Danica Kragic

List of Publications by Year
in descending order

120 papers	5,137 citations	304743 22 h-index	276875 41 g-index
120 all docs	120 docs citations	120 times ranked	3854 citing authors

#	Article	IF	Citations
1	Data-Driven Grasp Synthesisâ€"A Survey. IEEE Transactions on Robotics, 2014, 30, 289-309.	10.3	681
2	Combating COVID-19â€"The role of robotics in managing public health and infectious diseases. Science Robotics, 2020, 5, .	17.6	393
3	Dual arm manipulationâ€"A survey. Robotics and Autonomous Systems, 2012, 60, 1340-1353.	5.1	391
4	Trends and challenges in robot manipulation. Science, 2019, 364, .	12.6	380
5	Deep Representation Learning for Human Motion Prediction and Classification. , 2017, , .		221
6	Design of a flexible tactile sensor for classification of rigid and deformable objects. Robotics and Autonomous Systems, 2014, 62, 3-15.	5.1	182
7	Assessing Grasp Stability Based on Learning and Haptic Data. IEEE Transactions on Robotics, 2011, 27, 616-629.	10.3	161
8	Interactive Perception: Leveraging Action in Perception and Perception in Action. IEEE Transactions on Robotics, 2017, 33, 1273-1291.	10.3	154
9	The meaning of action: a review on action recognition and mapping. Advanced Robotics, 2007, 21, 1473-1501.	1.8	127
10	Minimum volume bounding box decomposition for shape approximation in robot grasping. , 2008, , .		119
11	Modeling, learning, perception, and control methods for deformable object manipulation. Science Robotics, 2021, 6, .	17.6	96
12	Hierarchical Fingertip Space: A Unified Framework for Grasp Planning and In-Hand Grasp Adaptation. IEEE Transactions on Robotics, 2016, 32, 960-972.	10.3	85
13	Learning Actions from Observations. IEEE Robotics and Automation Magazine, 2010, 17, 30-43.	2.0	84
14	Monocular real-time 3D articulated hand pose estimation. , 2009, , .		74
15	Perching and restingâ€"A paradigm for UAV maneuvering with modularized landing gears. Science Robotics, 2019, 4, .	17.6	69
16	Learning of grasp adaptation through experience and tactile sensing. , 2014, , .		68
17	Learning a dictionary of prototypical grasp-predicting parts from grasping experience. , 2013, , .		67
18	Deep predictive policy training using reinforcement learning. , 2017, , .		67

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19	A Metric for Comparing the Anthropomorphic Motion Capability of Artificial Hands. IEEE Transactions on Robotics, 2013, 29, 82-93.	10.3	66
20	SimTrack: A simulation-based framework for scalable real-time object pose detection and tracking. , 2015, , .		59
21	Affordance detection for task-specific grasping using deep learning. , 2017, , .		58
22	Generalizing grasps across partly similar objects. , 2012, , .		47
23	Modeling of Deformable Objects for Robotic Manipulation: A Tutorial and Review. Frontiers in Robotics and AI, 2020, 7, 82.	3.2	46
24	Benchmarking Bimanual Cloth Manipulation. IEEE Robotics and Automation Letters, 2020, 5, 1111-1118.	5.1	43
25	Classical grasp quality evaluation: New algorithms and theory. , 2013, , .		41
26	Human-Centered Collaborative Robots With Deep Reinforcement Learning. IEEE Robotics and Automation Letters, 2021, 6, 566-571.	5.1	41
27	Learning grasp stability based on tactile data and HMMs. , 2010, , .		40
28	Multivariate discretization for Bayesian Network structure learning in robot grasping. , 2011, , .		38
29	Learning Task-Oriented Grasping From Human Activity Datasets. IEEE Robotics and Automation Letters, 2020, 5, 3352-3359.	5.1	38
30	Classification of rigid and deformable objects using a novel tactile sensor. , 2011, , .		37
31	From object categories to grasp transfer using probabilistic reasoning. , 2012, , .		36
32	End-to-end nonprehensile rearrangement with deep reinforcement learning and simulation-to-reality transfer. Robotics and Autonomous Systems, 2019, 119, 119-134.	5.1	35
33	Layered HMM for Motion Intention Recognition. , 2006, , .		34
34	Predicting human intention in visual observations of hand/object interactions. , 2013, , .		34
35	A sensorimotor reinforcement learning framework for physical Human-Robot Interaction. , 2016, , .		34
36	Online contact point estimation for uncalibrated tool use. , 2014, , .		33

