Wolfram Erlhagen

List of Publications by Year
in descending order

72 papers	2,131 citations	361413 20 h-index	243625 44 g-index
75 all docs	75 docs citations	75 times ranked	1379 citing authors

#	Article	IF	Citations
1	Numerical solution of the stochastic neural field equation with applications to working memory. Physica A: Statistical Mechanics and Its Applications, 2022, 596, 127166.	2.6	3
2	Brain-inspired multiple-target tracking using Dynamic Neural Fields. Neural Networks, 2022, 151, 121-131.	5.9	1
3	A neural integrator model for planning and value-based decision making of a robotics assistant. Neural Computing and Applications, 2021, 33, 3737-3756.	5.6	14
4	Dynamic Identification of Stop Locations from GPS Trajectories Based on Their Temporal and Spatial Characteristics. Lecture Notes in Computer Science, 2021, , 347-359.	1.3	3
5	Mathematical Modeling of Working Memory in the Presence of Random Disturbance using Neural Field Equations. EPJ Web of Conferences, 2021, 248, 01021.	0.3	0
6	A Human-like Upper-limb Motion Planner: Generating naturalistic movements for humanoid robots. International Journal of Advanced Robotic Systems, 2021, 18, 172988142199858.	2.1	14
7	A dynamic neural field model of continuous input integration. Biological Cybernetics, 2021, 115, 451-471.	1.3	8
8	Discrimination of idiopathic Parkinsonâ€™s disease and vascular parkinsonism based on gait time series and the levodopa effect. Journal of Biomechanics, 2021, 125, 110214.	2.1	7
9	Continual Learning of Human-like Arm Postures. , 2021, , .		0
10	Rapid Learning of Complex Sequences With Time Constraints: A Dynamic Neural Field Model. IEEE Transactions on Cognitive and Developmental Systems, 2021, 13, 853-864.	3.8	9
11	Human-Like Arm Motion Generation: A Review. Robotics, 2020, 9, 102.	3.5	31
12	Towards Endowing Collaborative Robots with Fast Learning for Minimizing Tutorsâ€™ Demonstrations: What and When to Do?. Advances in Intelligent Systems and Computing, 2020, , 368-378.	0.6	2
13	Gait Characteristics and Their Discriminative Ability in Patients with Fabry Disease with and Without White-Matter Lesions. Lecture Notes in Computer Science, 2020, , 415-428.	1.3	0
14	Attractor dynamics approach to joint transportation by autonomous robots: theory, implementation and validation on the factory floor. Autonomous Robots, 2019, 43, 589-610.	4.8	10
15	Numerical analysis of the shape of bump solutions in a neuronal model of working memory. AIP Conference Proceedings, 2019, , .	0.4	0
16	Gait classification of patients with Fabry's disease based on normalized gait features obtained using multiple regression models. , 2019, , .		4
17	Automatic Denavit-Hartenberg Parameter Identification for Serial Manipulators. , 2019, , .		15
18	Motion Control for Autonomous Tugger Vehicles in Dynamic Factory Floors Shared with Human Operators. , 2019, , .		3

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19	Neural Field Model for Measuring and Reproducing Time Intervals. Lecture Notes in Computer Science, 2019, , 327-338.	1.3	4
20	Position-based kinematics for 7-DoF serial manipulators with global configuration control, joint limit and singularity avoidance. Mechanism and Machine Theory, 2018, 121, 317-334.	4.5	69
21	Artificial Neural Networks Classification of Patients with Parkinsonism based on Gait. , 2018, , .		9
22	Numerical simulations of two-dimensional neural fields with applications to working memory. , 2018, , .		3
23	A software framework for the implementation of Dynamic Neural Field control architectures for human-robot interaction. , 2017, , .		0
24	Towards temporal cognition for robots: A neurodynamics approach. , 2017, , .		3
25	Multi-constrained joint transportation tasks by teams of autonomous mobile robots using a dynamical systems approach. , 2016, , .		33
26	Multi-bump solutions in a neural field model with external inputs. Physica D: Nonlinear Phenomena, 2016, 326, 32-51.	2.8	24
27	Combining Spatial and Parametric Working Memory in a Dynamic Neural Field Model. Lecture Notes in Computer Science, 2016, , 411-418.	1.3	4
28	Combining intention and emotional state inference in a dynamic neural field architecture for human-robot joint action. Adaptive Behavior, 2016, 24, 350-372.	1.9	5
29	Superquadrics objects representation for robot manipulation. AIP Conference Proceedings, 2016, , .	0.4	2
30	Experiential Learning of Robotics Fundamentals Based on a Case Study of Robot-Assisted Stereotactic Neurosurgery. IEEE Transactions on Education, 2016, 59, 119-128.	2.4	4
31	Learning joint representations for order and timing of perceptual-motor sequences: A dynamic neural field approach. , 2015, , .		5
32	Review of Robotic Technology for Stereotactic Neurosurgery. IEEE Reviews in Biomedical Engineering, 2015, 8, 125-137.	18.0	75
33	Off-line simulation inspires insight: A neurodynamics approach to efficient robot task learning. Neural Networks, 2015, 72, 123-139.	5.9	14
34	Global vs. local nonlinear optimization techniques for human-like movement of an anthropomorphic robot. AIP Conference Proceedings, 2015, , .	0.4	0
35	Special session: Dynamic interactions between visual experiences, actions and word learning. , 2014, , .		0
36	Learning a musical sequence by observation: A robotics implementation of a dynamic neural field model. , 2014, , .		8

