Zhong-Lin Lu

List of Publications by Year
in descending order

147	7,695	76326 40	62596 80
papers	citations	h-index	g-index

153	153	153	4092
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	External noise distinguishes attention mechanisms. Vision Research, 1998, 38, 1183-1198.	1.4	474
2	The functional architecture of human visual motion perception. Vision Research, 1995, 35, 2697-2722.	1.4	407
3	Mechanisms of perceptual learning. Vision Research, 1999, 39, 3197-3221.	1.4	317
4	The Dynamics of Perceptual Learning: An Incremental Reweighting Model.. Psychological Review, 2005, 112, 715-743.	3.8	274
5	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
6	Noise Exclusion in Spatial Attention. Psychological Science, 2000, 11, 139-146.	3.3	245
7	Bayesian adaptive estimation of the contrast sensitivity function: The quick CSF method. Journal of Vision, 2010, 10, 1-21.	0.3	243
8	Perceptual learning improves contrast sensitivity and visual acuity in adults with anisometropic amblyopia. Vision Research, 2006, 46, 739-750.	1.4	219
9	Characterizing observers using external noise and observer models: Assessing internal representations with external noise.. Psychological Review, 2008, 115, 44-82.	3.8	215
10	Mechanisms of perceptual attention in precuing of location. Vision Research, 2000, 40, 1269-1292.	1.4	205
11	Task precision at transfer determines specificity of perceptual learning. Journal of Vision, 2009, 9, 1-1.	0.3	189
12	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
13	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
14	Visual Perceptual Learning and Models. Annual Review of Vision Science, 2017, 3, 343-363.	4.4	161
15	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
16	Perceptual Learning Improves Contrast Sensitivity of V1 Neurons in Cats. Current Biology, 2010, 20, 887-894.	3.9	130
17	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
18	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

#	Article	IF	Citations
19	qCSF in Clinical Application: Efficient Characterization and Classification of Contrast Sensitivity Functions in Amblyopia. , 2010, 51, 5365.		112
20	Perceptual learning as improved probabilistic inference in early sensory areas. Nature Neuroscience, 2011, 14, 642-648.	14.8	108
21	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
22	Specificity of perceptual learning increases with increased training. Vision Research, 2010, 50, 1928-1940.	1.4	101
23	Visual perceptual learning. Neurobiology of Learning and Memory, 2011, 95, 145-151.	1.9	99
24	Deficient binocular combination reveals mechanisms of anisometropic amblyopia: Signal attenuation and interocular inhibition. Journal of Vision, 2011, 11, 4-4.	0.3	96
25	Perceptual learning without feedback in non-stationary contexts: Data and model. Vision Research, 2006, 46, 3177-3197.	1.4	95
26	Rapid and Reliable Assessment of the Contrast Sensitivity Function on an iPad. , 2013, 54, 7266.		88
27	Perceptual learning retunes the perceptual template in foveal orientation identification. Journal of Vision, 2004, 4, 5-5.	0.3	85
28	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
29	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
30	Bayesian adaptive estimation of threshold versus contrast external noise functions: The quick TvC method. Vision Research, 2006, 46, 3160-3176.	1.4	74
31	Contrast and Phase Combination in Binocular Vision. PLoS ONE, 2010, 5, e15075.	2.5	73
32	Perceptual Learning Improves Stereoacuity in Amblyopia. , 2014, 55, 2384.		67
33	The Functional Form of Performance Improvements in Perceptual Learning. Psychological Science, 2007, 18, 531-539.	3.3	64
34	Evaluating the performance of the quick CSF method in detecting contrast sensitivity function changes. Journal of Vision, 2016, 16, 18.	0.3	63
35	Using 10AFC to further improve the efficiency of the quick CSF method. Journal of Vision, 2015, 15, 2.	0.3	62
36	A Hierarchical Adaptive Approach to Optimal Experimental Design. Neural Computation, 2014, 26, 2465-2492.	2.2	59

