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## The case for and against muscle synergies

DOI: 10.1016/j.conb.2009.09.002

Current Opinion in Neurobiology, 2009, 19, 601-7.

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**Version:** 2024-04-28

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424	Two aspects of feedforward postural control: anticipatory postural adjustments and anticipatory synergy adjustments. <b>2011</b> , 105, 2275-88		90
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419	State-, parameter-, and graph-dynamics: Constraints and the distillation of postural control systems. <b>2011</b> , 5-18		11
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417	Neurophysiological characterization of motor recovery in acute spinal cord injury. <b>2011</b> , 49, 421-9		32
416	Spikes alone do not behavior make: why neuroscience needs biomechanics. <i>Current Opinion in Neurobiology</i> , <b>2011</b> , 21, 816-22	7.6	78
415	Two stages and three components of the postural preparation to action. <b>2011</b> , 212, 47-63		67
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412	A single muscle's multifunctional control potential of body dynamics for postural control and running. <b>2011</b> , 366, 1592-605		40
411	Sequential activation of motor cortical neurons contributes to intralimb coordination during reaching in the cat by modulating muscle synergies. <b>2011</b> , 105, 388-409		57
410	Modules in the brain stem and spinal cord underlying motor behaviors. <b>2011</b> , 106, 1363-78		98
409	Fatigue-related adaptations in muscle coordination during a cyclic exercise in humans. <b>2011</b> , 214, 3305-14		37
408	Probing the independence of formant control using altered auditory feedback. <b>2011</b> , 129, 955-65		30
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405	Bernstein's Levels of Construction of Movements Applied to Upper Limb Prosthetics. <b>2012</b> , 24, 67-76		22
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402	A bio-inspired neuromuscular model to simulate the neuro-sensorimotor basis for postural-reflex-response in humans. <b>2012</b> ,		2
401	Reduced dimensionality control for the ACT hand. <b>2012</b> ,		4
400	Encoding of coordinated reach and grasp trajectories in primary motor cortex. <b>2012</b> , 32, 1220-32		59

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398	An involuntary stereotypical grasp tendency pervades voluntary dynamic multifinger manipulation. <b>2012</b> , 108, 2896-911	22
397	Robustness of muscle synergies underlying three-dimensional force generation at the hand in healthy humans. <b>2012</b> , 107, 2123-42	88
396	Voluntary and reactive recruitment of locomotor muscle synergies during perturbed walking. <b>2012</b> , 32, 12237-50	125
395	Studies of motor synergies in generating optimal goal-directed movements in human-like robotic arm. <b>2012</b> ,	1
394	Assessing the neural drive to muscle and translation to neurorehabilitation technologies. <b>2012</b> , 5, 3-14	72
393	Flexible cortical control of task-specific muscle synergies. <b>2012</b> , 32, 12349-60	74
392	Catapult effect in pole vaulting: is muscle coordination determinant?. <b>2012</b> , 22, 145-52	10
391	Early and late components of feed-forward postural adjustments to predictable perturbations. <b>2012</b> , 123, 1016-26	38
390	Control with muscle activations. <b>2012</b> , 93-111	2
389	Central pattern generators of the mammalian spinal cord. <b>2012</b> , 18, 56-69	70
388	Challenges and new approaches to proving the existence of muscle synergies of neural origin. <b>2012</b> , 8, e1002434	173
387	A generative model for measuring latent timing structure in motor sequences. <b>2012</b> , 7, e37616	9
386	Spinal and Corticospinal Pathways in Different Movements. 446-514	1
385	Patterned control of human locomotion. <b>2012</b> , 590, 2189-99	193
384	Rhythmic affects on stroke-induced joint synergies across a range of speeds. <b>2013</b> , 229, 517-24	10
383	Differences in adaptation rates after virtual surgeries provide direct evidence for modularity. <b>2013</b> , 33, 12384-94	125
382	Motor primitives and synergies in the spinal cord and after injury--the current state of play. <b>2013</b> , 1279, 114-26	42

381	Effects of Parkinson's disease on optimization and structure of variance in multi-finger tasks. <b>2013</b> , 231, 51-63	22
380	Joint-specific changes in locomotor complexity in the absence of muscle atrophy following incomplete spinal cord injury. <b>2013</b> , 10, 97	6
379	Analysis of Motor Synergies Utilization for Optimal Movement Generation for a Human-like Robotic Arm. <b>2013</b> , 10, 515-524	8
378	Inter-individual variability of forces and modular muscle coordination in cycling: a study on untrained subjects. <b>2013</b> , 32, 1480-94	38
377	Effects of olivo-ponto-cerebellar atrophy (OPCA) on finger interaction and coordination. <b>2013</b> , 124, 991-8	51
376	Voluntary and Reflex Muscle Synergies in Upper Limbs. <b>2013</b> , 575-580	1
375	The neural origin of muscle synergies. <b>2013</b> , 7, 51	259
374	Differences in kinematic control of ankle joint motions in people with chronic ankle instability. <b>2013</b> , 28, 562-7	17
373	A hierarchical model of synergistic motor control. <b>2013</b> ,	
372	Task-oriented control of muscle coordination during cycling. <b>2013</b> , 45, 2298-305	15
371	Plasticity and modular control of locomotor patterns in neurological disorders with motor deficits. <b>2013</b> , 7, 123	30
370	Extraction of basic movement from whole-body movement, based on gait variability. <b>2013</b> , 1, e00049	8
369	Canonical correlation analysis for muscle synergies organized by sensory-motor interactions in musculoskeletal arm movements. <b>2013</b> ,	
368	Principles of human locomotion: a review. <b>2013</b> , 2013, 6941-4	8
367	Extracting and study of synchronous muscle synergies during fast arm reaching movements. <b>2013</b> ,	2
366	Optimization and variability of motor behavior in multifinger tasks: what variables does the brain use?. <b>2013</b> , 45, 289-305	7
365	Equifinality and its violations in a redundant system: multifinger accurate force production. <b>2013</b> , 110, 1965-73	41
364	Locomotor adaptation to a soleus EMG-controlled antagonistic exoskeleton. <b>2013</b> , 109, 1804-14	37

