Beginnings of the Societies. , 2009, , 49-60.		0
123	Influence on walking dynamics of a gait training device that is connected through a lumbar belt. , 2009, , .		0
124	AAU-BOT1: a platform for studying dynamic, life-like walking. Applied Bionics and Biomechanics, 2009, 6, 285-299.	1.1	0
125	Biomechanical Modeling for Biologically Inspired Control of Neural Prostheses for Walking. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 359-364.	0.4	0
126	Muscle synergies with Walkaround® postural support vs. â€œcane/therapistâ€ assistance. NeuroRehabilitation, 2013, 33, 491-501.	1.3	0



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127	GammaKey software for acquiring, storing, retrieving and processing images obtained by gamma camera " Benefits for clinical practice. , 2015, , .		0
128	Optimal control of a two-wheeled mobile robot: Simulation for selecting of the motors. Facta Universitatis - Series Electronics and Energetics, 2003, 16, 55-65.	0.9	0
129	Foot Drop Stimulator. , 2015, , 1-12.		0
130	Foot Drop Stimulator. , 2022, , 1241-1255.		0
131	Hybrid Assistive Systems for Rehabilitation: Lessons Learned from Functional Electrical Therapy in Hemiplegics. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0