Stefan Schaal

List of Publications by Year in descending order

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76 papers	11,326 citations	136950 32 h-index	214800 47 g-index

77 all docs	77 docs citations	77 times ranked	6011 citing authors

#	Article	IF	Citations
1	Residual Learning From Demonstration: Adapting DMPs for Contact-Rich Manipulation. IEEE Robotics and Automation Letters, 2022, 7, 4488-4495.	5.1	14
2	Action planning and control under uncertainty emerge through a desirability-driven competition between parallel encoding motor plans. PLoS Computational Biology, 2021, 17, e1009429.	3.2	13
3	Historical Perspective of Humanoid Robot Research in the Americas. , 2019, , 9-17.		0
4	Real-Time Perception Meets Reactive Motion Generation. IEEE Robotics and Automation Letters, 2018, 3, 1864-1871.	5.1	50
5	Learning Task-Specific Dynamics to Improve Whole-Body Control. , 2018, , .		3
6	Learning Sensor Feedback Models from Demonstrations via Phase-Modulated Neural Networks. , 2018, , .		16
7	Online Learning of a Memory for Learning Rates. , 2018, , .		9
8	Historical Perspective of Humanoid Robot Research in the Americas. , 2018, , 1-9.		1
9	Learning feedback terms for reactive planning and control. , 2017, , .		27
10	Locally Weighted Regression for Control. , 2017, , 759-772.		0
11	DOOMED: Direct Online Optimization of Modeling Errors in Dynamics. Big Data, 2016, 4, 253-268.	3.4	12
12	Towards robust online inverse dynamics learning. , 2016, , .		21
13	Robot Learning. Springer Handbooks, 2016, , 357-398.	0.6	11
14	Drifting Gaussian processes with varying neighborhood sizes for online model learning. , 2016, , .		22
15	Locally Weighted Regression for Control. , 2016, , 1-14.		0
16	Force estimation and slip detection/classification for grip control using a biomimetic tactile sensor. , 2015, , .		136
17	Efficient Bayesian local model learning for control. , 2014, , .		6
18	An autonomous manipulation system based on force control and optimization. Autonomous Robots, 2014, 36, 11-30.	4.8	58

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19	Robotics and Neuroscience. Current Biology, 2014, 24, R910-R920.	3.9	64
20	Dynamical Movement Primitives: Learning Attractor Models for Motor Behaviors. Neural Computation, 2013, 25, 328-373.	2.2	1,128
21	From dynamic movement primitives to associative skill memories. Robotics and Autonomous Systems, 2013, 61, 351-361.	5.1	48
22	Model-Free Reinforcement Learning of Impedance Control in Stochastic Environments. IEEE Transactions on Autonomous Mental Development, 2012, 4, 330-341.	1.6	43
23	Bayesian robot system identification with input and output noise. Neural Networks, 2011, 24, 99-108.	5.9	24
24	Movement segmentation using a primitive library. , 2011, , .		51
25	Learning Control in Robotics. IEEE Robotics and Automation Magazine, 2010, 17, 20-29.	2.0	128
26	Constrained accelerations for controlled geometric reduction: Sagittal-plane decoupling for bipedal locomotion. , 2010, , .		3
27	Reinforcement learning of motor skills in high dimensions: A path integral approach. , 2010, , .		150
28	Learning locomotion over rough terrain using terrain templates. , 2009, , .		65
29	On-line learning and modulation of periodic movements withÂnonlinear dynamical systems. Autonomous Robots, 2009, 27, 3-23.	4.8	148
30	Local Dimensionality Reduction for Non-Parametric Regression. Neural Processing Letters, 2009, 29, 109-131.	3.2	29
31	Compact models of motor primitive variations for predictable reaching and obstacle avoidance. , 2009, , .		23
32	Biologically-inspired dynamical systems for movement generation: Automatic real-time goal adaptation and obstacle avoidance. , 2009, , .		184
33	Inertial parameter estimation of floating base humanoid systems using partial force sensing. , 2009, , .		30
34	Learning and generalization of motor skills by learning from demonstration. , 2009, , .		425
35	Reinforcement learning of motor skills with policy gradients. Neural Networks, 2008, 21, 682-697.	5.9	611
36	Natural Actor-Critic. Neurocomputing, 2008, 71, 1180-1190.	5.9	490