363	Quantitative evaluation of muscle synergy models: a single-trial task decoding approach. <b>2013</b> , 7, 8	47
362	Are muscle synergies useful for neural control?. <b>2013</b> , 7, 19	70
361	Neural bases of hand synergies. <b>2013</b> , 7, 23	139
360	Feedback of mechanical effectiveness induces adaptations in motor modules during cycling. <b>2013</b> , 7, 35	38
359	Synaptic and functional linkages between spinal premotor interneurons and hand-muscle activity during precision grip. <b>2013</b> , 7, 40	16
358	Control of reaching movements by muscle synergy combinations. <b>2013</b> , 7, 42	106
357	Muscle synergies in neuroscience and robotics: from input-space to task-space perspectives. <b>2013</b> , 7, 43	83
356	A methodology for assessing the effect of correlations among muscle synergy activations on task-discriminating information. <b>2013</b> , 7, 54	16
355	Motor cortical regulation of sparse synergies provides a framework for the flexible control of precision walking. <b>2013</b> , 7, 83	31
354	Compositionality in neural control: an interdisciplinary study of scribbling movements in primates. <b>2013</b> , 7, 103	8
353	Muscle synergy space: learning model to create an optimal muscle synergy. <b>2013</b> , 7, 136	23
352	Effort minimization and synergistic muscle recruitment for three-dimensional force generation. <b>2013</b> , 7, 186	21
351	The potential of corticomuscular and intermuscular coherence for research on human motor control. <b>2013</b> , 7, 855	33
350	A bidirectional brain-machine interface algorithm that approximates arbitrary force-fields. <b>2014</b> , 9, e91677	12
349	Aging induced loss of complexity and dedifferentiation: consequences for coordination dynamics within and between brain, muscular and behavioral levels. <b>2014</b> , 6, 140	66
348	Dimensionality of joint torques and muscle patterns for reaching. <b>2014</b> , 8, 24	34
347	Do muscle synergies reduce the dimensionality of behavior?. <b>2014</b> , 8, 63	10
346	Task constraints and minimization of muscle effort result in a small number of muscle synergies during gait. <b>2014</b> , 8, 115	37

345	Bihemispheric transcranial direct current stimulation enhances effector-independent representations of motor synergy and sequence learning. <b>2014</b> , 34, 1037-50	94
344	The role of muscle synergies in myoelectric control: trends and challenges for simultaneous multifunction control. <b>2014</b> , 11, 051001	111
343	Motor control of sound frequency in birdsong involves the interaction between air sac pressure and labial tension. <b>2014</b> , 89, 032706	12
342	Modular organization across changing task demands in healthy and poststroke gait. <b>2014</b> , 2, e12055	42
341	Real-time behaviour synthesis for dynamic hand-manipulation. <b>2014</b> ,	22
340	Stroke-induced synergistic phase shifting and its possible implications for recovery mechanisms. <b>2014</b> , 232, 3489-99	5
339	Muscle synergy stability and human balance maintenance. <b>2014</b> , 11, 129	21
338	Plasticity and alterations of trunk motor cortex following spinal cord injury and non-stepping robot and treadmill training. <b>2014</b> , 256, 57-69	25
337	A reductionist approach to the analysis of learning in brain-computer interfaces. <b>2014</b> , 108, 183-201	5
336	The Human Hand as an Inspiration for Robot Hand Development. <b>2014</b> ,	31
335	A Simplified Spinal-Like Controller Facilitates Muscle Synergies and Robust Reaching Motions. <b>2014</b> , 22, 77-87	7
334	A comparative approach to closed-loop computation. <i>Current Opinion in Neurobiology</i> , <b>2014</b> , 25, 54-62	7.6 81
333	Neuromodulation of the lumbar spinal locomotor circuit. <b>2014</b> , 25, 15-23	10
332	Upper limb joint space modeling of stroke induced synergies using isolated and voluntary arm perturbations. <b>2014</b> , 22, 491-500	11
331	Shared muscle synergies in human walking and cycling. <b>2014</b> , 112, 1984-98	73
330	Useful properties of spinal circuits for learning and performing planar reaches. <b>2014</b> , 11, 056006	26
329	Can modular strategies simplify neural control of multidirectional human locomotion?. <b>2014</b> , 111, 1686-702	76
328	The singer and the song: the neuromechanics of avian sound production. <i>Current Opinion in Neurobiology</i> , <b>2014</b> , 28, 172-8	7.6 34

327	Searching for synergy in silico, in vitro and in vivo. <b>2014</b> , 1, 30-43	22
326	Stability of multifinger action in different state spaces. <b>2014</b> , 112, 3209-18	30
325	Extracting motor synergies from random movements for low-dimensional task-space control of musculoskeletal robots. <b>2015</b> , 10, 056016	3
324	An Adaptive Low-Dimensional Control for a Hybrid Neuroprosthesis. <b>2015</b> , 48, 303-308	3
323	A neural circuitry that emphasizes spinal feedback generates diverse behaviours of human locomotion. <b>2015</b> , 593, 3493-511	113
322	A model-based approach to predict muscle synergies using optimization: application to feedback control. <b>2015</b> , 9, 121	15
321	Are movement disorders and sensorimotor injuries pathologic synergies? When normal multi-joint movement synergies become pathologic. <b>2014</b> , 8, 1050	44
320	Robot-assisted surgery: an emerging platform for human neuroscience research. <b>2015</b> , 9, 315	16
319	Task-discriminative space-by-time factorization of muscle activity. <b>2015</b> , 9, 399	17
318	Encyclopedia of Computational Neuroscience. <b>2015</b> , 1-2	
317	Encyclopedia of Computational Neuroscience. <b>2015</b> , 44-46	
316	Encyclopedia of Computational Neuroscience. <b>2015</b> , 43-44	
315	Encyclopedia of Computational Neuroscience. <b>2015</b> , 20-20	
314	Encyclopedia of Computational Neuroscience. <b>2015</b> , 21-24	
313	Sensory synergy: Modeling the neural dynamics of environmental feedback to the central nervous system. <b>2015</b> ,	
312	Mapping Sub-Second Structure in Mouse Behavior. <b>2015</b> , 88, 1121-1135	330
311	Long-term training modifies the modular structure and organization of walking balance control. <b>2015</b> , 114, 3359-73	68
310	Motor neuronal activity varies least among individuals when it matters most for behavior. <b>2015</b> , 113, 981-1000	20



