

Gordon E Legge

List of Publications by Year in descending order

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Version: 2024-02-01

164
papers

11,926
citations

30070

54
h-index

29157

104
g-index

169
all docs

169
docs citations

169
times ranked

4462
citing authors

#	ARTICLE	IF	CITATIONS
1	Contrast masking in human vision. <i>Journal of the Optical Society of America</i> , 1980, 70, 1458.	1.2	1,095
2	Psychophysics of readingâ€™I. Normal vision. <i>Vision Research</i> , 1985, 25, 239-252.	1.4	537
3	Sustained and transient mechanisms in human vision: Temporal and spatial properties. <i>Vision Research</i> , 1978, 18, 69-81.	1.4	413
4	Psychophysics of readingâ€™II. Low vision. <i>Vision Research</i> , 1985, 25, 253-265.	1.4	394
5	Psychophysics of reading. <i>Vision Research</i> , 2001, 41, 725-743.	1.4	355
6	Psychophysics of Reading. VIII. The Minnesota Low- Vision Reading Test. <i>Optometry and Vision Science</i> , 1989, 66, 843-853.	1.2	293
7	Psychophysics of readingâ€™V. The role of contrast in normal vision. <i>Vision Research</i> , 1987, 27, 1165-1177.	1.4	284
8	Contrast detection and near-threshold discrimination in human vision. <i>Vision Research</i> , 1981, 21, 1041-1053.	1.4	281
9	Stereopsis and contrast. <i>Vision Research</i> , 1989, 29, 989-1004.	1.4	266
10	Contrast discrimination in noise. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1987, 4, 391.	1.5	264
11	A power law for contrast discrimination. <i>Vision Research</i> , 1981, 21, 457-467.	1.4	258
12	Spatial-frequency and contrast properties of crowding. <i>Vision Research</i> , 2001, 41, 1833-1850.	1.4	243
13	Psychophysics of reading. XVIII. The effect of print size on reading speed in normal peripheral vision. <i>Vision Research</i> , 1998, 38, 2949-2962.	1.4	230
14	Mr. Chips: An ideal-observer model of reading.. <i>Psychological Review</i> , 1997, 104, 524-553.	3.8	220
15	Psychophysics of readingâ€™XVI. The visual span in normal and low vision. <i>Vision Research</i> , 1997, 37, 1999-2010.	1.4	215
16	Spatial frequency masking in human vision: binocular interactions. <i>Journal of the Optical Society of America</i> , 1979, 69, 838.	1.2	209
17	Color improves object recognition in normal and low vision.. <i>Journal of Experimental Psychology: Human Perception and Performance</i> , 1993, 19, 899-911.	0.9	195
18	Binocular contrast summationâ€™II. Quadratic summation. <i>Vision Research</i> , 1984, 24, 385-394.	1.4	191

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19	Does print size matter for reading? A review of findings from vision science and typography. <i>Journal of Vision</i> , 2011, 11, 8-8.	0.3	180
20	Functional and cortical adaptations to central vision loss. <i>Visual Neuroscience</i> , 2005, 22, 187-201.	1.0	161
21	Binocular contrast summation. I. Detection and discrimination. <i>Vision Research</i> , 1984, 24, 373-383.	1.4	157
22	Psychophysics of reading. VI. The role of contrast in low vision. <i>Vision Research</i> , 1989, 29, 79-91.	1.4	145
23	Human efficiency for recognizing 3-D objects in luminance noise. <i>Vision Research</i> , 1995, 35, 3053-3069.	1.4	143
24	Letter-recognition and reading speed in peripheral vision benefit from perceptual learning. <i>Vision Research</i> , 2004, 44, 695-709.	1.4	135
25	Tolerance to visual defocus. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1987, 4, 851.	1.5	131
26	The case for the visual span as a sensory bottleneck in reading. <i>Journal of Vision</i> , 2007, 7, 9.	0.3	124
27	Binocular interactions in suprathreshold contrast perception. <i>Perception & Psychophysics</i> , 1981, 30, 49-61.	2.3	121
28	Spatial-frequency characteristics of letter identification in central and peripheral vision. <i>Vision Research</i> , 2002, 42, 2137-2152.	1.4	112
29	Mr. Chips 2002: new insights from an ideal-observer model of reading. <i>Vision Research</i> , 2002, 42, 2219-2234.	1.4	111
30	Retention of high tactile acuity throughout the life span in blindness. <i>Perception & Psychophysics</i> , 2008, 70, 1471-1488.	2.3	111
31	Effect of letter spacing on visual span and reading speed. <i>Journal of Vision</i> , 2007, 7, 2.	0.3	109
32	Psychophysics of reading XI Comparing color contrast and luminance contrast. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1990, 7, 2002.	1.5	106
33	Printed cards for measuring low-vision reading speed. <i>Vision Research</i> , 1995, 35, 1939-1944.	1.4	103
34	The importance of eye movements in the analysis of simple patterns. <i>Vision Research</i> , 1986, 26, 1111-1117.	1.4	96
35	What Is Low Vision? A Re-evaluation of Definitions. <i>Optometry and Vision Science</i> , 1999, 76, 198-211.	1.2	94
36	Displacement detection in human vision. <i>Vision Research</i> , 1981, 21, 205-213.	1.4	93

