Tadahiro Taniguchi

List of Publications by Year
in descending order

82 papers	1,155 citations	516710 16 h-index	526287 27 g-index
82 all docs	82 docs citations	82 times ranked	679 citing authors

#	Article	IF	Citations
1	Hierarchical Bayesian model for the transfer of knowledge on spatial concepts based on multimodal information. Advanced Robotics, 2022, 36, 33-53.	1.8	3
2	Unsupervised lexical acquisition of relative spatial concepts using spoken user utterances. Advanced Robotics, 2022, 36, 54-70.	1.8	5
3	Multiagent multimodal categorization for symbol emergence: emergent communication via interpersonal cross-modal inference. Advanced Robotics, 2022, 36, 239-260.	1.8	7
4	Optical laser microphone for human-robot interaction: speech recognition in extremely noisy service environments. Advanced Robotics, 2022, 36, 304-317.	1.8	7
5	Map completion from partial observation using the global structure of multiple environmental maps. Advanced Robotics, 2022, 36, 279-290.	1.8	4
6	What is the role of the next generation of cognitive robotics?. Advanced Robotics, 2022, 36, 3-16.	1.8	7
7	Special issue on symbol emergence in robotics and cognitive systems (II). Advanced Robotics, 2022, 36, 217-218.	1.8	0
8	A whole brain probabilistic generative model: Toward realizing cognitive architectures for developmental robots. Neural Networks, 2022, 150, 293-312.	5.9	11
9	Integrative Cognitive Systems for Language Understanding and Symbol Emergence in Robotics. Journal of the Robotics Society of Japan, 2021, 39, 405-410.	0.1	0
10	Active Exploration for Unsupervised Object Categorization Based on Multimodal Hierarchical Dirichlet Process. , 2021, , .		2
11	Autonomous planning based on spatial concepts to tidy up home environments with service robots. Advanced Robotics, 2021, 35, 471-489.	1.8	18
12	Editorial: Language and Robotics. Frontiers in Robotics and AI, 2021, 8, 674832.	3.2	2
13	Explainable Artificial Intelligence Model for Diagnosis of Atrial Fibrillation Using Holter Electrocardiogram Waveforms. International Heart Journal, 2021, 62, 534-539.	1.0	19
14	Analyzing Phenotype Microarray Data for Escherichia coli Using an Infinite Relational Model. , 2021, , .		0
15	Semiotically adaptive cognition: toward the realization of remotely-operated service robots for the new normal symbiotic society. Advanced Robotics, 2021, 35, 664-674.	1.8	15
16	World model learning and inference. Neural Networks, 2021, 144, 573-590.	5.9	28
17	Robot Concept Acquisition Based on Interaction Between Probabilistic and Deep Generative Models. Frontiers in Computer Science, 2021, 3, .	2.8	3
18	Dreaming: Model-based Reinforcement Learning by Latent Imagination without Reconstruction. , 2021, , .		19