309	Exploring the high-dimensional structure of muscle redundancy via subject-specific and generic musculoskeletal models. <b>2015</b> , 48, 2887-96	32
308	Towards sparse coding of natural movements for neuroprosthetics and brain-machine interfaces. <b>2015</b> ,	7
307	Is there a reliable and invariant set of muscle synergy during isometric biaxial trunk exertion in the sagittal and transverse planes by healthy subjects?. <b>2015</b> , 48, 3234-41	7
306	Computational Models of Cognitive and Motor Control. <b>2015</b> , 665-682	2
305	Muscle synergy analysis in children with cerebral palsy. <b>2015</b> , 12, 046017	59
304	Dual dimensionality reduction reveals independent encoding of motor features in a muscle synergy for insect flight control. <b>2015</b> , 11, e1004168	8
303	Task-specific stability of multifinger steady-state action. <b>2015</b> , 47, 365-77	11
302	Somatosensory feedback refines the perception of hand shape with respect to external constraints. <b>2015</b> , 293, 1-11	1
301	Recruitment of muscle synergies is associated with endpoint force fluctuations during multi-directional isometric contractions. <b>2015</b> , 233, 1811-23	6
300	Multi-muscle coordination during a challenging stance. <b>2015</b> , 115, 1959-66	11
299	Trunk robot rehabilitation training with active stepping reorganizes and enriches trunk motor cortex representations in spinal transected rats. <b>2015</b> , 35, 7174-89	21
298	Consequences of biomechanically constrained tasks in the design and interpretation of synergy analyses. <b>2015</b> , 113, 2102-13	56
297	Neuromechanical principles underlying movement modularity and their implications for rehabilitation. <b>2015</b> , 86, 38-54	216
296	Motor Neuron Pools of Synergistic Thigh Muscles Share Most of Their Synaptic Input. <b>2015</b> , 35, 12207-16	82
295	Representation of Muscle Synergies in the Primate Brain. <b>2015</b> , 35, 12615-24	109
294	Coordination of intrinsic and extrinsic foot muscles during walking. <b>2015</b> , 115, 691-701	38
293	Redundancy and Abundance. <b>2016</b> , 177-204	
292	Development of network-based multichannel neuromuscular electrical stimulation system for stroke rehabilitation. <b>2016</b> , 52, 263-78	13

291	Suboptimal Muscle Synergy Activation Patterns Generalize their Motor Function across Postures. <b>2016</b> , 10, 7	11
290	Muscle Synergies in Cycling after Incomplete Spinal Cord Injury: Correlation with Clinical Measures of Motor Function and Spasticity. <b>2015</b> , 9, 706	22
289	Changes in muscle coordination patterns induced by exposure to a viscous force field. <b>2016</b> , 13, 58	6
288	Muscle Synergies Heavily Influence the Neural Control of Arm Endpoint Stiffness and Energy Consumption. <b>2016</b> , 12, e1004737	32
287	Biomechanical Constraints Underlying Motor Primitives Derived from the Musculoskeletal Anatomy of the Human Arm. <b>2016</b> , 11, e0164050	15
286	A physiologically based hypothesis for learning proprioception and in approximating inverse kinematics. <b>2016</b> , 4, e12774	2
285	. <b>2016</b> ,	
284	Comparison of hand and forearm muscle pairs in controlling of a novel myoelectric interface. <b>2016</b> ,	9
283	Biomechanics as a window into the neural control of movement. <b>2016</b> , 52, 7-20	9
282	Sparse Eigenmotions derived from daily life kinematics implemented on a dextrous robotic hand. <b>2016</b> ,	6
281	Functional connectivity in the neuromuscular system underlying bimanual coordination. <b>2016</b> , 116, 2576-2585	38
280	Modularity for Motor Control and Motor Learning. <b>2016</b> , 957, 3-19	17
279	Synergies in Grasping. <b>2016</b> , 957, 21-34	6
278	Fuzzy entropy based nonnegative matrix factorization for muscle synergy extraction. <b>2016</b> ,	2
277	Transferring synergies from neuroscience to robotics: Comment on "Hand synergies: Integration of robotics and neuroscience for understanding the control of biological and artificial hands" by M. Santello et al. <b>2016</b> , 17, 27-32	9
276	Embodied Motor Control of Avian Vocal Production. <b>2016</b> , 119-157	13
275	Integration of robotics and neuroscience beyond the hand: What kind of synergies?: Comment on "Hand synergies: Integration of robotics and neuroscience for understanding the control of biological and artificial hands" by Marco Santello et al. <b>2016</b> , 17, 33-5	1
274	Vertebrate Sound Production and Acoustic Communication. <b>2016</b> ,	11

273	Analyzing effects of variance in kinematic parameters on performance and EMG in dart throwing. <b>2016,</b>		1
272	Anthropomorphic Movement Analysis and Synthesis: A Survey of Methods and Applications. <b>2016,</b> 32, 776-795		29
271	An Optogenetic Demonstration of Motor Modularity in the Mammalian Spinal Cord. <i>Scientific Reports</i> , <b>2016,</b> 6, 35185	4.9	38
270	Mechanosensation and Adaptive Motor Control in Insects. <b>2016,</b> 26, R1022-R1038		117
269	. <b>2016,</b>		1
268	. <b>2016,</b>		4
267	Working hard to make a simple definition of synergies: Comment on: "Hand synergies: Integration of robotics and neuroscience for understanding the control of biological and artificial hands" by Marco Santello et al. <b>2016,</b> 17, 24-6		3
266	Learning new gait patterns: Exploratory muscle activity during motor learning is not predicted by motor modules. <b>2016,</b> 49, 718-725		24
265	Hand synergies: Integration of robotics and neuroscience for understanding the control of biological and artificial hands. <b>2016,</b> 17, 1-23		139
264	Repeatability of muscle synergies within and between days for typically developing children and children with cerebral palsy. <b>2016,</b> 45, 127-32		42
263	Incremental Learning of Muscle Synergies: From Calibration to Interaction. <b>2016,</b> 171-193		5
262	The effect of parameters of equilibrium-based 3-D biomechanical models on extracted muscle synergies during isometric lumbar exertion. <b>2016,</b> 49, 967-973		5
261	Real-Time Task Discrimination for Myoelectric Control Employing Task-Specific Muscle Synergies. <b>2016,</b> 24, 98-108		35
260	On identifying kinematic and muscle synergies: a comparison of matrix factorization methods using experimental data from the healthy population. <b>2017,</b> 117, 290-302		28
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257	Control of force during rapid visuomotor force-matching tasks can be described by discrete time PID control algorithms. <b>2017,</b> 235, 2561-2573		7
256	Analyze the Human Movements to Help CNS to Shape the Synergy using CNMF and Pattern Recognition. <b>2017,</b> 105, 170-176		1