#	Article	IF	Citations
37	Augmented Hebbian reweighting: Interactions between feedback and training accuracy in perceptual learning. Journal of Vision, 2010, 10, 29-29.	0.3	52
38	Hebbian reweighting on stable representations in perceptual learning. Learning & Perception, 2009, 1, 37-58.	2.4	52
39	Modeling mechanisms of perceptual learning with augmented Hebbian re-weighting. Vision Research, 2010, 50, 375-390.	1.4	51
40	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
41	Assessing Binocular Interaction in Amblyopia and Its Clinical Feasibility. PLoS ONE, 2014, 9, e100156.	2.5	47
42	How arousal modulates the visual contrast sensitivity function.. Emotion, 2014, 14, 978-984.	1.8	44
43	Mechanisms underlying perceptual learning of contrast detection in adults with anisometropic amblyopia. Journal of Vision, 2009, 9, 24-24.	0.3	43
44	Mechanisms of perceptual learning. Learning & Perception, 2009, 1, 19-36.	2.4	43
45	Spatial attention excludes external noise without changing the spatial frequency tuning of the perceptual template. Journal of Vision, 2004, 4, 10.	0.3	42
46	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
47	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
48	Second-order reversed phi. Perception & Psychophysics, 1999, 61, 1075-1088.	2.3	40
49	How age of acquisition influences brain architecture in bilinguals. Journal of Neurolinguistics, 2015, 36, 35-55.	1.1	40
50	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
51	Translating Perceptual Learning from the Laboratory to Applications. Trends in Cognitive Sciences, 2016, 20, 561-563.	7.8	37
52	Long-term experience with Chinese language shapes the fusiform asymmetry of English reading. NeuroImage, 2015, 110, 3-10.	4.2	36
53	Perceptual learning of motion direction discrimination in fovea: Separable mechanisms. Vision Research, 2006, 46, 2315-2327.	1.4	34
54	Common Neural Mechanisms Underlying Reversal Learning by Reward and Punishment. PLoS ONE, 2013, 8, e82169.	2.5	33

#	Article	IF	Citations
55	Artificial Language Training Reveals the Neural Substrates Underlying Addressed and Assembled Phonologies. PLoS ONE, 2014, 9, e93548.	2.5	33
56	Measuring the Contrast Sensitivity Function Using the qCSF Method With 10 Digits. Translational Vision Science and Technology, 2018, 7, 9.	2.2	33
57	Level and mechanisms of perceptual learning: Learning first-order luminance and second-order texture objects. Vision Research, 2006, 46, 1996-2007.	1.4	32
58	Black-white asymmetry in visual perception. Journal of Vision, 2012, 12, 8-8.	0.3	32
59	Mixed training at high and low accuracy levels leads to perceptual learning without feedback. Vision Research, 2012, 61, 15-24.	1.4	32
60	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
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	Language-general and -specific white matter microstructural bases for reading. NeuroImage, 2014, 98, 435-441.	4.2	29
63	Perceptual learning improves neural processing in myopic vision. Journal of Vision, 2015, 15, 12.	0.3	29
64	Native language experience shapes neural basis of addressed and assembled phonologies. NeuroImage, 2015, 114, 38-48.	4.2	29
65	Sensitive calibration and measurement procedures based on the amplification principle in motion perception. Vision Research, 2001, 41, 2355-2374.	1.4	28
66	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
67	Neural Global Pattern Similarity Underlies True and False Memories. Journal of Neuroscience, 2016, 36, 6792-6802.	3.6	27
68	Evaluation of the precision of contrast sensitivity function assessment on a tablet device. Scientific Reports, 2017, 7, 46706.	3.3	27
69	High reward enhances perceptual learning. Journal of Vision, 2018, 18, 11.	0.3	27
70	Attention Extracts Signal in External Noise: A BOLD fMRI Study. Journal of Cognitive Neuroscience, 2011, 23, 1148-1159.	2.3	26
71	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
72	Noise Provides New Insights on Contrast Sensitivity Function. PLoS ONE, 2014, 9, e90579.	2.5	26