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19	Analysing the Dealing Rights to Speak with a Large Number of Participants. Transactions of the Institute of Systems Control and Information Engineers, 2021, 34, 219-230.	0.1	0
20	Simultaneous Learning of Relative and Absolute Spatial Concepts without Any Prior Distinction. , 2021, , .		0
21	Spatial concept-based navigation with human speech instructions via probabilistic inference on Bayesian generative model. Advanced Robotics, 2020, 34, 1213-1228.	1.8	13
22	Improved and scalable online learning of spatial concepts and language models with mapping. Autonomous Robots, 2020, 44, 927-946.	4.8	21
23	Integration of imitation learning using GAIL and reinforcement learning using task-achievement rewards via probabilistic graphical model. Advanced Robotics, 2020, 34, 1055-1067.	1.8	14
24	Neuro-SERKET: Development of Integrative Cognitive System Through the Composition of Deep Probabilistic Generative Models. New Generation Computing, 2020, 38, 23-48.	3.3	30
25	SpCoMapGAN: Spatial Concept Formation-based Semantic Mapping with Generative Adversarial Networks. , 2020, , .		11
26	Semantic Mapping Based on Spatial Concepts for Grounding Words Related to Places in Daily Environments. Frontiers in Robotics and AI, 2019, 6, 31.	3.2	12
27	Exploring Behaviors of Caterpillar-Like Soft Robots with a Central Pattern Generator-Based Controller and Reinforcement Learning. Soft Robotics, 2019, 6, 579-594.	8.0	47
28	Unsupervised Phoneme and Word Discovery From Multiple Speakers Using Double Articulation Analyzer and Neural Network With Parametric Bias. Frontiers in Robotics and AI, 2019, 6, 92.	3.2	5
29	Editorial: Machine Learning Methods for High-Level Cognitive Capabilities in Robotics. Frontiers in Neurorobotics, 2019, 13, 83.	2.8	1
30	Symbol Emergence as an Interpersonal Multimodal Categorization. Frontiers in Robotics and AI, 2019, 6, 134.	3.2	14
31	Symbol Emergence in Cognitive Developmental Systems: A Survey. IEEE Transactions on Cognitive and Developmental Systems, 2019, 11, 494-516.	3.8	53
32	Robust Understanding of Robot-Directed Speech Commands Using Sequence to Sequence With Noise Injection. Frontiers in Robotics and AI, 2019, 6, 144.	3.2	16
33	Towards System Theory of Communication-field Mechanism Design. Transactions of the Institute of Systems Control and Information Engineers, 2019, 32, 417-428.	0.1	0
34	Impact Analysis of Order of Presentation on Champion Book Decision in Bibliobattle. Transactions of the Institute of Systems Control and Information Engineers, 2019, 32, 439-445.	0.1	0
35	Unsupervised spatial lexical acquisition by updating a language model with place clues. Robotics and Autonomous Systems, 2018, 99, 166-180.	5.1	13
36	Accelerated Nonparametric Bayesian Double Articulation Analyzer for Unsupervised Word Discovery. , 2018, , .		1

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37	Bayesian Noisy Word Clustering through Sampling Prototypical Words. , 2018, , .		1
38	Hierarchical Spatial Concept Formation Based on Multimodal Information for Human Support Robots. Frontiers in Neurorobotics, 2018, 12, 11.	2.8	15
39	Multimodal Hierarchical Dirichlet Process-Based Active Perception by a Robot. Frontiers in Neurorobotics, 2018, 12, 22.	2.8	20
40	SERKET: An Architecture for Connecting Stochastic Models to Realize a Large-Scale Cognitive Model. Frontiers in Neurorobotics, 2018, 12, 25.	2.8	34
41	Defect-Repairable Latent Feature Extraction of Driving Behavior via a Deep Sparse Autoencoder. Sensors, 2018, 18, 608.	3.8	4
42	Visualization of Driving Behavior Based on Hidden Feature Extraction by Using Deep Learning. IEEE Transactions on Intelligent Transportation Systems, 2017, 18, 2477-2489.	8.0	106
43	Unsupervised learning for spoken word production based on simultaneous word and phoneme discovery without transcribed data. , 2017, , .		1
44	Comparative study of feature extraction methods for direct word discovery with NPB-DAA from natural speech signals. , 2017, , .		4
45	Prediction of driving behavior based on sequence to sequence model with parametric bias. , 2017, , .		6
46	Online spatial concept and lexical acquisition with simultaneous localization and mapping. , 2017, , .		32
47	Cross-Situational Learning with Bayesian Generative Models for Multimodal Category and Word Learning in Robots. Frontiers in Neurorobotics, 2017, 11, 66.	2.8	19
48	A generative framework for multimodal learning of spatial concepts and object categories: An unsupervised part-of-speech tagging and 3D visual perception based approach. , 2017, , .		9
49	Learning Relationships Between Objects and Places by Multimodal Spatial Concept with Bag of Objects. Lecture Notes in Computer Science, 2017, , 115-125.	1.3	9
50	Risk-Limiting Real-Time Pricing for a Regional Prosumers' Electricity Network with Distributed Solar Power Generation. SICE Journal of Control Measurement and System Integration, 2017, 10, 100-109.	0.7	1
51	Costâ€Benefit Analysis of Renewable Installation in Interâ€Intelligent Renewable Energy Network. Electrical Engineering in Japan (English Translation of Denki Gakkai Ronbunshi), 2016, 194, 42-52.	0.4	1
52	Direct word discovery from speech signals based on hierarchical Dirichlet process-hidden language model and deep sparse autoencoder. , 2016, , .		1
53	Nonparametric Bayesian Double Articulation Analyzer for Direct Language Acquisition From Continuous Speech Signals. IEEE Transactions on Cognitive and Developmental Systems, 2016, 8, 171-185.	3.8	23
54	Symbol Emergence in Robotics for Long-Term Human-Robot Collaboration**This research was partially supported by a Grant-in-Aid for Young Scientists (B) 2012-2014 (24700233) and a Grant-in-Aid for Young Scientists (A) 2015-2019 (15H05319) funded by the Ministry of Education, Culture, Sports, Science, and Technology, Japan, and by CREST, JST.. IFAC-PapersOnLine, 2016, 49, 144-149.	0.9	4