255	Muscle synergy analysis in dart throwing. <b>2017</b> , 2017, 2534-2537	3
254	REMOVED: PB 17 Short-term shaping of cortico-muscular synergies. <b>2017</b> , 128, e323	
253	Data sample size needed for analysis of kinematic and muscle synergies in healthy and stroke populations. <b>2017</b> , 2017, 777-782	1
252	REMOVED: PB 16 Restingstate alterations under antidepressant treatment and the relation to sexual side effects [Comparison of bupropion, paroxetine and placebo. <b>2017</b> , 128, e322-e323	1
251	Muscle, Biomechanics, and Implications for Neural Control. <b>2017</b> , 365-416	10
250	Neural basis for hand muscle synergies in the primate spinal cord. <b>2017</b> , 114, 8643-8648	79
249	Differential spatial representation of precision and power grasps in the human motor system. <b>2017</b> , 158, 58-69	9
248	Intermuscular coherence reflects functional coordination. <b>2017</b> , 118, 1775-1783	39
247	A Method for Locomotion Mode Identification Using Muscle Synergies. <b>2017</b> , 25, 608-617	28
246	Grasp-Based Functional Coupling Between Reach- and Grasp-Related Components of Forelimb Muscle Activity. <b>2017</b> , 49, 312-328	7
245	An adaptive low-dimensional control to compensate for actuator redundancy and FES-induced muscle fatigue in a hybrid neuroprosthesis. <b>2017</b> , 59, 204-219	33
244	Muscle activation patterns during gait: A hierarchical clustering analysis. <b>2017</b> , 31, 463-469	32
243	Prehensile Movements. <b>2017</b> , 341-364	
242	Low-Dimensional Synergistic Representation of Bilateral Reaching Movements. <b>2017</b> , 5, 2	12
241	Electromyography Data Processing Impacts Muscle Synergies during Gait for Unimpaired Children and Children with Cerebral Palsy. <b>2017</b> , 11, 50	55
240	Empirical Evaluation of Voluntarily Activatable Muscle Synergies. <b>2017</b> , 11, 82	5
239	Evaluation of Functional Correlation of Task-Specific Muscle Synergies with Motor Performance in Patients Poststroke. <b>2017</b> , 8, 337	22
238	Shared and Task-Specific Muscle Synergies during Normal Walking and Slipping. <b>2017</b> , 11, 40	34

237	Intra-Subject Consistency during Locomotion: Similarity in Shared and Subject-Specific Muscle Synergies. <b>2017</b> , 11, 586	23
236	Low-Dimensional Motor Control Representations in Throwing Motions. <b>2017</b> , 2017, 3050917	1
235	On neuromechanical approaches for the study of biological and robotic grasp and manipulation. <b>2017</b> , 14, 101	18
234	Muscle Synergies Conception and Development, and the Known and Unknown. <b>2017</b> , 35, 506-511	1
233	Motor synergies research in physical therapy: advantages of the uncontrolled manifold approach. <b>2017</b> , 24, 2-8	1
232	How to Press a Button: Perspectives from the Science of Motor Control. <b>2018</b> , 1-14	
231	Associations Between Muscle Synergies and Treatment Outcomes in Cerebral Palsy Are Robust Across Clinical Centers. <b>2018</b> , 99, 2175-2182	19
230	Evidence for sparse synergies in grasping actions. <i>Scientific Reports</i> , <b>2018</b> , 8, 616	4-9 12
229	Neuromuscular synergies in motor control in normal and poststroke individuals. <b>2018</b> , 29, 593-612	9
228	A Novel Approach to the Segmentation of sEMG Data Based on the Activation and Deactivation of Muscle Synergies During Movement. <b>2018</b> , 3, 1972-1977	9
227	Stability of vertical posture explored with unexpected mechanical perturbations: synergy indices and motor equivalence. <b>2018</b> , 236, 1501-1517	9
226	Inter- and Intrasubject Similarity of Muscle Synergies During Bench Press With Slow and Fast Velocity. <b>2018</b> , 22, 100-115	2
225	Shared and task-specific muscle synergies of Nordic walking and conventional walking. <b>2018</b> , 28, 905-918	14
224	Similarity of muscle synergies extracted from the lower limb including the deep muscles between level and uphill treadmill walking. <b>2018</b> , 59, 134-139	25
223	Bernstein's levels of movement construction: A contemporary perspective. <b>2018</b> , 57, 111-133	47
222	Biotensegrity and myofascial chains: A global approach to an integrated kinetic chain. <b>2018</b> , 110, 90-96	21
221	Upper Limb Joint Angular Velocity Synergies of Human Reaching Movements. <b>2018</b> ,	3
220	Muscle synergy analysis of step cutting task in basketball athletes: preliminary results. <b>2018</b> ,	

219	The Effects of Selective Muscle Weakness on Muscle Coordination in the Human Arm. <b>2018</b> , 2018, 5637568	3
218	. <b>2018</b> , 38, 35-60	17
217	Individuals with sacroiliac joint dysfunction display asymmetrical gait and a depressed synergy between muscles providing sacroiliac joint force closure when walking. <b>2018</b> , 43, 95-103	7
216	Synergies in coordination: a comprehensive overview of neural, computational, and behavioral approaches. <b>2018</b> , 120, 2761-2774	35
215	Motor Overflow and Spasticity in Chronic Stroke Share a Common Pathophysiological Process: Analysis of Within-Limb and Between-Limb EMG-EMG Coherence. <b>2018</b> , 9, 795	24
214	Feasibility Theory Reconciles and Informs Alternative Approaches to Neuromuscular Control. <b>2018</b> , 12, 62	9
213	Characterization of whole-body muscle activity during reaching movements using space-by-time modularity and functional similarity analysis. <b>2018</b> ,	1
212	Cortical population activity within a preserved neural manifold underlies multiple motor behaviors. <b>2018</b> , 9, 4233	90
211	Strength Capacity Estimation of Human Upper Limb in Human-Robot Interactions with Muscle Synergy Models. <b>2018</b> ,	2
210	Effect of Task Failure on Intermuscular Coherence Measures in Synergistic Muscles. <b>2018</b> , 2018, 4759232	3
209	Incrementality and Hierarchies in the Enrollment of Multiple Synergies for Grasp Planning. <b>2018</b> , 3, 2686-2693	20
208	A Systematic Review on Muscle Synergies: From Building Blocks of Motor Behavior to a Neurorehabilitation Tool. <b>2018</b> , 2018, 3615368	37
207	Feasibility of Muscle Synergy Outcomes in Clinics, Robotics, and Sports: A Systematic Review. <b>2018</b> , 2018, 3934698	40
206	Using a Module-Based Analysis Framework for Investigating Muscle Coordination during Walking in Individuals Poststroke: A Literature Review and Synthesis. <b>2018</b> , 2018, 3795754	5
205	Muscle Synergies Control during Hand-Reaching Tasks in Multiple Directions Post-stroke. <b>2018</b> , 12, 10	16
204	A Control Scheme That Uses Dynamic Postural Synergies to Coordinate a Hybrid Walking Neuroprosthesis: Theory and Experiments. <b>2018</b> , 12, 159	21
203	Feedback Control of Functional Electrical Stimulation for 2-D Arm Reaching Movements. <b>2018</b> , 26, 2033-2043	12
202	Neuromechanical Model of Rat Hind Limb Walking with Two Layer CPGs and Muscle Synergies. <b>2018</b> , 134-144	1

