Sonia Chernova

List of Publications by Year in descending order

92 papers	3,963 citations	566801 15 h-index	395343 33 g-index
92 all docs	92 docs citations	92 times ranked	2729 citing authors

#	Article	IF	Citations
1	GRSTAPS: Graphically Recursive Simultaneous Task Allocation, Planning, and Scheduling. International Journal of Robotics Research, 2022, 41, 232-256.	5.8	11
2	Toward a One-interaction Data-driven Guide: Putting Co-speech Gesture Evidence to Work for Ambiguous Route Instructions. , 2021, , .		2
3	Explainable AI for Robot Failures. , 2021, , .		50
4	Bi-Directional Domain Adaptation for Sim2Real Transfer of Embodied Navigation Agents. IEEE Robotics and Automation Letters, 2021, 6, 2634-2641.	3.3	29
5	Continual Learning of Knowledge Graph Embeddings. IEEE Robotics and Automation Letters, 2021, 6, 1128-1135.	3.3	16
6	Predicting Individual Human Performance in Human-Robot Teaming. , 2021, , .		0
7	Towards Robust One-shot Task Execution using Knowledge Graph Embeddings. , 2021, , .		10
8	Desperate Times Call for Desperate Measures: Towards Risk-Adaptive Task Allocation. , 2021, , .		6
9	Learning Navigation Skills for Legged Robots with Learned Robot Embeddings. , 2021, , .		5
10	Recent Advances in Robot Learning from Demonstration. Annual Review of Control, Robotics, and Autonomous Systems, 2020, 3, 297-330.	7.5	311
11	Leveraging depth data in remote robot teleoperation interfaces for general object manipulation. International Journal of Robotics Research, 2020, 39, 39-53.	5.8	23
12	Benchmark for Skill Learning from Demonstration: Impact of User Experience, Task Complexity, and Start Configuration on Performance. , 2020, , .		3
13	Sim2Real Predictivity: Does Evaluation in Simulation Predict Real-World Performance?. IEEE Robotics and Automation Letters, 2020, 5, 6670-6677.	3.3	69
14	A Tale of Two Suggestions: Action and Diagnosis Recommendations for Responding to Robot Failure. , 2020, , .		4
15	CAGE: Context-Aware Grasping Engine. , 2020, , .		19
16	Human-Centric Active Perception for Autonomous Observation. , 2020, , .		7
17	Feature Guided Search for Creative Problem Solving Through Tool Construction. Frontiers in Robotics and AI, 2020, 7, 592382.	2.0	3
18	STRATA: unified framework for task assignments in large teams of heterogeneous agents. Autonomous Agents and Multi-Agent Systems, 2020, 34, 1.	1.3	27

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19	Multimodal Material Classification for Robots using Spectroscopy and High Resolution Texture Imaging. , 2020, , .		26
20	Leveraging rationales to improve human task performance. , 2020, , .		22
21	Situated Bayesian Reasoning Framework for Robots Operating in Diverse Everyday Environments. Springer Proceedings in Advanced Robotics, 2020, , 353-369.	0.9	9
22	Approximated Dynamic Trait Models for Heterogeneous Multi-Robot Teams. , 2020, , .		2
23	Anticipatory Human-Robot Collaboration via Multi-Objective Trajectory Optimization. , 2020, , .		6
24	Skill Acquisition via Automated Multi-Coordinate Cost Balancing. , 2019, , .		7
25	Tool Macgyvering: Tool Construction Using Geometric Reasoning. , 2019, , .		10
26	Real-time Multisensory Affordance-based Control for Adaptive Object Manipulation. , 2019, , .		1
27	Classification of Household Materials via Spectroscopy. IEEE Robotics and Automation Letters, 2019, 4, 700-707.	3.3	36
28	Effectiveness of Robot Communication Level on Likeability, Understandability and Comfortability. , 2019, , .		7
29	Human Trust After Robot Mistakes: Study of the Effects of Different Forms of Robot Communication. , 2019, , .		14
30	Simultaneous learning of hierarchy and primitives for complex robot tasks. Autonomous Robots, 2019, 43, 859-874.	3.2	13
31	Active Learning within Constrained Environments through Imitation of an Expert Questioner. , 2019, , .		5
32	Learning Generalizable Robot Skills from Demonstrations in Cluttered Environments. , 2018, , .		4
33	Robot Classification of Human Interruptibility and a Study of Its Effects. ACM Transactions on Human-Robot Interaction, 2018, 7, 1-35.	3.2	9
34	Towards Intelligent Arbitration of Diverse Active Learning Queries. , 2018, , .		7
35	Learning Sequential Decision Tasks for Robot Manipulation with Abstract Markov Decision Processes and Demonstration-Guided Exploration. , 2018, , .		2
36	Trajectory-Based Skill Learning Using Generalized Cylinders. Frontiers in Robotics and AI, 2018, 5, 132.	2.0	11