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37	Grasping objects with holes: A topological approach. , 2013, , .		31
38	What's in the container? Classifying object contents from vision and touch. , 2014, , .		31
39	An Adaptive Control Approach for Opening Doors and Drawers Under Uncertainties. IEEE Transactions on Robotics, 2016, 32, 161-175.	10.3	31
40	Hierarchical Fingertip Space for multi-fingered precision grasping. , 2014, , .		30
41	A probabilistic framework for task-oriented grasp stability assessment. , 2013, , .		29
42	In-hand manipulation using gravity and controlled slip. , 2015, , .		26
43	Herding by Caging: a Topological Approach towards Guiding Moving Agents via Mobile Robots. , 0, , .		26
44	A Framework for Optimal Grasp Contact Planning. IEEE Robotics and Automation Letters, 2017, 2, 704-711.	5.1	25
45	Visual recognition of grasps for human-to-robot mapping. , 2008, , .		24
46	Enabling grasping of unknown objects through a synergistic use of edge and surface information. International Journal of Robotics Research, 2012, 31, 1190-1213.	8.5	24
47	Analytic grasp success prediction with tactile feedback. , 2016, , .		24
48	Caging Grasps of Rigid and Partially Deformable 3-D Objects With Double Fork and Neck Features. IEEE Transactions on Robotics, 2016, 32, 1479-1497.	10.3	23
49	Adaptive control for pivoting with visual and tactile feedback. , 2016, , .		23
50	Improving generalization for 3D object categorization with Global Structure Histograms. , 2012, , .		22
51	Cohomological learning of periodic motion. Applicable Algebra in Engineering, Communications and Computing, 2015, 26, 5-26.	0.5	22
52	Learning to Estimate Pose and Shape of Hand-Held Objects from RGB Images. , 2019, , .		22
53	Benchmarking In-Hand Manipulation. IEEE Robotics and Automation Letters, 2020, 5, 588-595.	5.1	22
54	Learning the tactile signatures of prototypical object parts for robust part-based grasping of novel objects. , 2015, , .		20

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55	Multi-armed bandit models for 2D grasp planning with uncertainty. , 2015, , .		20
56	Dexterous Manipulation Graphs. , 2018, , .		20
57	Latent Space Roadmap for Visual Action Planning of Deformable and Rigid Object Manipulation. , 2020, , .		19
58	VisGraB: A Benchmark for Vision-Based Grasping. Paladyn, 2012, 3, .	2.7	18
59	Combinatorial optimization for hierarchical contact-level grasping. , 2014, , .		18
60	Active exploration using Gaussian Random Fields and Gaussian Process Implicit Surfaces. , 2016, , .		18
61	Stability-Guaranteed Reinforcement Learning for Contact-Rich Manipulation. IEEE Robotics and Automation Letters, 2021, 6, 1-8.	5.1	18
62	Distributed cooperative object attitude manipulation. , 2012, , .		17
63	Herding by caging: a formation-based motion planning framework for guiding mobile agents. Autonomous Robots, 2021, 45, 613-631.	4.8	16
64	Strategies for multi-modal scene exploration. , 2010, , .		15
65	Model-free robot manipulation of doors and drawers by means of fixed-grasps. , 2013, , .		15
66	Estimating the deformability of elastic materials using optical flow and position-based dynamics. , 2015, , .		15
67	Imitating by Generating: Deep Generative Models for Imitation of Interactive Tasks. Frontiers in Robotics and AI, 2020, 7, 47.	3.2	15
68	Integrating grasp planning with online stability assessment using tactile sensing. , 2011, , .		14
69	Learning object, grasping and manipulation activities using hierarchical HMMs. Autonomous Robots, 2014, 37, 317-331.	4.8	14
70	Grasp recognition and mapping on humanoid robots. , 2009, , .		12
71	A Multi Objective Control approach to Online Dual Arm Manipulation1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 747-752.	0.4	12
72	Object Placement Planning and optimization for Robot Manipulators. , 2019, , .		12