201	Feasibility of Synergy-Based Exoskeleton Robot Control in Hemiplegia. <b>2018</b> , 26, 1233-1242		29
200	Motor modules during adaptation to walking in a powered ankle exoskeleton. <b>2018</b> , 15, 2		21
199	Evaluation of matrix factorisation approaches for muscle synergy extraction. <b>2018</b> , 57, 51-60		22
198	Upper Extremity Problem-Solving: Challenging Cases. <b>2018</b> , 29, 593-617		
197	Autonomy in Rehabilitation Robotics: An Intersection. <b>2018</b> , 1, 441-463		10
196	Dynamics simulation for an upper-limb human-exoskeleton assistance system in a latent-space controlled tool manipulation task. <b>2018</b> ,		6
195	Dynamic Control of Virtual Hand Grasp Using Spatiotemporal Synergies. <b>2019</b> , 7, 112327-112338		3
194	Muscle Activity Analysis Using Higher-Order Tensor Decomposition: Application to Muscle Synergy Extraction. <b>2019</b> , 7, 27257-27271		7
193	A review of grasping as the movements of digits in space. <b>2019</b> , 122, 1578-1597		13
192	Muscle Synergies in Response to Biofeedback-Driven Gait Adaptations in Children With Cerebral Palsy. <i>Frontiers in Physiology</i> , <b>2019</b> , 10, 1208	4.6	15
191	Postural Representations of the Hand in the Primate Sensorimotor Cortex. <b>2019</b> , 104, 1000-1009.e7		17
190	Non-synergistic synergies of muscle activation: an apparent oxymoron. <b>2019</b> , 597, 5743-5744		
189	Analyzing Moment Arm Profiles in a Full-Muscle Rat Hindlimb Model. <b>2019</b> , 4,		8
188	Consistency of Muscle Synergies Extracted via Higher-Order Tensor Decomposition Towards Myoelectric Control. <b>2019</b> ,		2
187	Assessment of upper limb muscle synergies for industrial overhead tasks: a preliminary study. <b>2019</b> ,		12
186	Muscle recruitment strategies can reduce joint loading during level walking. <b>2019</b> , 97, 109368		7
185	Neuromusculoskeletal model that walks and runs across a speed range with a few motor control parameter changes based on the muscle synergy hypothesis. <i>Scientific Reports</i> , <b>2019</b> , 9, 369	4.9	28
184	Neural Decoding of Synergy-Based Hand Movements Using Electroencephalography. <b>2019</b> , 7, 18155-18163		6

183	The human sensorimotor cortex fosters muscle synergies through cortico-synergy coherence. <b>2019</b> , 199, 30-37		18
182	On the Relationship Between Muscle Synergies and Redundant Degrees of Freedom in Musculoskeletal Systems. <b>2019</b> , 13, 23		2
181	Modulation of muscle synergies with direction and distance during reaching movements. <b>2019</b> ,		
180	Motor primitives are determined in early development and are then robustly conserved into adulthood. <b>2019</b> , 116, 12025-12034		23
179	Neuromechanical Model of Rat Hindlimb Walking with Two-Layer CPGs. <b>2019</b> , 4,		8
178	The impact of evoked cutaneous afferents on voluntary reaching movement in patients with Parkinson's disease. <b>2019</b> , 16, 036029		4
177	Constrained particle filtering for movement identification in forearm prosthesis. <b>2019</b> , 161, 25-35		4
176	Hysteresis and Synergy of the Central Commands to Muscles Participating in Parafrontal Upper Limb Movements. <i>Frontiers in Physiology</i> , <b>2019</b> , 10, 1441	4.6	3
175	Adaptation of muscle activation after patellar loading demonstrates neural control of joint variables. <i>Scientific Reports</i> , <b>2019</b> , 9, 20370	4.9	11
174	Local Online Motor Babbling: Learning Motor Abundance of a Musculoskeletal Robot Arm*. <b>2019</b> ,		1
173	A functional analysis-based approach to quantify upper limb impairment level in chronic stroke patients: a pilot study. <b>2019</b> , 2019, 4198-4204		12
172	The effects of different tracking tasks on muscle synergy through visual feedback. <b>2019</b> , 2019, 417-420		1
171	Do Walking Muscle Synergies Influence Propensity of Severe Slipping?. <b>2019</b> , 13, 383		2
170	Estimating Biomechanical Time-Series with Wearable Sensors: A Systematic Review of Machine Learning Techniques. <b>2019</b> , 19,		16
169	Compensation or Recovery? Altered Kinetics and Neuromuscular Synergies Following High-Intensity Stepping Training Poststroke. <b>2019</b> , 33, 47-58		14
168	Coordination in adults with neurological impairment - A systematic review of uncontrolled manifold studies. <b>2019</b> , 69, 66-78		13
167	Intersegmental coordination patterns are differently affected in Parkinson's disease and cerebellar ataxia. <b>2019</b> , 121, 672-689		5
166	Spinal control of muscle synergies for adult mammalian locomotion. <b>2019</b> , 597, 333-350		27



