Pieter Abbeel

List of Publications by Year
in descending order

64 papers	9,317 citations	567281 15 h-index	996975 15 g-index
64 all docs	64 docs citations	64 times ranked	6306 citing authors

#	Article	IF	Citations
1	BADGR: An Autonomous Self-Supervised Learning-Based Navigation System. IEEE Robotics and Automation Letters, 2021, 6, 1312-1319.	5.1	103
2	Quasi-Direct Drive for Low-Cost Compliant Robotic Manipulation. , 2019, , .		43
3	Blue Gripper: A Robust, Low-Cost, and Force-Controlled Robot Hand. , 2019, , .		6
4	The limits and potentials of deep learning for robotics. International Journal of Robotics Research, 2018, 37, 405-420.	8.5	320
5	An Algorithmic Perspective on Imitation Learning. Foundations and Trends in Robotics, 2018, 7, 1-179.	6.9	212
6	Imitation from Observation: Learning to Imitate Behaviors from Raw Video via Context Translation. , 2018, , .		99
7	Deep Imitation Learning for Complex Manipulation Tasks from Virtual Reality Teleoperation. , 2018, , .		263
8	Deep Object-Centric Representations for Generalizable Robot Learning. , 2018, , .		33
9	Sim-to-Real Transfer of Robotic Control with Dynamics Randomization. , 2018, , .		451
10	Yale-CMU-Berkeley dataset for robotic manipulation research. International Journal of Robotics Research, 2017, 36, 261-268.	8.5	205
11	Domain randomization for transferring deep neural networks from simulation to the real world. , 2017, , .		1,273
12	Reset-free guided policy search: Efficient deep reinforcement learning with stochastic initial states. , 2017, , .		16
13	Learning deep control policies for autonomous aerial vehicles with MPC-guided policy search. , 2016, , .		236
14	Model-based reinforcement learning with parametrized physical models and optimism-driven exploration. , 2016, , .		17
15	Occlusion-aware multi-robot 3D tracking. , 2016, , .		4
16	Learning dexterous manipulation for a soft robotic hand from human demonstrations. , 2016, , .		91
17	One-shot learning of manipulation skills with online dynamics adaptation and neural network priors. , 2016, , .		54
18	Deep spatial autoencoders for visuomotor learning. , 2016, , .		205

#	Article	IF	Citations
19	Learning deep neural network policies with continuous memory states. , 2016, , .		40
20	Range sensor and silhouette fusion for high-quality 3D Scanning. , 2015, , .		9
21	Optimism-driven exploration for nonlinear systems. , 2015, , .		15
22	Physics-based trajectory optimization for grasping in cluttered environments. , 2015, , .		36
23	Learning from multiple demonstrations using trajectory-aware non-rigid registration with applications to deformable object manipulation. , 2015, , .		15
24	Optimized color models for high-quality 3D scanning. , 2015, , .		6
25	Learning compound multi-step controllers under unknown dynamics. , 2015, , .		12
26	A non-rigid point and normal registration algorithm with applications to learning from demonstrations. , 2015, , .		7
27	Beyond lowest-warping cost action selection in trajectory transfer. , 2015, , .		2
28	Leveraging appearance priors in non-rigid registration, with application to manipulation of deformable objects. , 2015, , .		25
29	Multi-armed bandit models for 2D grasp planning with uncertainty. , 2015, , .		20
30	Toward asymptotically optimal motion planning for kinodynamic systems using a two-point boundary value problem solver. , 2015, , .		39
31	Learning force-based manipulation of deformable objects from multiple demonstrations. , 2015, , .		83
32	Deep learning helicopter dynamics models. , 2015, , .		107
33	Deciphering the Role of a Coleopteran Steering Muscle via Free Flight Stimulation. Current Biology, 2015, 25, 798-803.	3.9	50
34	Learning contact-rich manipulation skills with guided policy search. , 2015, , .		161
35	Benchmarking in Manipulation Research: Using the Yale-CMU-Berkeley Object and Model Set. IEEE Robotics and Automation Magazine, 2015, 22, 36-52.	2.0	384
36	Scaling up Gaussian Belief Space Planning Through Covariance-Free Trajectory Optimization and Automatic Differentiation. Springer Tracts in Advanced Robotics, 2015, , 515-533.	0.4	41

#	Article	IF	Citations
37	Unifying scene registration and trajectory optimization for learning from demonstrations with application to manipulation of deformable objects. , 2014, , .		22
38	Predicting initialization effectiveness for trajectory optimization. , 2014, , .		16
39	Planning locally optimal, curvature-constrained trajectories in 3D using sequential convex optimization. , 2014, , .		14
40	BigBIRD: A large-scale 3D database of object instances. , 2014, , .		205
41	Motion planning with sequential convex optimization and convex collision checking. International Journal of Robotics Research, 2014, 33, 1251-1270.	8.5	532
42	A Biological Micro Actuator: Graded and Closed-Loop Control of Insect Leg Motion by Electrical Stimulation of Muscles. PLoS ONE, 2014, 9, e105389.	2.5	41
43	An algorithm for computing customized 3D printed implants with curvature constrained channels for enhancing intracavitary brachytherapy radiation delivery. , 2013, , .		12
44	Sigma hulls for Gaussian belief space planning for imprecise articulated robots amid obstacles. , 2013, , .		29
45	Multimodal blending for high-accuracy instance recognition. , 2013, , .		16
46	A geometric approach to robotic laundry folding. International Journal of Robotics Research, 2012, 31, 249-267.	8.5	183
47	A textured object recognition pipeline for color and depth image data. , 2012, , .		36
48	Performance analysis and terrain classification for a legged robot over rough terrain. , 2012, , .		39
49	Learning the Dynamics of Arterial Traffic From Probe Data Using a Dynamic Bayesian Network. IEEE Transactions on Intelligent Transportation Systems, 2012, 13, 1679-1693.	8.0	193
50	Modeling and perception of deformable one-dimensional objects. , 2011, , .		34
51	Scaling the mobile millennium system in the cloud. , 2011, , .		53
52	LQG-MP: Optimized path planning for robots with motion uncertainty and imperfect state information. International Journal of Robotics Research, 2011, 30, 895-913.	8.5	271
53	Parametrized shape models for clothing. , 2011, , .		62
54	LQG-Based Planning, Sensing, and Control of Steerable Needles. Springer Tracts in Advanced Robotics, 2010, , 373-389.	0.4	35

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55	Cloth grasp point detection based on multiple-view geometric cues with application to robotic towel folding. , 2010, , .		258
56	Parameterized maneuver learning for autonomous helicopter flight. , 2010, , .		14
57	Estimating arterial traffic conditions using sparse probe data. , 2010, , .		134
58	Autonomous Helicopter Aerobatics through Apprenticeship Learning. International Journal of Robotics Research, 2010, 29, 1608-1639.	8.5	406
59	Gravity-Based Robotic Cloth Folding. Springer Tracts in Advanced Robotics, 2010, , 409-424.	0.4	44
60	Learning for control from multiple demonstrations. , 2008, , .		140
61	Using inaccurate models in reinforcement learning. , 2006, , .		109
62	Exploration and apprenticeship learning in reinforcement learning. , 2005, , .		124
63	Apprenticeship learning via inverse reinforcement learning. , 2004, , .		1,373
64	Finding Locally Optimal, Collision-Free Trajectories with Sequential Convex Optimization. , 0, , .		239