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73	Data-Driven Model Predictive Control for the Contact-Rich Task of Food Cutting. , 2019, , .		12
74	Data-Efficient Model Learning and Prediction for Contact-Rich Manipulation Tasks. IEEE Robotics and Automation Letters, 2020, 5, 4321-4328.	5.1	12
75	Mapping human intentions to robot motions via physical interaction through a jointly-held object. , 2014, , .		11
76	Grasp moduli spaces and spherical harmonics. , 2014, , .		11
77	VPE: Variational Policy Embedding for Transfer Reinforcement Learning. , 2019, , .		9
78	Predicting slippage and learning manipulation affordances through Gaussian Process regression. , 2013, , .		8
79	Online kinematics estimation for active human-robot manipulation of jointly held objects. , 2013, , .		8
80	Integrated on-line robot-camera calibration and object pose estimation. , 2016, , .		8
81	Active perception and modeling of deformable surfaces using Gaussian processes and position-based dynamics. , 2016, , .		8
82	Graph-based Task-specific Prediction Models for Interactions between Deformable and Rigid Objects. , 2021, , .		8
83	Fashion Landmark Detection and Category Classification for Robotics. , 2020, , .		7
84	Effective and natural human-robot interaction requires multidisciplinary research. Science Robotics, 2021, 6, eabl7022.	17.6	7
85	Estimating tactile data for adaptive grasping of novel objects. , 2017, , .		6
86	A Robotics-Inspired Screening Algorithm for Molecular Caging Prediction. Journal of Chemical Information and Modeling, 2020, 60, 1302-1316.	5.4	6
87	Learning Deep Energy Shaping Policies for Stability-Guaranteed Manipulation. IEEE Robotics and Automation Letters, 2021, 6, 8583-8590.	5.1	6
88	Embodiment-specific representation of robot grasping using graphical models and latent-space discretization. , 2011, , .		6
89	Textile Taxonomy and Classification Using Pulling and Twisting. , 2021, , .		6
90	Tracking rigid objects using integration of model-based and model-free cues. Machine Vision and Applications, 2011, 22, 323-335.	2.7	5

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91	Learning Predictive State Representation for in-hand manipulation. , 2015, , .		5
92	Estimating deformability of objects using meshless shape matching. , 2017, , .		5
93	Exploring Temporal Dependencies in Multimodal Referring Expressions with Mixed Reality. Lecture Notes in Computer Science, 2019, , 108-123.	1.3	5
94	Representations for object grasping and learning from experience. , 2010, , .		4
95	Integrating 3D features and virtual visual servoing for hand-eye and humanoid robot pose estimation. , 2013, , .		4
96	Partial Caging: A Clearance-Based Definition and Deep Learning. , 2019, , .		4
97	Coordinating With a Robot Partner Affects Neural Processing Related to Action Monitoring. Frontiers in Neurorobotics, 2021, 15, 686010.	2.8	4
98	Safe Data-Driven Contact-Rich Manipulation. , 2021, , .		4
99	YES - YEt another object segmentation: Exploiting camera movement. , 2012, , .		3
100	Sparse summarization of robotic grasping data. , 2013, , .		3
101	From active perception to deep learning. Science Robotics, 2018, 3, .	17.6	3
102	Placing Objects with prior In-Hand Manipulation using Dexterous Manipulation Graphs. , 2019, , .		3
103	Variational Auto-Regularized Alignment for Sim-to-Real Control. , 2020, , .		3
104	Learning Stable Normalizing-Flow Control for Robotic Manipulation. , 2021, , .		3
105	Modelling and Learning Dynamics for Robotic Food-Cutting. , 2021, , .		3
106	Extracting essential local object characteristics for 3D object categorization. , 2013, , .		2
107	Cooperative grasping through topological object representation. , 2014, , .		2
108	Evaluating the Quality of Non-Prehensile Balancing Grasps. , 2018, , .		2

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109	Visual and tactile 3D point cloud data from real robots for shape modeling and completion. Data in Brief, 2020, 30, 105335.	1.0	2
110	Partial caging: a clearance-based definition, datasets, and deep learning. Autonomous Robots, 2021, 45, 647-664.	4.8	2
111	Co-adaptive Human–Robot Cooperation: Summary and Challenges. Unmanned Systems, 2022, 10, 187-203.	3.6	2
112	Interpretability in Contact-Rich Manipulation via Kinodynamic Images. , 2021, , .		2
113	A high level decentralized tracking algorithm for three manipulators subject to motion constraints. , 2012, , .		1
114	Vision for acting and interacting robots. , 2010, , .		0
115	Unsupervised learning of action primitives. , 2010, , .		0
116	Learning Predictive State Representations for planning. , 2015, , .		0
117	In-Hand Manipulation of Objects with Unknown Shapes. , 2020, , .		0
118	Discrete Bimanual Manipulation for Wrench Balancing. , 2020, , .		0
119	Learning Task Constraints in Visual-Action Planning from Demonstrations. , 2021, , .		0
120	Grasping Grasping in GRASP. Journal of the Robotics Society of Japan, 2013, 31, 330-333.	0.1	0