165	A Novel FES Strategy for Poststroke Rehabilitation Based on the Natural Organization of Neuromuscular Control. <b>2019</b> , 12, 154-167	14
164	A synergy-based motor control framework for the fast feedback control of musculoskeletal systems. <b>2018</b> ,	4
163	Modular Organization of Exploratory Force Development Under Isometric Conditions in the Human Arm. <b>2019</b> , 51, 83-99	2
162	Linking Individual Movements to a Skilled Repertoire: Fast Modulation of Motor Synergies by Repetition of Stereotyped Movements. <b>2020</b> , 30, 1185-1198	4
161	Jaw Elevator Muscle Coordination during Rhythmic Mastication in Primates: Are Triplets Units of Motor Control?. <b>2020</b> , 95, 1-14	
160	Synergic control of action in levodopa-naïve Parkinson's disease patients: II. Multi-muscle synergies stabilizing vertical posture. <b>2020</b> , 238, 2931-2945	4
159	Neural Decoding of Upper Limb Movements Using Electroencephalography. <b>2020</b> , 25-33	1
158	Evaluation of Motor Primitive-Based Adaptive Control for Lower Limb Exoskeletons. <b>2020</b> , 7, 575217	3
157	Ankle Push-Off Based Mathematical Model for Freezing of Gait in Parkinson's Disease. <b>2020</b> , 8, 552635	1
156	Older adults reduce the complexity and efficiency of neuromuscular control to preserve walking balance. <b>2020</b> , 140, 111050	8
155	Motor Modules are Impacted by the Number of Reaching Directions Included in the Analysis. <b>2020</b> , 28, 2025-2034	3
154	Muscle Synergies and Coherence Networks Reflect Different Modes of Coordination During Walking. <i>Frontiers in Physiology</i> , <b>2020</b> , 11, 751	4.6 14
153	Differences in Muscle Synergy Symmetry Between Subacute Post-stroke Patients With Bioelectrically-Controlled Exoskeleton Gait Training and Conventional Gait Training. <b>2020</b> , 8, 770	5
152	Combining cognitive stimulation therapy and fall prevention exercise (CogEx) in older adults with mild to moderate dementia: a feasibility randomised controlled trial. <b>2020</b> , 6, 108	3
151	Unexpected complexity of everyday manual behaviors. <b>2020</b> , 11, 3564	8
150	Shoulder muscle activation strategies differ when lifting or lowering a load. <b>2020</b> , 120, 2417-2429	2
149	Surface Electromyography Meets Biomechanics: Correct Interpretation of sEMG-Signals in Neuro-Rehabilitation Needs Biomechanical Input. <b>2020</b> , 11, 603550	6
148	Muscle Synergies Reliability in the Power Clean Exercise. <b>2020</b> , 5,	3

147	Do Muscle Synergies Improve Optimization Prediction of Muscle Activations During Gait?. <b>2020</b> , 14, 54	3
146	What do people match when they try to match force? Analysis at the level of hypothetical control variables. <b>2020</b> , 238, 1885-1901	8
145	Does the cerebellum shape the spatiotemporal organization of muscle patterns? Insights from subjects with cerebellar ataxias. <b>2020</b> , 123, 1691-1710	10
144	Modulation of muscle synergies for multiple forearm movements under variant force and arm position constraints. <b>2020</b> , 17, 026015	2
143	Coordination amongst quadriceps muscles suggests neural regulation of internal joint stresses, not simplification of task performance. <b>2020</b> , 117, 8135-8142	14
142	Segmentation and Averaging of sEMG Muscle Activations Prior to Synergy Extraction. <b>2020</b> , 5, 3106-3112	2
141	Reaching decisions during ongoing movements. <b>2020</b> , 123, 1090-1102	18
140	Muscle synergy for upper limb damping behavior during object transport while walking in healthy young individuals. <b>2020</b> , 238, 1203-1218	0
139	Identifying Muscle Synergies From Reaching and Grasping Movements in Rats. <b>2020</b> , 8, 62517-62530	1
138	Spinal Interneurons With Dual Axon Projections to Knee-Extensor and Hip-Extensor Motor Pools. <b>2020</b> , 14, 7	
137	Muscular Activity Modulation During Post-operative Walking With Hybrid Assistive Limb (HAL) in a Patient With Thoracic Myelopathy Due to Ossification of Posterior Longitudinal Ligament: A Case Report. <b>2020</b> , 11, 102	5
136	When 90% of the variance is not enough: residual EMG from muscle synergy extraction influences task performance. <b>2020</b> , 123, 2180-2190	5
135	Muscles from the same muscle group do not necessarily share common drive: evidence from the human triceps surae. <b>2021</b> , 130, 342-354	7
134	The Spinal Control of Backward Locomotion. <b>2021</b> , 41, 630-647	6
133	Synergic control of a single muscle: The example of flexor digitorum superficialis. <b>2021</b> , 599, 1261-1279	17
132	Synergistic Activation Patterns of Hand Muscles in Left-and Right-Hand Dominant Individuals. <b>2021</b> , 76, 89-100	0
131	A fair and EMG-validated comparison of recruitment criteria, musculotendon models and muscle coordination strategies, for the inverse-dynamics based optimization of muscle forces during gait. <b>2021</b> , 18, 17	3
130	A Reliable Muscle Synergy Extraction Method based on Multivariate Curve Resolution-Alternating Least Squares. <b>2021</b> , 271, 03019	

129	Muscle Synergy-based Planning and Neural-adaptive Control for a Prosthetic Arm. <b>2021</b> , 1-1		1
128	The effects of long-term exercise training on the neural control of walking.		1
127	Slow walking synergies reveal a functional role for arm swing asymmetry in healthy adults: A principal component analysis with relation to mechanical work. <b>2021</b> , 85, 126-130		1
126	Neural correlations are attenuated in the transformation from the frontal cortex to movement.		
125	Effects of gravity and kinematic constraints on muscle synergies in arm cycling. <b>2021</b> , 125, 1367-1381		3
124	A Systematic Review of EMG Applications for the Characterization of Forearm and Hand Muscle Activity during Activities of Daily Living: Results, Challenges, and Open Issues. <b>2021</b> , 21,		8
123	Differential sets of cortical muscle synergy signatures during adult locomotion. <b>2021</b> ,		
122	Inhibition of Knee Sensory Receptors does not affect Quadriceps Muscle Activity at Different Conditions of Patellofemoral Loading. <b>2021</b> ,		
121	Approaches to revealing the neural basis of muscle synergies: a review and a critique. <b>2021</b> , 125, 1580-1597		8
120	A three-dimensional musculoskeletal model of the dog. <i>Scientific Reports</i> , <b>2021</b> , 11, 11335	4.9	9
119	Temporal control of muscle synergies is linked with alpha-band neural drive. <b>2021</b> , 599, 3385-3402		1
118	Investigation of Power Specific Motor Primitives in an Upper Limb Rotational Motion. <b>2021</b> , 1-12		1
117	Correcting movement syndromes: the role of training load and its effects on muscle activity. 1		1
116	Number of Synergies Impacts Sensitivity of Gait to Weakness and Contracture.		
115	A Novel Muscle Synergy Extraction Method Used for Motor Function Evaluation of Stroke Patients: A Pilot Study. <b>2021</b> , 21,		0
114	Spinal neurons innervating multiple local and distant motor pools.		0
113	Synergistic Organization of Neural Inputs from Spinal Motor Neurons to Extrinsic and Intrinsic Hand Muscles. <b>2021</b> , 41, 6878-6891		5
112	Synergies at the level of motor units in single-finger and multi-finger tasks. <b>2021</b> , 239, 2905-2923		6