#	Article	IF	Citations
73	Modeling trial by trial and block feedback in perceptual learning. Vision Research, 2014, 99, 46-56.	1.4	25
74	The effects of monocular training on binocular functions in anisometropic amblyopia. Vision Research, 2018, 152, 74-83.	1.4	23
75	Assessing the detailed time course of perceptual sensitivity change in perceptual learning. Journal of Vision, 2019, 19, 9.	0.3	23
76	Binocular Summation and Suppression of Contrast Sensitivity in Strabismus, Fusion and Amblyopia. Frontiers in Human Neuroscience, 2019, 13, 234.	2.0	23
77	Learning to read words in a new language shapes the neural organization of the prior languages. Neuropsychologia, 2014, 65, 156-168.	1.6	21
78	Effects of Monocular Perceptual Learning on Binocular Visual Processing in Adolescent and Adult Amblyopia. IScience, 2020, 23, 100875.	4.1	21
79	Neural correlates of stimulus spatial frequency-dependent contrast detection. Experimental Brain Research, 2013, 225, 377-385.	1.5	20
80	Phonological processing is uniquely associated with neuro-metabolic concentration. NeuroImage, 2013, 67, 175-181.	4.2	20
81	Temporal tuning characteristics of the perceptual template and endogenous cuing of spatial attention. Vision Research, 2004, 44, 1333-1350.	1.4	19
82	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
83	The external noise normalized gain profile of spatial vision. Journal of Vision, 2014, 14, 9-9.	0.3	18
84	Discriminating anisometropic amblyopia from myopia based on interocular inhibition. Vision Research, 2015, 114, 135-141.	1.4	18
85	Intra- and cross-modal cuing of spatial attention: Time courses and mechanisms. Vision Research, 2009, 49, 1081-1096.	1.4	17
86	Perceptual learning and attention: Reduction of object attention limitations with practice. Vision Research, 2010, 50, 402-415.	1.4	17
87	Next-generation vision testing: the quick CSF. Current Directions in Biomedical Engineering, 2015, 1, 131-134.	0.4	17
88	A complete investigation of monocular and binocular functions in clinically treated amblyopia. Scientific Reports, 2017, 7, 10682.	3.3	17
89	Efficient Characterization and Classification of Contrast Sensitivity Functions in Aging. Scientific Reports, 2017, 7, 5045.	3.3	17
90	Statistical Modeling of the Default Mode Brain Network Reveals a Segregated Highway Structure. Scientific Reports, 2017, 7, 11694.	3.3	16

#	Article	IF	Citations
91	Action video game play facilitates â€œlearning to learnâ€• Communications Biology, 2021, 4, 1154.	4.4	16
92	Augmented Hebbian reweighting accounts for accuracy and induced bias in perceptual learning with reverse feedback. Journal of Vision, 2015, 15, 10.	0.3	14
93	Decomposing experience-driven attention: Opposite attentional effects of previously predictive cues. Attention, Perception, and Psychophysics, 2016, 78, 2185-2198.	1.3	14
94	Predicting Task and Subject Differences with Functional Connectivity and Blood-Oxygen-Level-Dependent Variability. Brain Connectivity, 2019, 9, 451-463.	1.7	14
95	Efficient assessment of the time course of perceptual sensitivity change. Vision Research, 2019, 154, 21-43.	1.4	14
96	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
97	Separating decision and encoding noise in signal detection tasks.. Psychological Review, 2015, 122, 429-460.	3.8	13
98	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
99	A novel Bayesian adaptive method for mapping the visual field. Journal of Vision, 2019, 19, 16.	0.3	13
100	qPR: An adaptive partial-report procedure based on Bayesian inference. Journal of Vision, 2016, 16, 25.	0.3	12
101	Comparing Spatial Contrast Sensitivity Functions Measured With Digit and Grating Stimuli. Translational Vision Science and Technology, 2019, 8, 16.	2.2	12
102	Pediatric Stroke Impairs Theory of Mind Performance. Journal of Child Neurology, 2020, 35, 228-234.	1.4	12
103	Hierarchical Bayesian Analyses for Modeling BOLD Time Series Data. Computational Brain & Behavior, 2018, 1, 184-213.	1.7	11
104	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
105	Planning Beyond the Next Trial in Adaptive Experiments: A Dynamic Programming Approach. Cognitive Science, 2017, 41, 2234-2252.	1.7	10
106	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
107	Bayesian adaptive assessment of the reading function for vision: The qReading method. Journal of Vision, 2018, 18, 6.	0.3	10
108	Computational neuroscience: a frontier of the 21st century. National Science Review, 2020, 7, 1418-1422.	9.5	10

