Rajesh P N Rao

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/7507752/publications.pdf

Version: 2024-02-01

138 papers	12,854 citations	81900 39 h-index	32842 100 g-index
153 all docs	153 docs citations	153 times ranked	10133 citing authors

#	Article	IF	Citations
1	AJILE12: Long-term naturalistic human intracranial neural recordings and pose. Scientific Data, 2022, 9, 184.	5.3	7
2	Touch restoration through electrical cortical stimulation in humans. , 2021, , 443-478.		2
3	Generalized neural decoders for transfer learning across participants and recording modalities. Journal of Neural Engineering, 2021, 18, 026014.	3.5	24
4	Identifying with all humanity predicts cooperative health behaviors and helpful responding during COVID-19. PLoS ONE, 2021, 16, e0248234.	2.5	30
5	Behavioral and Neural Variability of Naturalistic Arm Movements. ENeuro, 2021, 8, ENEURO.0007-21.2021.	1.9	6
6	Mining naturalistic human behaviors in long-term video and neural recordings. Journal of Neuroscience Methods, 2021, 358, 109199.	2.5	10
7	Bayesian inference with incomplete knowledge explains perceptual confidence and its deviations from accuracy. Nature Communications, 2021, 12, 5704.	12.8	28
8	Brain Co-processors: Using AI to Restore and Augment Brain Function. , 2021, , 1-36.		2
9	Projections and the Potential Societal Impact of the Future of Neurotechnologies. Frontiers in Neuroscience, 2021, 15, 658930.	2.8	7
10	Unsupervised Sleep and Wake State Identification in Long-Term Electrocorticography Recordings. , 2020, 2020, 629-632.		3
11	Pyneal: Open Source Real-Time fMRI Software. Frontiers in Neuroscience, 2020, 14, 900.	2.8	7
12	Direct Electrical Stimulation in Electrocorticographic Brainâ€“Computer Interfaces: Enabling Technologies for Input to Cortex. Frontiers in Neuroscience, 2019, 13, 804.	2.8	46
13	Cortical Topography of Error-Related High-Frequency Potentials During Erroneous Control in a Continuous Control Brainâ€“Computer Interface. Frontiers in Neuroscience, 2019, 13, 502.	2.8	13
14	BrainNet: A Multi-Person Brain-to-Brain Interface for Direct Collaboration Between Brains. Scientific Reports, 2019, 9, 6115.	3.3	83
15	Towards neural co-processors for the brain: combining decoding and encoding in brainâ€“computer interfaces. Current Opinion in Neurobiology, 2019, 55, 142-151.	4.2	36
16	Direct stimulation of somatosensory cortex results in slower reaction times compared to peripheral touch in humans. Scientific Reports, 2019, 9, 3292.	3.3	27
17	Modeling other minds: Bayesian inference explains human choices in group decision-making. Science Advances, 2019, 5, eaax8783.	10.3	31
18	Estimation of Vector Autoregressive Parameters and Granger Causality From Noisy Multichannel Data. IEEE Transactions on Biomedical Engineering, 2019, 66, 2231-2240.	4.2	3

#	Article	IF	Citations
19	Electrocorticographic Dynamics Predict Sustained Grasping and Upper-Limb Kinetic Output. , 2018, , .		1
20	Concurrent control of a brainâ€“computer interface and natural overt movements. Journal of Neural Engineering, 2018, 15, 066021.	3.5	11
21	The Indus Script and Economics.. , 2018, , 518-525.		3
22	Efficient human-robot collaboration: When should a robot take initiative?. International Journal of Robotics Research, 2017, 36, 563-579.	8.5	55
23	Learning deep generative spatial models for mobile robots. , 2017, , .		17
24	Electrocorticographic dynamics predict visually guided motor imagery of grasp shaping. , 2017, , .		3
25	Interactive web application for exploring matrices of neural connectivity. , 2017, , .		1
26	Unsupervised Decoding of Long-Term, Naturalistic Human Neural Recordings with Automated Video and Audio Annotations. Frontiers in Human Neuroscience, 2016, 10, 165.	2.0	15
27	Spontaneous Decoding of the Timing and Content of Human Object Perception from Cortical Surface Recordings Reveals Complementary Information in the Event-Related Potential and Broadband Spectral Change. PLoS Computational Biology, 2016, 12, e1004660.	3.2	74
28	Navigating a 2D Virtual World Using Direct Brain Stimulation. Frontiers in Robotics and AI, 2016, 3, .	3.2	15
29	Bayesian Inference and Online Learning in Poisson Neuronal Networks. Neural Computation, 2016, 28, 1503-1526.	2.2	9
30	Multistep model for predicting upper-limb 3D isometric force application from pre-movement electrocorticographic features. , 2016, 2016, 1564-1567.		2
31	Autonomous question answering with mobile robots in human-populated environments. , 2016, , .		5
32	New Perspectives on Neuroengineering and Neurotechnologies: NSF-DFG Workshop Report. IEEE Transactions on Biomedical Engineering, 2016, 63, 1354-1367.	4.2	23
33	Task-Specific Somatosensory Feedback via Cortical Stimulation in Humans. IEEE Transactions on Haptics, 2016, 9, 515-522.	2.7	58
34	Cortico-Cortical Interactions during Acquisition and Use of a Neuroprosthetic Skill. PLoS Computational Biology, 2016, 12, e1004931.	3.2	6
35	On statistical measures and ancient writing systems. Language, 2015, 91, e198-e205.	0.6	2
36	Playing 20 Questions with the Mind: Collaborative Problem Solving by Humans Using a Brain-to-Brain Interface. PLoS ONE, 2015, 10, e0137303.	2.5	32

