Zhong-Lin Lu

List of Publications by Year
in descending order

147 papers	7,695 citations	76326 40 h-index	62596 80 g-index
153 all docs	153 docs citations	153 times ranked	4092 citing authors

#	Article	IF	Citations
1	Improving iconic memory through contrast detection training with HOA-corrected vision. Fundamental Research, 2024, 4, 95-102.	3.3	1
2	Quantitative characterization of the human retinotopic map based on quasiconformal mapping. Medical Image Analysis, 2022, 75, 102230.	11.6	7
3	Effects of top-down influence suppression on behavioral and V1 neuronal contrast sensitivity functions in cats. IScience, 2022, 25, 103683.	4.1	7
4	Diffeomorphic registration for retinotopic maps of multiple visual regions. Brain Structure and Function, 2022, 227, 1507-1522.	2.3	3
5	Identifying Long- and Short-Term Processes in Perceptual Learning. Psychological Science, 2022, 33, 830-843.	3.3	6
6	Functional connectivity signatures of political ideology. , 2022, 1, .		5
7	Quantification of Myelinated Nerve Fraction and Degeneration in Spinal Cord Neuropil by SHIFT MRI. Journal of Magnetic Resonance Imaging, 2021, 53, 1162-1174.	3.4	0
8	2.2: Invited Paper: The Temporal Window of Visual Processing. Digest of Technical Papers SID International Symposium, 2021, 52, 11-12.	0.3	0
9	Topology-preserving smoothing of retinotopic maps. PLoS Computational Biology, 2021, 17, e1009216.	3.2	4
10	Diffeomorphic Registration of Retinotopic Maps with Quasiconformal Mapping. Journal of Vision, 2021, 21, 2467.	0.3	0
11	Modeling Within-Item Dependencies in Parallel Data on Test Responses and Brain Activation. Psychometrika, 2021, 86, 239-271.	2.1	4
12	Psychophysical Validation of a Novel Active Learning Approach for Measuring the Visual Acuity Behavioral Function. Translational Vision Science and Technology, 2021, 10, 1.	2.2	5
13	Topological Receptive Field Model for Human Retinotopic Mapping. Lecture Notes in Computer Science, 2021, 12907, 639-649.	1.3	1
14	Quantifying Uncertainty of the Estimated Visual Acuity Behavioral Function With Hierarchical Bayesian Modeling. Translational Vision Science and Technology, 2021, 10, 18.	2.2	8
15	Action video game play facilitates â€œlearning to learnâ€• Communications Biology, 2021, 4, 1154.	4.4	16
16	Hierarchical Bayesian modeling of contrast sensitivity functions in a within-subject design. Journal of Vision, 2021, 21, 9.	0.3	7
17	Pediatric Stroke Impairs Theory of Mind Performance. Journal of Child Neurology, 2020, 35, 228-234.	1.4	12
18	Roving: The causes of interference and re-enabled learning in multi-task visual training. Journal of Vision, 2020, 20, 9.	0.3	5

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19	General learning ability in perceptual learning. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 19092-19100.	7.1	26
20	Mapping the Contrast Sensitivity of the Visual Field With Bayesian Adaptive qVFM. Frontiers in Neuroscience, 2020, 14, 665.	2.8	5
21	Diffeomorphic Registration for Retinotopic Mapping Via Quasiconformal Mapping. , 2020, 2020, 687-691.		7
22	Diffeomorphic Smoothing for Retinotopic Mapping. , 2020, 2020, 534-538.		5
23	Computational neuroscience: a frontier of the 21st century. National Science Review, 2020, 7, 1418-1422.	9.5	10
24	Effects of Monocular Perceptual Learning on Binocular Visual Processing in Adolescent and Adult Amblyopia. IScience, 2020, 23, 100875.	4.1	21
25	Left posterior prefrontal regions support domainâ€general executive processes needed for both reading and math. Journal of Neuropsychology, 2020, 14, 467-495.	1.4	14
26	Optimizing Visual Cortex Parameterization with Error-Tolerant TeichmÃ¼ller Map in Retinotopic Mapping. Lecture Notes in Computer Science, 2020, 12267, 218-227.	1.3	0
27	Evaluating the functional form of perceptual learning with trial-by-trial analysis. Journal of Vision, 2020, 20, 1643.	0.3	1
28	Evaluating the performance of the staircase and quick Change Detection methods in measuring perceptual learning. Journal of Vision, 2019, 19, 14.	0.3	7
29	Assessing the detailed time course of perceptual sensitivity change in perceptual learning. Journal of Vision, 2019, 19, 9.	0.3	23
30	Binocular Summation and Suppression of Contrast Sensitivity in Strabismus, Fusion and Amblyopia. Frontiers in Human Neuroscience, 2019, 13, 234.	2.0	23
31	Characterizing and decomposing the neural correlates of individual differences in reading ability among adolescents with task-based fMRI. Developmental Cognitive Neuroscience, 2019, 37, 100647.	4.0	11
32	Predicting Task and Subject Differences with Functional Connectivity and Blood-Oxygen-Level-Dependent Variability. Brain Connectivity, 2019, 9, 451-463.	1.7	14
33	A novel Bayesian adaptive method for mapping the visual field. Journal of Vision, 2019, 19, 16.	0.3	13
34	Comparing Spatial Contrast Sensitivity Functions Measured With Digit and Grating Stimuli. Translational Vision Science and Technology, 2019, 8, 16.	2.2	12
35	Efficient assessment of the time course of perceptual sensitivity change. Vision Research, 2019, 154, 21-43.	1.4	14
36	Generalization of learning in n-AFC orientation identification. Journal of Vision, 2019, 19, 29a.	0.3	0