111	Diversified physiological sensory input connectivity questions the existence of distinct classes of spinal interneurons in the adult cat in vivo.	
110	Flexible recruitments of fundamental muscle synergies in the trunk and lower limbs for highly variable movements and postures.	
109	Task space exploration improves adaptation after incompatible virtual surgeries.	
108	Common and distinct muscle synergies during level and slope locomotion in the cat. <b>2021</b> , 126, 493-515	5
107	One more time about motor (and non-motor) synergies. <b>2021</b> , 239, 2951-2967	5
106	Common motor patterns of asymmetrical and symmetrical bipedal gaits. <b>2021</b> , 9, e11970	0
105	Flexible Recruitments of Fundamental Muscle Synergies in the Trunk and Lower Limbs for Highly Variable Movements and Postures. <b>2021</b> , 21,	1
104	A Perspective on Muscle Synergies and Different Theories Related to Their Adaptation. <b>2021</b> , 1, 253-263	0
103	Are muscle synergies useful for stroke rehabilitation?. <b>2021</b> , 19, 100315	4
102	Convergence in myoelectric control: Between individual patterns of myoelectric learning. <b>2021</b> , 70, 103057	
101	Non-parametric Functional Muscle Network as a Robust Biomarker of Fatigue.	
100	Recent Advances in the Neural Control of Movements: Lessons for Functional Recovery.. <b>2022</b> , 25, 1-11	0
99	Identifying differences in gait adaptability across various speeds using movement synergy analysis. <b>2021</b> , 16, e0244582	4
98	The Nature and Structure of Feasible Sets. <b>2016</b> , 135-157	1
97	Encyclopedia of Computational Neuroscience. <b>2014</b> , 1-2	0
96	Synergistic Control of Hand Muscles Through Common Neural Input. <b>2014</b> , 23-48	7
95	Optimality and Modularity in Human Movement: From Optimal Control to Muscle Synergies. <b>2019</b> , 105-133	9
94	Functional connectivity in neuromuscular system underlying bimanual muscle synergies.	1

93	Multiple tasks viewed from the neural manifold: Stable control of varied behavior.	3
92	Adaptation after vastus lateralis denervation in rats suggests neural regulation of joint stresses and strains.	1
91	Postural Representations of the Hand in Primate Sensorimotor Cortex.	2
90	Precise timing is ubiquitous, consistent and coordinated across a comprehensive, spike-resolved flight motor program.	0
89	When 90% of the variance is not enough: residual EMG from muscle synergy extraction influences task performance.	1
88	Coordination amongst quadriceps muscles suggests neural regulation of internal joint stresses, not simplification of task performance.	1
87	On Primitives in Motor Control. <b>2020</b> , 24, 318-346	16
86	Biomimetic control for redundant and high degree of freedom limb systems: neurobiological modularity. <b>2011</b> , 7, 169-184	1
85	Task-level strategies for human sagittal-plane running maneuvers are consistent with robotic control policies. <b>2012</b> , 7, e51888	16
84	MCA-NMF: Multimodal Concept Acquisition with Non-Negative Matrix Factorization. <b>2015</b> , 10, e0140732	14
83	Normalized Index of Synergy for Evaluating the Coordination of Motor Commands. <b>2015</b> , 10, e0140836	2
82	Activation of plantar flexor muscles is constrained by multiple muscle synergies rather than joint torques. <b>2017</b> , 12, e0187587	5
81	Postural Preparation to Stepping: Coupled Center of Pressure Shifts in the Anterior-Posterior and Medio-Lateral Directions. <b>2016</b> , 54, 5-14	7
80	Regulation of two motor patterns enables the gradual adjustment of locomotion strategy in <i>Caenorhabditis elegans</i> . <b>2016</b> , 5,	29
79	Dynamic structure of locomotor behavior in walking fruit flies. <b>2017</b> , 6,	22
78	Adaptation after vastus lateralis denervation in rats demonstrates neural regulation of joint stresses and strains. <b>2018</b> , 7,	19
77	Neural population dynamics in motor cortex are different for reach and grasp. <b>2020</b> , 9,	12
76	Weight perturbation learning outperforms node perturbation on broad classes of temporally extended tasks.	

- 75 Clarifying the Biomechanical Concept of Coordination Through Comparison With Coordination in Motor Control. **2021**, 3, 753062 2
- 74 Neuronal Mechanisms and Voluntary Agency. **2014**, 126-165
- 73 The primary afferent activity cannot capture the dynamical features of muscle activity during reaching movements.
- 72 Clinical Model to the Analysis of Synergy Pattern Changes of Back Muscles and its Relationship with the Occurrence of Fatigue. **2018**, 11, 53-60
- 71 Muscle Synergies for Motor Control Evaluation. **2019**, 529-533
- 70 Unexpected complexity of everyday manual behaviors. 2
- 69 Do Walking Muscle Synergies Influence Propensity of Severe Slipping?.
- 68 A three-dimensional musculoskeletal model of the dog.
- 67 Decomposing spontaneous sign language into elementary movements: A principal component analysis-based approach. **2021**, 16, e0259464
- 66 Neural network models for spinal implementation of muscle synergies.
- 65 Reciprocal and coactivation commands at the level of individual motor units in an extrinsic finger flexor-extensor muscle pair. **2021**, 1 3
- 64 Kineto-Dynamic Modeling of Human Upper Limb for Robotic Manipulators and Assistive Applications. **2020**, 23-51
- 63 References. **2020**, 195-222
- 62 Proximal and distal spinal neurons innervating multiple synergist and antagonist motor pools. **2021**, 10, 3
- 61 Generation of Human-like Arm Motions using Sampling-based Motion Planning. **2021**, 0
- 60 Angular Velocity Profiles of Upper Limb Joint Synergies in Reaching Movements: a pilot study. **2021**, 2021, 6420-6423
- 59 Introduction. **2022**, 1-22
- 58 A Novel Approach to Quantify Motion Impairment. **2022**, 113-126