#	Article	IF	Citations
37	A Bayesian Developmental Approach to Robotic Goal-Based Imitation Learning. PLoS ONE, 2015, 10, e0141965.	2.5	8
38	Near-Instantaneous Classification of Perceptual States from Cortical Surface Recordings. Springer Briefs in Electrical and Computer Engineering, 2015, , 105-114.	0.5	0
39	Designing information gathering robots for human-populated environments. , 2015, , .		4
40	Robot Programming by Demonstration with situated spatial language understanding. , 2015, , .		37
41	The physiology of perception in human temporal lobe is specialized for contextual novelty. Journal of Neurophysiology, 2015, 114, 256-263.	1.8	18
42	Exploring the Potential of Information Gathering Robots. , 2015, , .		2
43	A Direct Brain-to-Brain Interface in Humans. PLoS ONE, 2014, 9, e111332.	2.5	126
44	Non-invasive detection of high gamma band activity during motor imagery. Frontiers in Human Neuroscience, 2014, 8, 817.	2.0	26
45	Neural correlates of learning in an electrocorticographic motor-imagery brain-computer interface. Brain-Computer Interfaces, 2014, 1, 147-157.	1.8	14
46	When Two Brains Connect. Scientific American Mind, 2014, 25, 36-39.	0.0	9
47	Accelerating imitation learning through crowdsourcing. , 2014, , .		14
48	Short-time windowed covariance: A metric for identifying non-stationary, event-related covariant cortical sites. Journal of Neuroscience Methods, 2014, 222, 24-33.	2.5	5
49	Brainâ€“computer interfaces: a powerful tool for scientific inquiry. Current Opinion in Neurobiology, 2014, 25, 70-75.	4.2	40
50	Broadband changes in the cortical surface potential track activation of functionally diverse neuronal populations. NeuroImage, 2014, 85, 711-720.	4.2	225
51	Probabilistic co-adaptive brainâ€“computer interfacing. Journal of Neural Engineering, 2013, 10, 066008.	3.5	26
52	Localized High Gamma Motor Oscillations Respond to Perceived Biologic Motion. Journal of Clinical Neurophysiology, 2013, 30, 299-307.	1.7	10
53	Distributed cortical adaptation during learning of a brain-computer interface task. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 10818-10823.	7.1	132
54	Reward Optimization in the Primate Brain: A Probabilistic Model of Decision Making under Uncertainty. PLoS ONE, 2013, 8, e53344.	2.5	26

#	Article	IF	Citations
55	Automatic extraction of command hierarchies for adaptive brain-robot interfacing. , 2012, , .		14
56	Simultaneous brain-computer interfacing and motor control: Expanding the reach of non-invasive BCIs. , 2012, 2012, 6715-8.		4
57	Fast Structured Prediction Using Large Margin Sigmoid Belief Networks. International Journal of Computer Vision, 2012, 99, 302-318.	15.6	1
58	Complementary Kernel Density Estimation. Pattern Recognition Letters, 2012, 33, 1381-1387.	4.2	2
59	Towards hierarchical BCIs for robotic control. , 2011, , .		8
60	An adaptive brain-computer interface for humanoid robot control. , 2011, , .		47
61	Predictive coding. Wiley Interdisciplinary Reviews: Cognitive Science, 2011, 2, 580-593.	2.8	323
62	Non-invasive Brain-Computer Interfaces: Enhanced Gaming and Robotic Control. Lecture Notes in Computer Science, 2011, , 362-369.	1.3	16
63	Probabilistic Analysis of an Ancient Undeciphered Script. Computer, 2010, 43, 76-80.	1.1	19
64	â€œSocialâ€•robots are psychological agents for infants: A test of gaze following. Neural Networks, 2010, 23, 966-972.	5.9	121
65	Decision Making Under Uncertainty: A Neural Model Based on Partially Observable Markov Decision Processes. Frontiers in Computational Neuroscience, 2010, 4, 146.	2.1	156
66	Statistical Analysis of the Indus Script Using n-Grams. PLoS ONE, 2010, 5, e9506.	2.5	19
67	Dynamic Modulation of Local Population Activity by Rhythm Phase in Human Occipital Cortex During a Visual Search Task. Frontiers in Human Neuroscience, 2010, 4, 197.	2.0	65
68	Learning to Walk by Imitation in Low-Dimensional Subspaces. Advanced Robotics, 2010, 24, 207-232.	1.8	7
69	Brain surface electrode co-registration using MRI and x-ray. , 2010, 2010, 6015-8.		8
70	Imitation learning with hierarchical actions. , 2010, , .		5
71	Cortical activity during motor execution, motor imagery, and imagery-based online feedback. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 4430-4435.	7.1	474
72	Entropy, the Indus Script, and Language:A Reply to R. Sproat. Computational Linguistics, 2010, 36, 795-805.	3.3	12