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37	Evaluating the performance of the staircase and qCD methods in measuring specificity/transfer of perceptual learning. Journal of Vision, 2019, 19, 29.	0.3	1
38	Identifying first-episode drug naÃ¯ve patients with schizophrenia with or without auditory verbal hallucinations using whole-brain functional connectivity: A pattern analysis study. NeuroImage: Clinical, 2018, 19, 351-359.	2.7	10
39	Prefrontal Cortical Activity During the Stroop Task: New Insights into the Why and the Who of Real-World Risky Sexual Behavior. Annals of Behavioral Medicine, 2018, 52, 367-379.	2.9	13
40	The effects of monocular training on binocular functions in anisometropic amblyopia. Vision Research, 2018, 152, 74-83.	1.4	23
41	Measuring the Contrast Sensitivity Function Using the qCSF Method With 10 Digits. Translational Vision Science and Technology, 2018, 7, 9.	2.2	33
42	Introduction to Special Issue on Perceptual Learning. Vision Research, 2018, 152, 1-2.	1.4	0
43	Hierarchical Bayesian Analyses for Modeling BOLD Time Series Data. Computational Brain & Behavior, 2018, 1, 184-213.	1.7	11
44	High reward enhances perceptual learning. Journal of Vision, 2018, 18, 11.	0.3	27
45	Bayesian adaptive assessment of the reading function for vision: The qReading method. Journal of Vision, 2018, 18, 6.	0.3	10
46	Evaluating the performance of the staircase and quick Change Detection methods in measuring perceptual learning. Journal of Vision, 2018, 18, 256.	0.3	2
47	Perceptual learning trial-by- trial in a task-roving paradigm. Journal of Vision, 2018, 18, 755.	0.3	0
48	Assessing the trial-by-trial time course of perceptual sensitivity change in perceptual learning using the quick Change Detection method. Journal of Vision, 2018, 18, 1068.	0.3	2
49	Planning Beyond the Next Trial in Adaptive Experiments: A Dynamic Programming Approach. Cognitive Science, 2017, 41, 2234-2252.	1.7	10
50	Evaluation of the precision of contrast sensitivity function assessment on a tablet device. Scientific Reports, 2017, 7, 46706.	3.3	27
51	Prior Visual Experience Modulates Learning of Sound Localization Among Blind Individuals. Brain Topography, 2017, 30, 364-379.	1.8	5
52	Statistical Modeling of the Default Mode Brain Network Reveals a Segregated Highway Structure. Scientific Reports, 2017, 7, 11694.	3.3	16
53	A complete investigation of monocular and binocular functions in clinically treated amblyopia. Scientific Reports, 2017, 7, 10682.	3.3	17
54	Visual Perceptual Learning and Models. Annual Review of Vision Science, 2017, 3, 343-363.	4.4	161