#	Article	IF	Citations
109	Enabling High Grayscale Resolution Displays and Accurate Response Time Measurements on Conventional Computers. Journal of Visualized Experiments, 2012, , .	0.3	9
110	Quantifying Uncertainty of the Estimated Visual Acuity Behavioral Function With Hierarchical Bayesian Modeling. Translational Vision Science and Technology, 2021, 10, 18.	2.2	8
111	Mixture of easy trials enables transient and sustained perceptual improvements through priming and perceptual learning. Scientific Reports, 2017, 7, 7421.	3.3	7
112	Evaluating the performance of the staircase and quick Change Detection methods in measuring perceptual learning. Journal of Vision, 2019, 19, 14.	0.3	7
113	Diffeomorphic Registration for Retinotopic Mapping Via Quasiconformal Mapping. , 2020, 2020, 687-691.		7
114	Quantitative characterization of the human retinotopic map based on quasiconformal mapping. Medical Image Analysis, 2022, 75, 102230.	11.6	7
115	Hierarchical Bayesian modeling of contrast sensitivity functions in a within-subject design. Journal of Vision, 2021, 21, 9.	0.3	7
116	Effects of top-down influence suppression on behavioral and V1 neuronal contrast sensitivity functions in cats. IScience, 2022, 25, 103683.	4.1	7
117	Identifying Long- and Short-Term Processes in Perceptual Learning. Psychological Science, 2022, 33, 830-843.	3.3	6
118	Prior Visual Experience Modulates Learning of Sound Localization Among Blind Individuals. Brain Topography, 2017, 30, 364-379.	1.8	5
119	Roving: The causes of interference and re-enabled learning in multi-task visual training. Journal of Vision, 2020, 20, 9.	0.3	5
120	Mapping the Contrast Sensitivity of the Visual Field With Bayesian Adaptive qVFM. Frontiers in Neuroscience, 2020, 14, 665.	2.8	5
121	Diffeomorphic Smoothing for Retinotopic Mapping. , 2020, 2020, 534-538.		5
122	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
123	Functional connectivity signatures of political ideology. , 2022, 1, .		5
124	Construction and evaluation of an integrated dynamical model of visual motion perception. Neural Networks, 2015, 67, 110-120.	5.9	4
125	Automaticity of phasic alertness: Evidence for a three-component model of visual cueing. Attention, Perception, and Psychophysics, 2016, 78, 1948-1967.	1.3	4
126	Topology-preserving smoothing of retinotopic maps. PLoS Computational Biology, 2021, 17, e1009216.	3.2	4

#	Article	IF	Citations
127	Modeling Within-Item Dependencies in Parallel Data on Test Responses and Brain Activation. Psychometrika, 2021, 86, 239-271.	2.1	4
128	Characterizing human retinotopic mapping with conformal geometry: a preliminary study. , 2014, , .		3
129	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
130	Broad bandwidth of perceptual learning in second-order contrast modulation detection. Journal of Vision, 2015, 15, 20-20.	0.3	3
131	Diffeomorphic registration for retinotopic maps of multiple visual regions. Brain Structure and Function, 2022, 227, 1507-1522.	2.3	3
132	Correction of eddy current distortions in high angular resolution diffusion imaging. Journal of Magnetic Resonance Imaging, 2013, 37, spcone-spcone.	3.4	2
133	Evaluating the performance of the staircase and quick Change Detection methods in measuring perceptual learning. Journal of Vision, 2018, 18, 256.	0.3	2
134	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
135	Topological Receptive Field Model for Human Retinotopic Mapping. Lecture Notes in Computer Science, 2021, 12907, 639-649.	1.3	1
136	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
137	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
138	Evaluating the functional form of perceptual learning with trial-by-trial analysis. Journal of Vision, 2020, 20, 1643.	0.3	1
139	Improving iconic memory through contrast detection training with HOA-corrected vision. Fundamental Research, 2024, 4, 95-102.	3.3	1
140	Introduction to Special Issue on Perceptual Learning. Vision Research, 2018, 152, 1-2.	1.4	0
141	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
142	2.2: Invited Paper: The Temporal Window of Visual Processing. Digest of Technical Papers SID International Symposium, 2021, 52, 11-12.	0.3	0
143	Diffeomorphic Registration of Retinotopic Maps with Quasiconformal Mapping. Journal of Vision, 2021, 21, 2467.	0.3	0
144	Perceptual learning trial-by- trial in a task-roving paradigm. Journal of Vision, 2018, 18, 755.	0.3	0

#	Article	IF	Citations
145	Generalization of learning in n-AFC orientation identification. Journal of Vision, 2019, 19, 29a.	0.3	0
146	Optimizing Visual Cortex Parameterization with Error-Tolerant TeichmÃ¼ller Map in Retinotopic Mapping. Lecture Notes in Computer Science, 2020, 12267, 218-227.	1.3	0
147	Mechanisms of attention: Psychophysics, cognitive psychology, and cognitive neuroscience. Kiso Shinrigaku KenkyÅ«, 2008, 27, 38-45.	0.0	0