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55	Simultaneous Estimation of Self-position and Word from Noisy Utterances and Sensory Information. IFAC-PapersOnLine, 2016, 49, 221-226.	0.9	8
56	Symbol emergence in robotics: a survey. Advanced Robotics, 2016, 30, 706-728.	1.8	98
57	Spatial Concept Acquisition for a Mobile Robot that Integrates Self-Localization and Unsupervised Word Discovery from Spoken Sentences. IEEE Transactions on Cognitive and Developmental Systems, 2016, , 1-1.	3.8	25
58	Double articulation analyzer with deep sparse autoencoder for unsupervised word discovery from speech signals. Advanced Robotics, 2016, 30, 770-783.	1.8	24
59	Determining Utterance Timing of a Driving Agent With Double Articulation Analyzer. IEEE Transactions on Intelligent Transportation Systems, 2016, 17, 810-821.	8.0	12
60	Convergence Error Analysis of DSM with Dual-Decomposition for the Smart Grid. SICE Journal of Control Measurement and System Integration, 2016, 9, 115-121.	0.7	1
61	Convergent Double Auction Mechanism for a Prosumers' Decentralized Smart Grid. Energies, 2015, 8, 12342-12361.	3.1	8
62	Automated Linear Function Submission-Based Double Auction as Bottom-up Real-Time Pricing in a Regional Prosumers' Electricity Network. Energies, 2015, 8, 7381-7406.	3.1	15
63	Economically Efficient Power Storage Operation by Dealing with the Non-Normality of Power Prediction. Energies, 2015, 8, 12211-12227.	3.1	4
64	Statistical localization exploiting convolutional neural network for an autonomous vehicle. , 2015, , .		9
65	Unsupervised Hierarchical Modeling of Driving Behavior and Prediction of Contextual Changing Points. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 1746-1760.	8.0	34
66	Essential feature extraction of driving behavior using a deep learning method. , 2015, , .		15
67	Mutual Learning of an Object Concept and Language Model Based on MLDA and NPYLM. Transactions of the Japanese Society for Artificial Intelligence, 2015, 30, 498-509.	0.1	3
68	Mutual learning of an object concept and language model based on MLDA and NPYLM. , 2014, , .		29
69	Feature Extraction and Pattern Recognition for Human Motion by a Deep Sparse Autoencoder. , 2014, , .		17
70	Cost Benefit Analysis for the Renewable Installation in Inter-Intelligent Renewable Energy Network. IEEJ Transactions on Electronics, Information and Systems, 2014, 134, 1925-1933.	0.2	0
71	Encouraging User Interaction of Social Network through Tweet Recommendation Using Community Structure. , 2013, , .		1
72	Multimodal concept and word learning using phoneme sequences with errors. , 2013, , .		4

#	Article	IF	Citations
73	Drive video summarization based on double articulation structure of driving behavior. , 2012, , .		17
74	Contextual scene segmentation of driving behavior based on double articulation analyzer. , 2012, , .		24
75	Online learning of concepts and words using multimodal LDA and hierarchical Pitman-Yor Language Model. , 2012, , .		32
76	Semiotic prediction of driving behavior using unsupervised double articulation analyzer. , 2012, , .		37
77	Finding meaningful robust chunks from driving behavior based on double articulation analyzer. , 2012, , .		4
78	Decentralized trading and demand side response in inter-intelligent renewable energy network. , 2012, , .		8
79	Double articulation analyzer for unsegmented human motion using Pitman-Yor language model and infinite hidden Markov model. , 2011, , .		27
80	Multi-agent Simulation about Urban Dynamics Based on a Hypothetical Relationship between Individuals' Travel Behavior and Residential Choice Behavior. Transactions of the Society of Instrument and Control Engineers, 2011, 47, 571-580.	0.2	3
81	Adaptive Design of Role Differentiation by Division of Reward Function in Multi-Agent Reinforcement Learning. SICE Journal of Control Measurement and System Integration, 2010, 3, 26-34.	0.7	0
82	Role differentiation process by division of reward function in multi-agent reinforcement learning. , 2008, , .		5