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55	Mixture of easy trials enables transient and sustained perceptual improvements through priming and perceptual learning. Scientific Reports, 2017, 7, 7421.	3.3	7
56	Efficient Characterization and Classification of Contrast Sensitivity Functions in Aging. Scientific Reports, 2017, 7, 5045.	3.3	17
57	Perceptual learning in n-alternative forced choice with response and accuracy feedback, and a reweighting model.. Journal of Vision, 2017, 17, 1078.	0.3	1
58	Efficacy and Safety of MMFS-01, a Synapse Density Enhancer, for Treating Cognitive Impairment in Older Adults: A Randomized, Double-Blind, Placebo-Controlled Trial. Journal of Alzheimer's Disease, 2016, 49, 971-990.	2.6	47
59	Evaluating the performance of the quick CSF method in detecting contrast sensitivity function changes. Journal of Vision, 2016, 16, 18.	0.3	63
60	qPR: An adaptive partial-report procedure based on Bayesian inference. Journal of Vision, 2016, 16, 25.	0.3	12
61	A hierarchical Bayesian approach to adaptive vision testing: A case study with the contrast sensitivity function. Journal of Vision, 2016, 16, 15.	0.3	31
62	Translating Perceptual Learning from the Laboratory to Applications. Trends in Cognitive Sciences, 2016, 20, 561-563.	7.8	37
63	Decomposing experience-driven attention: Opposite attentional effects of previously predictive cues. Attention, Perception, and Psychophysics, 2016, 78, 2185-2198.	1.3	14
64	Automaticity of phasic alertness: Evidence for a three-component model of visual cueing. Attention, Perception, and Psychophysics, 2016, 78, 1948-1967.	1.3	4
65	Neural Global Pattern Similarity Underlies True and False Memories. Journal of Neuroscience, 2016, 36, 6792-6802.	3.6	27
66	Separating decision and encoding noise in signal detection tasks.. Psychological Review, 2015, 122, 429-460.	3.8	13
67	Decreased bilateral thalamic gray matter volume in first-episode schizophrenia with prominent hallucinatory symptoms: A volumetric MRI study. Scientific Reports, 2015, 5, 14505.	3.3	42
68	Next-generation vision testing: the quick CSF. Current Directions in Biomedical Engineering, 2015, 1, 131-134.	0.4	17
69	Tilt after-effect from high spatial-frequency patterns in the amblyopic eye of adults with anisometropic amblyopia. Scientific Reports, 2015, 5, 8728.	3.3	3
70	Augmented Hebbian reweighting accounts for accuracy and induced bias in perceptual learning with reverse feedback. Journal of Vision, 2015, 15, 10.	0.3	14
71	Using 10AFC to further improve the efficiency of the quick CSF method. Journal of Vision, 2015, 15, 2.	0.3	62
72	Broad bandwidth of perceptual learning in second-order contrast modulation detection. Journal of Vision, 2015, 15, 20-20.	0.3	3

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73	Perceptual learning improves neural processing in myopic vision. Journal of Vision, 2015, 15, 12.	0.3	29
74	Developing Bayesian adaptive methods for estimating sensitivity thresholds (dâ€²) in Yes-No and forced-choice tasks. Frontiers in Psychology, 2015, 6, 1070.	2.1	37
75	How age of acquisition influences brain architecture in bilinguals. Journal of Neurolinguistics, 2015, 36, 35-55.	1.1	40
76	Long-term experience with Chinese language shapes the fusiform asymmetry of English reading. NeuroImage, 2015, 110, 3-10.	4.2	36
77	Discriminating anisometropic amblyopia from myopia based on interocular inhibition. Vision Research, 2015, 114, 135-141.	1.4	18
78	Construction and evaluation of an integrated dynamical model of visual motion perception. Neural Networks, 2015, 67, 110-120.	5.9	4
79	Native language experience shapes neural basis of addressed and assembled phonologies. NeuroImage, 2015, 114, 38-48.	4.2	29
80	Artificial Language Training Reveals the Neural Substrates Underlying Addressed and Assembled Phonologies. PLoS ONE, 2014, 9, e93548.	2.5	33
81	The external noise normalized gain profile of spatial vision. Journal of Vision, 2014, 14, 9-9.	0.3	18
82	Characterizing human retinotopic mapping with conformal geometry: a preliminary study. , 2014, , .		3
83	A Hierarchical Adaptive Approach to Optimal Experimental Design. Neural Computation, 2014, 26, 2465-2492.	2.2	59
84	Modeling trial by trial and block feedback in perceptual learning. Vision Research, 2014, 99, 46-56.	1.4	25
85	Learning to read words in a new language shapes the neural organization of the prior languages. Neuropsychologia, 2014, 65, 156-168.	1.6	21
86	Action video game play facilitates the development of better perceptual templates. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 16961-16966.	7.1	151
87	Perceptual Learning Improves Stereoacuity in Amblyopia. , 2014, 55, 2384.		67
88	Language-general and -specific white matter microstructural bases for reading. NeuroImage, 2014, 98, 435-441.	4.2	29
89	How arousal modulates the visual contrast sensitivity function.. Emotion, 2014, 14, 978-984.	1.8	44
90	Noise Provides New Insights on Contrast Sensitivity Function. PLoS ONE, 2014, 9, e90579.	2.5	26