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37	Human-Driven Feature Selection for a Robotic Agent Learning Classification Tasks from Demonstration. , 2018, , .		4
38	Efficient Human-Robot Interaction for Robust Autonomy in Task Execution. , 2018, , .		0
39	A Comparison of Remote Robot Teleoperation Interfaces for General Object Manipulation. , 2017, , .		41
40	Temporal persistence modeling for object search. , 2017, , .		11
41	SLHAP. , 2017, , .		0
42	What's in a primitive? Identifying reusable motion trajectories in narrated demonstrations. , 2016, , .		3
43	Leveraging Large-Scale Semantic Networks for Adaptive Robot Task Learning and Execution. Big Data, 2016, 4, 217-235.	2.1	6
44	Trajectory learning from demonstration with canal surfaces: A parameter-free approach. , 2016, , .		12
45	Identifying reusable primitives in narrated demonstrations. , 2016, , .		2
46	Fostering parentâ€"child dialog through automated discussion suggestions. User Modeling and User-Adapted Interaction, 2016, 26, 393-423.	2.9	7
47	Grounding action parameters from demonstration. , 2016, , .		7
48	Construction of a 3D object recognition and manipulation database from grasp demonstrations. Autonomous Robots, 2016, 40, 175-192.	3.2	10
49	From Autonomy to Cooperative Traded Control of Humanoid Manipulation Tasks with Unreliable Communication. Journal of Intelligent and Robotic Systems: Theory and Applications, 2016, 82, 341-361.	2.0	14
50	Reports on the 2014 AAAI Fall Symposium Series. AI Magazine, 2015, 36, 107-112.	1.4	0
51	Human-centered design of a cyber-physical system for advanced response to Ebola (CARE). , 2015, 2015, 6856-9.		4
52	Robot Web Tools: Efficient messaging for cloud robotics. , 2015, , .		53
53	Unsupervised learning of multi-hypothesized pick-and-place task templates via crowdsourcing. , 2015, , .		9
54	Interactive Hierarchical Task Learning from a Single Demonstration. , 2015, , .		68

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55	Learning partial ordering constraints from a single demonstration. , 2014, , .		4
56	Crowdsourcing the construction of a 3D object recognition database for robotic grasping. , 2014, , .		10
57	Message authentication codes for secure remote non-native client connections to ROS enabled robots. , 2014, , .		17
58	DARPA Robotics Challenge: Towards a user-guided manipulation framework for high-DOF robots. , 2014, , .		5
59	Construction of an object manipulation database from grasp demonstrations. , 2014, , .		6
60	From autonomy to cooperative traded control of humanoid manipulation tasks with unreliable communication: System design and lessons learned. , 2014, , .		3
61	Toward a user-guided manipulation framework for high-DOF robots with limited communication. Intelligent Service Robotics, 2014, 7, 121-131.	1.6	12
62	Robot Learning from Human Teachers. Synthesis Lectures on Artificial Intelligence and Machine Learning, 2014, 8, 1-121.	0.6	90
63	The Robot Management System: A Framework for Conducting Human-Robot Interaction Studies Through Crowdsourcing. Journal of Human-robot Interaction, 2014, 3, 25.	2.0	40
64	Toward a user-guided manipulation framework for high-DOF robots with limited communication. , 2013, , .		22
65	Modeling discussion topics in interactions with a tablet reading primer. , 2013, , .		2
66	Guest Editorial Special Issue on Robotics Education. IEEE Transactions on Education, 2013, 56, 1-2.	2.0	17
67	Crowdsourcing Human-Robot Interaction: New Methods and System Evaluation in a Public Environment. Journal of Human-robot Interaction, 2013, 2, 82-111.	2.0	72
68	Policy transformation for learning from demonstration. , 2012, , .		1
69	A practical comparison of three robot learning from demonstration algorithms. , 2012, , .		12
70	The design and realization of a high mobility biomimetic quadrupedal robot. , 2012, , .		7
71	A Practical Comparison of Three Robot Learning from Demonstration Algorithm. International Journal of Social Robotics, 2012, 4, 319-330.	3.1	28
72	Special Issue on Robot Learning from Demonstration. International Journal of Social Robotics, 2012, 4, 317-318.	3.1	2

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73	The AAAI 2011 Robot Exhibition. AI Magazine, 2012, 33, 43-50.	1.4	3
74	Crowdsourcing Real World Human-Robot Dialog and Teamwork through Online Multiplayer Games. AI Magazine, 2012, 32, 100-111.	1.4	13
75	Robot Learning from Demonstration. , 2012, , 2871-2873.		1
76	Effect of human guidance and state space size on Interactive Reinforcement Learning. , 2011, , .		67
77	Crowdsourcing human-robot interaction: Application from virtual to physical worlds. , 2011, , .		34
78	Report on the AAAI 2010 Robot Exhibition. AI Magazine, 2011, 32, 109-118.	1.4	2
79	A comparison of two algorithms for robot learning from demonstration. , 2011, , .		2
80	A Unified and Integrated Approach to Teaching a Two-Course Sequence in Robotics Engineering. Journal of Robotics and Mechatronics, 2011, 23, 748-758.	0.5	6
81	Confidence-Based Multi-Robot Learning from Demonstration. International Journal of Social Robotics, 2010, 2, 195-215.	3.1	31
82	A survey of robot learning from demonstration. Robotics and Autonomous Systems, 2009, 57, 469-483.	3.0	2,217
83	Teaching collaborative multi-robot tasks through demonstration. , 2008, , .		16
84	A TEAM OF HUMANOID GAME COMMENTATORS. International Journal of Humanoid Robotics, 2008, 05, 457-480.	0.6	5
85	Multi-thresholded approach to demonstration selection for interactive robot learning. , 2008, , .		36
86	Learning equivalent action choices from demonstration. , 2008, , .		25
87	Confidence-based policy learning from demonstration using Gaussian mixture models. , 2007, , .		82
88	From Deliberative to Routine Behaviors: A Cognitively Inspired Action-Selection Mechanism for Routine Behavior Capture. Adaptive Behavior, 2007, 15, 199-216.	1.1	20
89	A Team of Humanoid Game Commentators. , 2006, , .		0
90	Acquiring Observation Models Through Reverse Plan Monitoring. Lecture Notes in Computer Science, 2005, , 410-421.	1.0	1

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91	Generalized Cylinders for Learning, Reproduction, Generalization, and Refinement of Robot Skills. , 0, , .		7
92	Autonomous Tool Construction Using Part Shape and Attachment Prediction. , 0, , .		8