Benjamin Kuipers

List of Publications by Year
in descending order

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70 papers	6,003 citations	361413 20 h-index	434195 31 g-index
70 all docs	70 docs citations	70 times ranked	3077 citing authors

#	Article	IF	Citations
1	Qualitative simulation. Artificial Intelligence, 1986, 29, 289-338.	5.8	1,109
2	The Spatial Semantic Hierarchy. Artificial Intelligence, 2000, 119, 191-233.	5.8	578
3	A robot exploration and mapping strategy based on a semantic hierarchy of spatial representations. Robotics and Autonomous Systems, 1991, 8, 47-63.	5.1	542
4	Modeling Spatial Knowledge*. Cognitive Science, 1978, 2, 129-153.	1.7	539
5	A Description of Think Aloud Method and Protocol Analysis. Qualitative Health Research, 1993, 3, 430-441.	2.1	447
6	Commonsense reasoning about causality: Deriving behavior from structure. Artificial Intelligence, 1984, 24, 169-203.	5.8	415
7	Qualitative reasoning: Modeling and simulation with incomplete knowledge. Automatica, 1989, 25, 571-585.	5.0	256
8	The "Map in the Head" Metaphor. Environment and Behavior, 1982, 14, 202-220.	4.7	250
9	Cross-view action recognition via view knowledge transfer. , 2011, , .		205
10	Causal Reasoning in Medicine: Analysis of a Protocol. Cognitive Science, 1984, 8, 363-385.	1.7	177
11	Towards a general theory of topological maps. Artificial Intelligence, 2004, 152, 47-104.	5.8	154
12	The composition and validation of heterogeneous control laws. Automatica, 1994, 30, 233-249.	5.0	97
13	Critical Decisions under Uncertainty: Representation and Structure. Cognitive Science, 1988, 12, 177-210.	1.7	93
14	The Skeleton In The Cognitive Map. Environment and Behavior, 2003, 35, 81-106.	4.7	89
15	Factoring the Mapping Problem: Mobile Robot Map-building in the Hybrid Spatial Semantic Hierarchy. International Journal of Robotics Research, 2010, 29, 428-459.	8.5	89
16	Qualitative Simulation as Causal Explanation. IEEE Transactions on Systems, Man, and Cybernetics, 1987, 17, 432-444.	0.9	88
17	Causal reasoning in medicine: Analysis of a protocol. Cognitive Science, 1984, 8, 363-385.	1.7	72
18	The Cognitive Map: Could It Have Been Any Other Way?. , 1983, , 345-359.		64

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19	Autonomous Learning of High-Level States and Actions in Continuous Environments. IEEE Transactions on Autonomous Mental Development, 2012, 4, 70-86.	1.6	63
20	A smooth control law for graceful motion of differential wheeled mobile robots in 2D environment. , 2011, , .		50
21	Robot navigation with model predictive equilibrium point control. , 2012, , .		47
22	How can we trust a robot?. Communications of the ACM, 2018, 61, 86-95.	4.5	47
23	Real-time indoor scene understanding using Bayesian filtering with motion cues. , 2011, , .		42
24	Abstraction by Time-Scale in Qualitative Simulation. , 1990, , 530-534.		35
25	The initial development of object knowledge by a learning robot. Robotics and Autonomous Systems, 2008, 56, 879-890.	5.1	34
26	VisAGGE: Visible angle grid for glass environments. , 2013, , .		31
27	Detecting obstacles and drop-offs using stereo and motion cues for safe local motion. , 2008, , .		30
28	A framework for planning comfortable and customizable motion of an assistive mobile robot. , 2009, , .		28
29	Drinking from the firehose of experience. Artificial Intelligence in Medicine, 2008, 44, 155-170.	6.5	25
30	A stereo vision based mapping algorithm for detecting inclines, drop-offs, and obstacles for safe local navigation. , 2009, , .		25
31	An Intellectual History of the Spatial Semantic Hierarchy. , 2007, , 243-264.		24
32	Weakly Supervised Learning of Mid-Level Features with Beta-Bernoulli Process Restricted Boltzmann Machines. , 2013, , .		21
33	A Hierarchy of Qualitative Representations for Space. Lecture Notes in Computer Science, 1998, , 337-350.	1.3	20
34	Feedback motion planning via non-holonomic RRT* for mobile robots. , 2015, , .		19
35	ON REPRESENTING COMMONSENSE KNOWLEDGE. , 1979, , 393-408.		17
36	Socially-Aware Navigation Using Topological Maps and Social Norm Learning. , 2018, , .		16