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91	Assessing Binocular Interaction in Amblyopia and Its Clinical Feasibility. PLoS ONE, 2014, 9, e100156.	2.5	47
92	Neural correlates of stimulus spatial frequency-dependent contrast detection. Experimental Brain Research, 2013, 225, 377-385.	1.5	20
93	Phonological processing is uniquely associated with neuro-metabolic concentration. NeuroImage, 2013, 67, 175-181.	4.2	20
94	An integrated reweighting theory of perceptual learning. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13678-13683.	7.1	120
95	Correction of eddy current distortions in high angular resolution diffusion imaging. Journal of Magnetic Resonance Imaging, 2013, 37, spcone-spcone.	3.4	2
96	Rapid and Reliable Assessment of the Contrast Sensitivity Function on an iPad. , 2013, 54, 7266.		88
97	Common Neural Mechanisms Underlying Reversal Learning by Reward and Punishment. PLoS ONE, 2013, 8, e82169.	2.5	33
98	Black-white asymmetry in visual perception. Journal of Vision, 2012, 12, 8-8.	0.3	32
99	Enabling High Grayscale Resolution Displays and Accurate Response Time Measurements on Conventional Computers. Journal of Visualized Experiments, 2012, , .	0.3	9
100	Co-learning analysis of two perceptual learning tasks with identical input stimuli supports the reweighting hypothesis. Vision Research, 2012, 61, 25-32.	1.4	27
101	Mixed training at high and low accuracy levels leads to perceptual learning without feedback. Vision Research, 2012, 61, 15-24.	1.4	32
102	Attention Extracts Signal in External Noise: A BOLD fMRI Study. Journal of Cognitive Neuroscience, 2011, 23, 1148-1159.	2.3	26
103	Perceptual learning as improved probabilistic inference in early sensory areas. Nature Neuroscience, 2011, 14, 642-648.	14.8	108
104	Visual perceptual learning. Neurobiology of Learning and Memory, 2011, 95, 145-151.	1.9	99
105	Deficient binocular combination reveals mechanisms of anisometropic amblyopia: Signal attenuation and interocular inhibition. Journal of Vision, 2011, 11, 4-4.	0.3	96
106	Perceptual Learning Improves Contrast Sensitivity of V1 Neurons in Cats. Current Biology, 2010, 20, 887-894.	3.9	130
107	Modeling mechanisms of perceptual learning with augmented Hebbian re-weighting. Vision Research, 2010, 50, 375-390.	1.4	51
108	Perceptual learning and attention: Reduction of object attention limitations with practice. Vision Research, 2010, 50, 402-415.	1.4	17