#	Article	IF	Citations
37	A Dynamic Neural Field Approach to Natural and Efficient Human-Robot Collaboration. , 2014, , 341-365.		9
38	ON OBSERVATIONAL LEARNING OF HIERARCHIES IN SEQUENTIAL TASKS: A DYNAMIC NEURAL FIELD MODEL. , 2014, , .		2
39	Transportation of long objects in unknown cluttered environments by a team of robots: A dynamical systems approach. , 2013, , .		5
40	Robotic Assisted Deep Brain Stimulation Neurosurgery: First Steps on System Development. , 2013, , .		2
41	Multi-robot cognitive formations. , 2012, , .		0
42	NON-DESTRUCTIVE WHOLE-BRAIN MONITORING USING NANOROBOTS: NEURAL ELECTRICAL DATA RATE REQUIREMENTS. International Journal of Machine Consciousness, 2012, 04, 109-140.	1.0	7
43	Neuro-cognitive mechanisms of decision making in joint action: A humanâ€"robot interaction study. Human Movement Science, 2011, 30, 846-868.	1.4	58
44	A Dynamic Field Model of Ordinal and Timing Properties of Sequential Events. Lecture Notes in Computer Science, 2011, , 325-332.	1.3	5
45	A dynamic field approach to goal inference, error detection and anticipatory action selection in human-robot collaboration. Advances in Interaction Studies, 2011, , 135-164.	2.0	11
46	Effects of attention on a relative mislocalization with successively presented stimuli. Vision Research, 2010, 50, 1793-1802.	1.4	19
47	Integrating verbal and nonverbal communication in a dynamic neural field architecture for human-robot interaction. Frontiers in Neurorobotics, 2010, 4, .	2.8	28
48	Bridging the gap: a model of common neural mechanisms underlying the FrÃ¶hlich effect, the flash-lag effect, and the representational momentum effect. , 2010, , 422-440.		18
49	A dynamic neural field architecture for a pro-active assistant robot. , 2010, , .		4
50	LEARNING TO TIME: A PERSPECTIVE. Journal of the Experimental Analysis of Behavior, 2009, 92, 423-458.	1.1	63
51	Relative mislocalization of successively presented stimuli. Vision Research, 2008, 48, 2204-2212.	1.4	13
52	Implementing Bayesâ€™ Rule with Neural Fields. Lecture Notes in Computer Science, 2008, , 228-237.	1.3	6
53	On the development of intention understanding for joint action tasks. , 2007, , .		10
54	Object transportation by multiple mobile robots controlled by attractor dynamics: theory and implementation. , 2007, , .		9

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55	Goal-directed imitation for robots: A bio-inspired approach to action understanding and skill learning. Robotics and Autonomous Systems, 2006, 54, 353-360.	5.1	66
56	Goals and means in action observation: A computational approach. Neural Networks, 2006, 19, 311-322.	5.9	75
57	A dynamic model for action understanding and goal-directed imitation. Brain Research, 2006, 1083, 174-188.	2.2	58
58	Robust persistent activity in neural fields with asymmetric connectivity. Neurocomputing, 2006, 69, 1141-1145.	5.9	2
59	The dynamic neural field approach to cognitive robotics. Journal of Neural Engineering, 2006, 3, R36-R54.	3.5	111
60	Action Understanding and Imitation Learning in a Robot-Human Task. Lecture Notes in Computer Science, 2005, , 261-268.	1.3	3
61	Shorter latencies for motion trajectories than for flashes in population responses of cat primary visual cortex. Journal of Physiology, 2004, 556, 971-982.	2.9	105
62	The role of action plans and other cognitive factors in motion extrapolation: A modelling study. Visual Cognition, 2004, 11, 315-340.	1.6	22
63	Internal models for visual perception. Biological Cybernetics, 2003, 88, 409-417.	1.3	99
64	Dynamic field theory of movement preparation.. Psychological Review, 2002, 109, 545-572.	3.8	503
65	Evolving field models for inhibition effects in early vision. Neurocomputing, 2002, 44-46, 467-472.	5.9	3
66	A neural field model for saccade planning in the superior colliculus: speed-accuracy tradeoff in the double-target paradigm. Neurocomputing, 2002, 44-46, 623-628.	5.9	6
67	Optimization of dynamic neural fields. Neurocomputing, 2001, 36, 225-233.	5.9	28
68	Parametric Population Representation of Retinal Location: Neuronal Interaction Dynamics in Cat Primary Visual Cortex. Journal of Neuroscience, 1999, 19, 9016-9028.	3.6	135
69	The distribution of neuronal population activation (DPA) as a tool to study interaction and integration in cortical representations. Journal of Neuroscience Methods, 1999, 94, 53-66.	2.5	125
70	Prior information preshapes the population representation of movement direction in motor cortex. NeuroReport, 1998, 9, 315-319.	1.2	94
71	The Dynamic Neural Field Theory of Motor Programming: Arm and Eye Movements. Advances in Psychology, 1997, , 271-310.	0.1	24
72	Population coding in cat visual cortex reveals nonlinear interactions as predicted by a neural field model. Lecture Notes in Computer Science, 1996, , 641-648.	1.3	4