#	Article	IF	Citations
37	Qualitative simulation using time-scale abstraction. Advanced Engineering Informatics, 1988, 3, 185-191.	0.5	15
38	Commonsense Reasoning about Causality: Deriving Behavior from Structure. , 1984, , 169-203.		14
39	From pixels to policies: A bootstrapping agent. , 2008, , .		12
40	Autonomous person pacing and following with Model Predictive Equilibrium Point Control. , 2013, , .		12
41	New reasoning methods for artificial intelligence in medicine. International Journal of Man-Machine Studies, 1987, 26, 707-718.	0.7	9
42	Trust and Cooperation. Frontiers in Robotics and AI, 2022, 9, 676767.	3.2	9
43	Learning to reach by building a representation of peri-personal space. , 2016, , .		8
44	Qualitative Simulation. , 1990, , 236-260.		8
45	Learning to predict the effects of actions: Synergy between rules and landmarks. , 2007, , .		7
46	Object Detection Using Principal Contour Fragments. , 2011, , .		7
47	Learning and Acting in Peripersonal Space: Moving, Reaching, and Grasping. Frontiers in Neurorobotics, 2019, 13, 4.	2.8	7
48	Qualitative Heterogeneous Control of Higher Order Systems. Lecture Notes in Computer Science, 2003, , 417-434.	1.3	7
49	Learning geometry from sensorimotor experience. , 2011, , .		6
50	A Bayesian generative model for learning semantic hierarchies. Frontiers in Psychology, 2014, 5, 417.	2.1	6
51	Discrete-time dynamic modeling and calibration of differential-drive mobile robots with friction. , 2017, , .		6
52	Qualitative Modeling and Heterogeneous Control of Global System Behavior. Lecture Notes in Computer Science, 2002, , 294-307.	1.3	5
53	Motion Segmentation by Learning Homography Matrices from Motor Signals. , 2011, , .		5
54	Towards the Object Semantic Hierarchy. , 2010, , .		4

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55	Efficient search for correct and useful topological maps. , 2012, , .		4
56	Qualitative Simulation. , 2003, , 287-300.		3
57	Cognitive Maps for Planetary Rovers. Autonomous Robots, 2001, 11, 325-331.	4.8	2
58	Time in Qualitative Simulation. Foundations of Artificial Intelligence, 2005, , 655-664.	0.9	2
59	Understanding Psychological Development in Biological and Artificial Agents: Report on the International Conference on Development and Learning (ICDL 2010). IEEE Transactions on Autonomous Mental Development, 2011, 3, 4-5.	1.6	2
60	Learning to Grasp by Extending the Peri-Personal Space Graph. , 2018, , .		2
61	ALL. , 1991, , 299-330.		2
62	Semantic Visual Understanding of Indoor Environments: From Structures to Opportunities for Action. , 2014, , .		1
63	The cognitive map must be a separate module. Behavioral and Brain Sciences, 1982, 5, 645-646.	0.7	0
64	What do eidetic images tell us about vision?. Behavioral and Brain Sciences, 1982, 5, 296-296.	0.7	0
65	Is this a theory of competence or performance?. Behavioral and Brain Sciences, 1985, 8, 159-159.	0.7	0
66	The cognitive map overlaps the environmental frame, the situation, and the real-world formulary. Behavioral and Brain Sciences, 1985, 8, 298-299.	0.7	0
67	GUARANTEED COVERAGE VERSUS INTELLIGENT SAMPLING: A REPLY TO SACKS AND DOYLE. Computational Intelligence, 1992, 8, 289-294.	3.2	0
68	Exciting and Provocative Book, Starting with Chapter Two. International Journal of Machine Consciousness, 2011, 03, 349-352.	1.0	0
69	Handling perceptual clutter for robot vision with partial model-based interpretations. , 2014, , .		0
70	Cognitive Robot Mapping: An Introduction. , 2007, , 239-242.		0