57	Dexterity Augmentation of Robotic Hands: A Study on the Kinetic Domain. <b>2022</b> , 237-254	
56	Synergies are minimally affected during emulation of cerebral palsy gait patterns.. <b>2022</b> , 133, 110953	1
55	The association between motor modules and movement primitives of gait: A muscle and kinematic synergy study.. <b>2022</b> , 134, 110997	0
54	Task space exploration improves adaptation after incompatible virtual surgeries.. <b>2022</b> ,	1
53	Number of synergies impacts sensitivity of gait to weakness and contracture.. <b>2022</b> , 134, 111012	
52	Clarify Sit-to-Stand Muscle Synergy and Tension Changes in Subacute Stroke Rehabilitation by Musculoskeletal Modeling.. <b>2022</b> , 16, 785143	1
51	Neural Network Models for Spinal Implementation of Muscle Synergies.. <b>2022</b> , 16, 800628	0
50	Individuals with Chronic Mild-to-Moderate Traumatic Brain Injury Exhibit Decreased Neuromuscular Complexity During Gait.. <b>2022</b> , 15459683221081064	0
49	Lumbar time-varying muscle synergies in trunk flexion and bending movements at different velocities.	
48	Estimating muscle activation from EMG using deep learning-based dynamical systems models.. <b>2022</b> ,	1
47	Continuous Estimation of Finger and Wrist Joint Angles Using a Muscle Synergy Based Musculoskeletal Model. <b>2022</b> , 12, 3772	1
46	Effects of hand muscle function and dominance on intra-muscle synergies.. <b>2022</b> , 82, 102936	1
45	Lumbar time-varying muscle synergies in trunk flexion and bending movements at different velocities.	
44	Diversified physiological sensory input connectivity questions the existence of distinct classes of spinal interneurons.. <b>2022</b> , 25, 104083	1
43	Temporal Synergies Detection in Gait Cyclograms Using Wearable Technology.. <b>2022</b> , 22,	1
42	Muscle synergies are modified with improved task performance in skill learning.. <b>2022</b> , 83, 102946	1
41	LAZYnergy: Controlling Smart Home Devices as Lazily as Possible Using Human and Environment Behavioral Synergies in Daily Activities. <b>2021</b> ,	
40	Estimating muscle activation from EMG using deep learning-based dynamical systems models.	0

39 Data\_Sheet\_1.PDF. **2020**,

38 DataSheet1.DOCX. **2018**,

37 Data\_Sheet\_1.pdf. **2019**,

36 DataSheet1.pdf. **2018**,

35 Video1.mp4. **2018**,

34 Data\_Sheet\_1.PDF. **2020**,

33 Data\_Sheet\_1.pdf. **2020**,

32 Video\_1.mp4. **2020**,

31 Data\_Sheet\_1.pdf. **2019**,

30 Data\_Sheet\_2.pdf. **2019**,

29 Evidence for shared neural information between muscle synergies and corticospinal efficacy. *Scientific Reports*, **2022**, 12, 4.9 ○

28 Central Commands to the Elbow and Shoulder Muscles During Circular Planar Movements of Hand With Simultaneous Generation of Tangential Forces. *Frontiers in Physiology*, **2022**, 13, 4.6

27 Spinal and Neuromechanical Integration: Overview. **2022**, 118-119

26 muscleyneRgies: factorization of electromyographic data in R with sensible defaults. *Journal of Open Source Software*, **2022**, 7, 4439 5.2 ○

25 Muscle synergies are flexibly recruited during gait pattern exploration using motor control-based biofeedback.

24 Similarity of Hand Muscle Synergies Elicited by Transcranial Magnetic Stimulation and Those Found During Voluntary Movement.

23 Synergies Stabilizing Vertical Posture in Spaces of Control Variables. **2022**, 500, 79-94

22 Surface Electromyography-Based Assessment of Muscle Contribution in Squatting Movements. **2022**, 742-752 ○



21	Modelling and analysis of Parkinsonian gait.	0
20	Neurorehabilitation Through Synergistic Man-Machine Interfaces Promoting Dormant Neuroplasticity in Spinal Cord Injury: Protocol for a Nonrandomized Controlled Trial. <b>2022</b> , 11, e41152	1
19	Are Changes in Nociceptive Withdrawal Reflex Magnitude a Viable Central Sensitization Proxy? Implications of a Replication Attempt. <b>2022</b> ,	0
18	Decomposition into dynamic features reveals a conserved temporal structure in hand kinematics. <b>2022</b> , 105428	0
17	Intra-muscle Synergies Stabilizing Reflex-mediated Force Changes. <b>2022</b> , 505, 59-77	1
16	Two motor neuron synergies, invariant across ankle joint angles, activate the triceps surae during plantarflexion.	0
15	Self-configuring feedback loops for sensorimotor control. 11,	0
14	Intramuscle Synergies: Their Place in the Neural Control Hierarchy. <b>2022</b> , 1-40	0
13	A computational method for estimating trunk muscle activations during gait using lower extremity muscle synergies. 10,	0
12	an interpretive description of embedding physical therapy-led falls prevention group exercise in long-term care. <b>2023</b> , 23,	0
11	Intralimb locomotor coordination in rats walking on asymmetric pegway.	0
10	Variability of trunk muscle synergies underlying the multidirectional movements and stability trunk motor tasks in healthy individuals. <b>2023</b> , 13,	1
9	Attenuation of noise correlations in the transformation from the frontal eye field to movement. <b>2023</b> , 129, 843-861	0
8	A graph-based approach to identify motor neuron synergies.	0
7	Use of Surface Electromyography to Estimate End-Point Force in Redundant Systems: Comparison between Linear Approaches. <b>2023</b> , 10, 234	0
6	Inhibition of knee joint sensory afferents alters covariation across strides between quadriceps muscles during locomotion. <b>2023</b> , 134, 957-968	0
5	Five synergies describe motor adaptation in people with drop foot in a way that supplements traditional coarse synergies	0
4	Motor control complexity can be dynamically simplified during gait pattern exploration using motor control-based biofeedback. <b>2023</b> , 129, 984-998	0

- 3 Weight versus Node Perturbation Learning in Temporally Extended Tasks: Weight Perturbation Often Performs Similarly or Better. **2023**, 13,
- 2 Neurotechnologies to restore hand functions.
- 1 Measuring the Effect of Vision on the Synergy of Lower Extremity Muscles during Walking using Nonnegative Matrix Factorization (NNMF) Algorithm Method. **2023**, 2023, 1-7