#	Article	IF	Citations
73	Statistical Pattern Recognition and Machine Learning in Brainâ€“Computer Interfaces. , 2010, , 335-367.		11
74	Brain-Computer Interfacing [In the Spotlight. IEEE Signal Processing Magazine, 2010, 27, 152-150.	5.6	56
75	Learning to Imitate Human Actions through Eigenposes. Studies in Computational Intelligence, 2010, , 357-381.	0.9	6
76	Using eigenposes for lossless periodic human motion imitation. , 2009, , .		1
77	Detection of spontaneous class-specific visual stimuli with high temporal accuracy in human electrocorticography. , 2009, 2009, 6465-8.		4
78	A Markov model of the Indus script. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 13685-13690.	7.1	23
79	Nonlinear Phaseâ€“Phase Cross-Frequency Coupling Mediates Communication between Distant Sites in Human Neocortex. Journal of Neuroscience, 2009, 29, 426-435.	3.6	65
80	Robust, long-term control of an electrocorticographic brain-computer interface with fixed parameters. Neurosurgical Focus, 2009, 27, E13.	2.3	72
81	Classification of contralateral and ipsilateral finger movements for electrocorticographic brain-computer interfaces. Neurosurgical Focus, 2009, 27, E12.	2.3	54
82	Entropic Evidence for Linguistic Structure in the Indus Script. Science, 2009, 324, 1165-1165.	12.6	50
83	Learning Actions through Imitation and Exploration: Towards Humanoid Robots That Learn from Humans. Lecture Notes in Computer Science, 2009, , 103-138.	1.3	19
84	Generalized Features for Electrocorticographic BCIs. IEEE Transactions on Biomedical Engineering, 2008, 55, 273-280.	4.2	91
85	Online Electromyographic Control of a Robotic Prosthesis. IEEE Transactions on Biomedical Engineering, 2008, 55, 1128-1135.	4.2	233
86	Beyond the Gamma Band: The Role of High-Frequency Features in Movement Classification. IEEE Transactions on Biomedical Engineering, 2008, 55, 1634-1637.	4.2	57
87	Control of a humanoid robot by a noninvasive brainâ€“computer interface in humans. Journal of Neural Engineering, 2008, 5, 214-220.	3.5	356
88	Learning nonparametric policies by imitation. , 2008, , .		4
89	Localization and classification of phonemes using high spatial resolution electrocorticography (ECoG) grids. , 2008, 2008, 4964-7.		64
90	Feasibility and pragmatics of classifying working memory load with an electroencephalograph. , 2008, , .		138

#	Article	IF	Citations
91	Three cases of feature correlation in an electrocorticographic BCI. , 2008, 2008, 5318-21.		5
92	Predictive Learning of Temporal Sequences in Recurrent Neocortical Circuits. Novartis Foundation Symposium, 2008, 239, 208-233.	1.1	15
93	Task-Related Principal Component Analysis: Formalism and Illustration. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5469-72.	0.5	1
94	The Behavioral Split in the Gamma Band. , 2007, , .		1
95	Finger Movement Classification for an Electrocorticographic BCI. , 2007, , .		26
96	Learning the Lie Groups of Visual Invariance. Neural Computation, 2007, 19, 2665-2693.	2.2	24
97	Towards a Real-Time Bayesian Imitation System for a Humanoid Robot. Proceedings - IEEE International Conference on Robotics and Automation, 2007, , .	0.0	39
98	Learning full-body motions from monocular vision: dynamic imitation in a humanoid robot. , 2007, , .		20
99	A COGNITIVE MODEL OF IMITATIVE DEVELOPMENT IN HUMANS AND MACHINES. International Journal of Humanoid Robotics, 2007, 04, 387-406.	1.1	11
100	A Bayesian model of imitation in infants and robots. , 2007, , 217-248.		30
101	Real-time functional brain mapping using electrocorticography. NeuroImage, 2007, 37, 504-507.	4.2	146
102	Spectral Changes in Cortical Surface Potentials during Motor Movement. Journal of Neuroscience, 2007, 27, 2424-2432.	3.6	654
103	An Image-based Brain-Computer Interface Using the P3 Response. , 2007, , .		5
104	Cortical electrode localization from X-rays and simple mapping for electrocorticographic research: The â€œLocation on Cortexâ€•(LOC) package for MATLAB. Journal of Neuroscience Methods, 2007, 162, 303-308.	2.5	101
105	Imitation Learning Using Graphical Models. Lecture Notes in Computer Science, 2007, , 757-764.	1.3	5
106	Towards adaptive classification for BCI. Journal of Neural Engineering, 2006, 3, R13-R23.	3.5	360
107	A probabilistic model of gaze imitation and shared attention. Neural Networks, 2006, 19, 299-310.	5.9	56
108	Electrocorticography-based brain computer Interface-the seattle experience. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2006, 14, 194-198.	4.9	212