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37	Robot Programming by Demonstration. , 2008, , 1371-1394.		691
38	Movement reproduction and obstacle avoidance with dynamic movement primitives and potential fields. , 2008, , .		81
39	A Bayesian approach to empirical local linearization for robotics. , 2008, , .		11
40	Learning to Control in Operational Space. International Journal of Robotics Research, 2008, 27, 197-212.	8.5	175
41	Task space control with prioritization for balance and locomotion. , 2007, , .		18
42	Automatic Outlier Detection: A Bayesian Approach. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	23
43	The new roboticsâ€"towards humanâ€centered machines. HFSP Journal, 2007, 1, 115-126.	2.5	64
44	Towards compliant humanoids-an experimental assessment of suitable task space position/orientation controllers. , 2007, , .		3
45	Dynamics systems vs. optimal control â€" a unifying view. Progress in Brain Research, 2007, 165, 425-445.	1.4	206
46	Inverse Dynamics Control with Floating Base and Constraints. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	25
47	A Robust Quadruped Walking Gait for Traversing Rough Terrain. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	76
48	Dynamic Movement Primitives -A Framework for Motor Control in Humans and Humanoid Robotics. , 2006, , 261-280.		314
49	Dynamic systems: brain, body, and imitation. , 2006, , 177-214.		1
50	Composite adaptive control with locally weighted statistical learning. Neural Networks, 2005, 18, 71-90.	5.9	93
51	Computational motor control in humans and robots. Current Opinion in Neurobiology, 2005, 15, 675-682.	4.2	84
52	Natural Actor-Critic. Lecture Notes in Computer Science, 2005, , 280-291.	1.3	105
53	Incremental Online Learning in High Dimensions. Neural Computation, 2005, 17, 2602-2634.	2.2	479
54	Rhythmic arm movement is not discrete. Nature Neuroscience, 2004, 7, 1136-1143.	14.8	292

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55	Discovering optimal imitation strategies. Robotics and Autonomous Systems, 2004, 47, 69-77.	5.1	140
56	Learning from demonstration and adaptation of biped locomotion. Robotics and Autonomous Systems, 2004, 47, 79-91.	5.1	361
57	Feedback error learning and nonlinear adaptive control. Neural Networks, 2004, 17, 1453-1465.	5.9	124
58	Learning from demonstration and adaptation of biped locomotion. Robotics and Autonomous Systems, 2004, 47, 79-79.	5.1	25
59	Discovering optimal imitation strategies. Robotics and Autonomous Systems, 2004, 47, 69-69.	5.1	4
60	Learning Movement Primitives for Imitation Learning in Humanoid Robots. Journal of the Robotics Society of Japan, 2004, 22, 165-170.	0.1	5
61	Computational approaches to motor learning by imitation. Philosophical Transactions of the Royal Society B: Biological Sciences, 2003, 358, 537-547.	4.0	431
62	Statistical Learning for Humanoid Robots. Autonomous Robots, 2002, 12, 55-69.	4.8	64
63	Scalable Techniques from Nonparametric Statistics for Real Time Robot Learning. Applied Intelligence, 2002, 17, 49-60.	5.3	177
64	Origins and violations of the 2/3 power law in rhythmic three-dimensional arm movements. Experimental Brain Research, 2001, 136, 60-72.	1.5	169
65	Fast Learning of Biomimetic Oculomotor Control with Nonparametric Regression Networks.. Journal of the Robotics Society of Japan, 2001, 19, 468-475.	0.1	0
66	Kawato Dynamic Brain Project. Online Statistical Robot Learning.. Journal of the Robotics Society of Japan, 2001, 19, 561-568.	0.1	0
67	Humanoid robot â€œDBâ€•, 2001, , 279-284.		2
68	Nonparametric Regression for Learning Nonlinear Transformations. Studies in Cognitive Systems, 2000, , 1054-1080.	0.1	3
69	Is imitation learning the route to humanoid robots?. Trends in Cognitive Sciences, 1999, 3, 233-242.	7.8	978
70	Local Adaptive Subspace Regression. Neural Processing Letters, 1998, 7, 139-149.	3.2	17
71	Constructive Incremental Learning from Only Local Information. Neural Computation, 1998, 10, 2047-2084.	2.2	421
72	Robot gaze stabilization based on mimesis of oculomotor dynamics and vestibulocerebellar learning. Advanced Robotics, 1998, 13, 351-352.	1.8	4

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73	Locally Weighted Learning for Control. Artificial Intelligence Review, 1997, 11, 75-113.	15.7	292
74	Locally Weighted Learning. Artificial Intelligence Review, 1997, 11, 11-73.	15.7	1,143
75	A Kendama Learning Robot Based on Bi-directional Theory. Neural Networks, 1996, 9, 1281-1302.	5.9	139
76	Memory-based neural networks for robot learning. Neurocomputing, 1995, 9, 243-269.	5.9	40