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109	Specificity of perceptual learning increases with increased training. Vision Research, 2010, 50, 1928-1940.	1.4	101
110	Contrast and Phase Combination in Binocular Vision. PLoS ONE, 2010, 5, e15075.	2.5	73
111	Bayesian adaptive estimation of the contrast sensitivity function: The quick CSF method. Journal of Vision, 2010, 10, 1-21.	0.3	243
112	Augmented Hebbian reweighting: Interactions between feedback and training accuracy in perceptual learning. Journal of Vision, 2010, 10, 29-29.	0.3	52
113	qCSF in Clinical Application: Efficient Characterization and Classification of Contrast Sensitivity Functions in Amblyopia. , 2010, 51, 5365.		112
114	Task precision at transfer determines specificity of perceptual learning. Journal of Vision, 2009, 9, 1-1.	0.3	189
115	Mechanisms underlying perceptual learning of contrast detection in adults with anisometropic amblyopia. Journal of Vision, 2009, 9, 24-24.	0.3	43
116	Intra- and cross-modal cuing of spatial attention: Time courses and mechanisms. Vision Research, 2009, 49, 1081-1096.	1.4	17
117	Mechanisms of perceptual learning. Learning & Perception, 2009, 1, 19-36.	2.4	43
118	Hebbian reweighting on stable representations in perceptual learning. Learning & Perception, 2009, 1, 37-58.	2.4	52
119	Broad bandwidth of perceptual learning in the visual system of adults with anisometropic amblyopia. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 4068-4073.	7.1	185
120	Blood oxygenation level-dependent contrast response functions identify mechanisms of covert attention in early visual areas. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 6202-6207.	7.1	117
121	Characterizing observers using external noise and observer models: Assessing internal representations with external noise.. Psychological Review, 2008, 115, 44-82.	3.8	215
122	Mechanisms of attention: Psychophysics, cognitive psychology, and cognitive neuroscience. Kiso Shinrigaku KenkyÅ«, 2008, 27, 38-45.	0.0	0
123	The Functional Form of Performance Improvements in Perceptual Learning. Psychological Science, 2007, 18, 531-539.	3.3	64
124	Perceptual learning improves contrast sensitivity and visual acuity in adults with anisometropic amblyopia. Vision Research, 2006, 46, 739-750.	1.4	219
125	Level and mechanisms of perceptual learning: Learning first-order luminance and second-order texture objects. Vision Research, 2006, 46, 1996-2007.	1.4	32
126	Perceptual learning of motion direction discrimination in fovea: Separable mechanisms. Vision Research, 2006, 46, 2315-2327.	1.4	34

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127	Perceptual learning without feedback in non-stationary contexts: Data and model. Vision Research, 2006, 46, 3177-3197.	1.4	95
128	Bayesian adaptive estimation of threshold versus contrast external noise functions: The quick TvC method. Vision Research, 2006, 46, 3160-3176.	1.4	74
129	The Dynamics of Perceptual Learning: An Incremental Reweighting Model.. Psychological Review, 2005, 112, 715-743.	3.8	274
130	Independent perceptual learning in monocular and binocular motion systems. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 5624-5629.	7.1	31
131	Perceptual learning in clear displays optimizes perceptual expertise: Learning the limiting process. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 5286-5290.	7.1	85
132	Fast decay of iconic memory in observers with mild cognitive impairments. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 1797-1802.	7.1	85
133	Perceptual learning of Gabor orientation identification in visual periphery: Complete inter-ocular transfer of learning mechanisms. Vision Research, 2005, 45, 2500-2510.	1.4	18
134	Perceptual learning retunes the perceptual template in foveal orientation identification. Journal of Vision, 2004, 4, 5-5.	0.3	85
135	Spatial attention excludes external noise without changing the spatial frequency tuning of the perceptual template. Journal of Vision, 2004, 4, 10.	0.3	42
136	Temporal tuning characteristics of the perceptual template and endogenous cuing of spatial attention. Vision Research, 2004, 44, 1333-1350.	1.4	19
137	Generating high gray-level resolution monochrome displays with conventional computer graphics cards and color monitors. Journal of Neuroscience Methods, 2003, 130, 9-18.	2.5	102
138	Three-systems theory of human visual motion perception: review and update. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2001, 18, 2331.	1.5	263
139	Sensitive calibration and measurement procedures based on the amplification principle in motion perception. Vision Research, 2001, 41, 2355-2374.	1.4	28
140	Noise Exclusion in Spatial Attention. Psychological Science, 2000, 11, 139-146.	3.3	245
141	Mechanisms of perceptual attention in precuing of location. Vision Research, 2000, 40, 1269-1292.	1.4	205
142	Second-order reversed phi. Perception & Psychophysics, 1999, 61, 1075-1088.	2.3	40
143	Mechanisms of perceptual learning. Vision Research, 1999, 39, 3197-3221.	1.4	317
144	Characterizing human perceptual inefficiencies with equivalent internal noise. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1999, 16, 764.	1.5	183

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145	External noise distinguishes attention mechanisms. Vision Research, 1998, 38, 1183-1198.	1.4	474
146	Contrast gain control in first- and second-order motion perception. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1996, 13, 2305.	1.5	41
147	The functional architecture of human visual motion perception. Vision Research, 1995, 35, 2697-2722.	1.4	407