#	Article	IF	Citations
109	Planning and Acting in Uncertain Environments using Probabilistic Inference. , 2006, , .		13
110	Bayesian inference and attentional modulation in the visual cortex. NeuroReport, 2005, 16, 1843-1848.	1.2	131
111	Implementing belief propagation in neural circuits. Neurocomputing, 2005, 65-66, 393-399.	5.9	7
112	Learning temporal clusters with synaptic facilitation and lateral inhibition. Neurocomputing, 2005, 65-66, 877-884.	5.9	1
113	Probabilistic Models of Attention Based on Iconic Representations and Predictive Coding. , 2005, , 553-561.		23
114	Bilinear Sparse Coding for Invariant Vision. Neural Computation, 2005, 17, 47-73.	2.2	68
115	Bayesian Computation in Recurrent Neural Circuits. Neural Computation, 2004, 16, 1-38.	2.2	194
116	Learning temporal patterns by redistribution of synaptic efficacy. Neurocomputing, 2003, 52-54, 13-18.	5.9	2
117	Complex Cell-like Direction Selectivity through Spike-Timing Dependent Plasticity. IETE Journal of Research, 2003, 49, 97-111.	2.6	4
118	Selfâ€“organizing neural systems based on predictive learning. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2003, 361, 1149-1175.	3.4	25
119	Receptive Field. , 2002, , 155-168.		0
120	Eye movements in iconic visual search. Vision Research, 2002, 42, 1447-1463.	1.4	237
121	Optimal Smoothing in Visual Motion Perception. Neural Computation, 2001, 13, 1243-1253.	2.2	54
122	Spike-Timing-Dependent Hebbian Plasticity as Temporal Difference Learning. Neural Computation, 2001, 13, 2221-2237.	2.2	173
123	Neural circuits in silicon. Nature, 2000, 405, 891-892.	27.8	16
124	A single-spike model of predictive coding. Neurocomputing, 2000, 32-33, 17-23.	5.9	2
125	Predictive coding in the visual cortex: a functional interpretation of some extra-classical receptive-field effects. Nature Neuroscience, 1999, 2, 79-87.	14.8	4,034
126	An optimal estimation approach to visual perception and learning. Vision Research, 1999, 39, 1963-1989.	1.4	126

#	Article	IF	Citations
127	Title is missing!. Machine Learning, 1998, 31, 87-113.	5.4	20
128	Title is missing!. Autonomous Robots, 1998, 5, 297-316.	4.8	6
129	Development of localized oriented receptive fields by learning a translation-invariant code for natural images. Network: Computation in Neural Systems, 1998, 9, 219-234.	3.6	6
130	Eye Movements Reveal the Spatiotemporal Dynamics of Visual Search. Psychological Science, 1997, 8, 448-453.	3.3	237
131	Deictic codes for the embodiment of cognition. Behavioral and Brain Sciences, 1997, 20, 723-742.	0.7	1,044
132	Dynamic Model of Visual Recognition Predicts Neural Response Properties in the Visual Cortex. Neural Computation, 1997, 9, 721-763.	2.2	260
133	Pointing the way. Behavioral and Brain Sciences, 1997, 20, 758-763.	0.7	0
134	A Computational Model of Spatial Representations that Explains Object-Centered Neglect in Parietal Patients. , 1997, , 779-785.		2
135	A note on P-selective sets and closeness. Information Processing Letters, 1995, 54, 179-185.	0.6	0
136	An active vision architecture based on iconic representations. Artificial Intelligence, 1995, 78, 461-505.	5.8	205
137	Seeing behind occlusions. Lecture Notes in Computer Science, 1994, , 274-285.	1.3	4
138	Upward separation for FewP and related classes. Information Processing Letters, 1994, 52, 175-180.	0.6	24