Pieter Abbeel

List of Publications by Year
in descending order

64 papers	9,317 citations	566801 15 h-index	996533 15 g-index
64 all docs	64 docs citations	64 times ranked	6306 citing authors

#	ARTICLE	IF	CITATIONS
1	Apprenticeship learning via inverse reinforcement learning. , 2004, , .		1,373
2	Domain randomization for transferring deep neural networks from simulation to the real world. , 2017, , .		1,273
3	Motion planning with sequential convex optimization and convex collision checking. International Journal of Robotics Research, 2014, 33, 1251-1270.	5.8	532
4	Sim-to-Real Transfer of Robotic Control with Dynamics Randomization. , 2018, , .		451
5	Autonomous Helicopter Aerobatics through Apprenticeship Learning. International Journal of Robotics Research, 2010, 29, 1608-1639.	5.8	406
6	Benchmarking in Manipulation Research: Using the Yale-CMU-Berkeley Object and Model Set. IEEE Robotics and Automation Magazine, 2015, 22, 36-52.	2.2	384
7	The limits and potentials of deep learning for robotics. International Journal of Robotics Research, 2018, 37, 405-420.	5.8	320
8	LQG-MP: Optimized path planning for robots with motion uncertainty and imperfect state information. International Journal of Robotics Research, 2011, 30, 895-913.	5.8	271
9	Deep Imitation Learning for Complex Manipulation Tasks from Virtual Reality Teleoperation. , 2018, , .		263
10	Cloth grasp point detection based on multiple-view geometric cues with application to robotic towel folding. , 2010, , .		258
11	Finding Locally Optimal, Collision-Free Trajectories with Sequential Convex Optimization. , 0, , .		239
12	Learning deep control policies for autonomous aerial vehicles with MPC-guided policy search. , 2016, , .		236
13	An Algorithmic Perspective on Imitation Learning. Foundations and Trends in Robotics, 2018, 7, 1-179.	5.0	212
14	BigBIRD: A large-scale 3D database of object instances. , 2014, , .		205
15	Deep spatial autoencoders for visuomotor learning. , 2016, , .		205
16	Yale-CMU-Berkeley dataset for robotic manipulation research. International Journal of Robotics Research, 2017, 36, 261-268.	5.8	205
17	Learning the Dynamics of Arterial Traffic From Probe Data Using a Dynamic Bayesian Network. IEEE Transactions on Intelligent Transportation Systems, 2012, 13, 1679-1693.	4.7	193
18	A geometric approach to robotic laundry folding. International Journal of Robotics Research, 2012, 31, 249-267.	5.8	183

#	ARTICLE	IF	CITATIONS
19	Learning contact-rich manipulation skills with guided policy search. , 2015, , .		161
20	Learning for control from multiple demonstrations. , 2008, , .		140
21	Estimating arterial traffic conditions using sparse probe data. , 2010, , .		134
22	Exploration and apprenticeship learning in reinforcement learning. , 2005, , .		124
23	Using inaccurate models in reinforcement learning. , 2006, , .		109
24	Deep learning helicopter dynamics models. , 2015, , .		107
25	BADGR: An Autonomous Self-Supervised Learning-Based Navigation System. IEEE Robotics and Automation Letters, 2021, 6, 1312-1319.	3.3	103
26	Imitation from Observation: Learning to Imitate Behaviors from Raw Video via Context Translation. , 2018, , .		99
27	Learning dexterous manipulation for a soft robotic hand from human demonstrations. , 2016, , .		91
28	Learning force-based manipulation of deformable objects from multiple demonstrations. , 2015, , .		83
29	Parametrized shape models for clothing. , 2011, , .		62
30	One-shot learning of manipulation skills with online dynamics adaptation and neural network priors. , 2016, , .		54
31	Scaling the mobile millennium system in the cloud. , 2011, , .		53
32	Deciphering the Role of a Coleopteran Steering Muscle via Free Flight Stimulation. Current Biology, 2015, 25, 798-803.	1.8	50
33	Gravity-Based Robotic Cloth Folding. Springer Tracts in Advanced Robotics, 2010, , 409-424.	0.3	44
34	Quasi-Direct Drive for Low-Cost Compliant Robotic Manipulation. , 2019, , .		43
35	Scaling up Gaussian Belief Space Planning Through Covariance-Free Trajectory Optimization and Automatic Differentiation. Springer Tracts in Advanced Robotics, 2015, , 515-533.	0.3	41
36	A Biological Micro Actuator: Graded and Closed-Loop Control of Insect Leg Motion by Electrical Stimulation of Muscles. PLoS ONE, 2014, 9, e105389.	1.1	41

#	Article	IF	Citations
37	Learning deep neural network policies with continuous memory states. , 2016, , .		40
38	Performance analysis and terrain classification for a legged robot over rough terrain. , 2012, , .		39
39	Toward asymptotically optimal motion planning for kinodynamic systems using a two-point boundary value problem solver. , 2015, , .		39
40	A textured object recognition pipeline for color and depth image data. , 2012, , .		36
41	Physics-based trajectory optimization for grasping in cluttered environments. , 2015, , .		36
42	LQG-Based Planning, Sensing, and Control of Steerable Needles. Springer Tracts in Advanced Robotics, 2010, , 373-389.	0.3	35
43	Modeling and perception of deformable one-dimensional objects. , 2011, , .		34
44	Deep Object-Centric Representations for Generalizable Robot Learning. , 2018, , .		33
45	Sigma hulls for Gaussian belief space planning for imprecise articulated robots amid obstacles. , 2013, , .		29
46	Leveraging appearance priors in non-rigid registration, with application to manipulation of deformable objects. , 2015, , .		25
47	Unifying scene registration and trajectory optimization for learning from demonstrations with application to manipulation of deformable objects. , 2014, , .		22
48	Multi-armed bandit models for 2D grasp planning with uncertainty. , 2015, , .		20
49	Model-based reinforcement learning with parametrized physical models and optimism-driven exploration. , 2016, , .		17
50	Multimodal blending for high-accuracy instance recognition. , 2013, , .		16
51	Predicting initialization effectiveness for trajectory optimization. , 2014, , .		16
52	Reset-free guided policy search: Efficient deep reinforcement learning with stochastic initial states. , 2017, , .		16
53	Optimism-driven exploration for nonlinear systems. , 2015, , .		15
54	Learning from multiple demonstrations using trajectory-aware non-rigid registration with applications to deformable object manipulation. , 2015, , .		15

#	Article	IF	Citations
55	Parameterized maneuver learning for autonomous helicopter flight. , 2010, , .		14
56	Planning locally optimal, curvature-constrained trajectories in 3D using sequential convex optimization. , 2014, , .		14
57	An algorithm for computing customized 3D printed implants with curvature constrained channels for enhancing intracavitary brachytherapy radiation delivery. , 2013, , .		12
58	Learning compound multi-step controllers under unknown dynamics. , 2015, , .		12
59	Range sensor and silhouette fusion for high-quality 3D Scanning. , 2015, , .		9
60	A non-rigid point and normal registration algorithm with applications to learning from demonstrations. , 2015, , .		7
61	Optimized color models for high-quality 3D scanning. , 2015, , .		6
62	Blue Gripper: A Robust, Low-Cost, and Force-Controlled Robot Hand. , 2019, , .		6
63	Occlusion-aware multi-robot 3D tracking. , 2016, , .		4
64	Beyond lowest-warping cost action selection in trajectory transfer. , 2015, , .		2