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37	Light and dark bars; contrast discrimination. <i>Vision Research</i> , 1983, 23, 473-483.	1.4	89
38	THE PREFERRED RETINAL LOCUS IN MACULAR DISEASE. <i>Retina</i> , 2011, 31, 2109-2114.	1.7	86
39	The effect of print size on reading speed in dyslexia. <i>Journal of Research in Reading</i> , 2005, 28, 332-349.	2.0	84
40	Psychophysics of reading IV Wavelength effects in normal and low vision. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1986, 3, 40.	1.5	74
41	Developmental changes in the visual span for reading. <i>Vision Research</i> , 2007, 47, 2889-2900.	1.4	74
42	Designing Media for Visually-Impaired Users of Refreshable Touch Displays: Possibilities and Pitfalls. <i>IEEE Transactions on Haptics</i> , 2015, 8, 248-257.	2.7	74
43	Efficiency of graphical perception. <i>Perception & Psychophysics</i> , 1989, 46, 365-374.	2.3	73
44	Comparing reading speed for horizontal and vertical English text. <i>Journal of Vision</i> , 2010, 10, 1-17.	0.3	72
45	Learning unfamiliar voices.. <i>Journal of Experimental Psychology: Learning Memory and Cognition</i> , 1984, 10, 298-303.	0.9	70
46	Psychophysics of Reading-x. Effects of Age-related Changes in Vision. <i>Journal of Gerontology</i> , 1991, 46, P325-P331.	1.9	70
47	Adaptive changes in visual cortex following prolonged contrast reduction. <i>Journal of Vision</i> , 2009, 9, 20-20.	0.3	70
48	Indoor Navigation by People with Visual Impairment Using a Digital Sign System. <i>PLoS ONE</i> , 2013, 8, e76783.	2.5	68
49	Reading Digital with Low Vision. <i>Visible Language</i> , 2016, 50, 102-125.	0.4	65
50	Measuring Braille reading speed with the MNREAD test. <i>Visual Impairment Research</i> , 1999, 1, 131-145.	0.2	62
51	Baseline MNREAD Measures for Normally Sighted Subjects From Childhood to Old Age. , 2016, 57, 3836.		62
52	Relationship between visual span and reading performance in age-related macular degeneration. <i>Vision Research</i> , 2008, 48, 577-588.	1.4	61
53	Comparing the Shape of Contrast Sensitivity Functions for Normal and Low Vision. , 2016, 57, 198.		61
54	Human efficiency for recognizing and detecting low-pass filtered objects. <i>Vision Research</i> , 1995, 35, 2955-2966.	1.4	60

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55	Lost in virtual space: Studies in human and ideal spatial navigation.. Journal of Experimental Psychology: Human Perception and Performance, 2006, 32, 688-704.	0.9	57
56	Reading speed in the peripheral visual field of older adults: Does it benefit from perceptual learning?. Vision Research, 2010, 50, 860-869.	1.4	57
57	Incomplete Cortical Reorganization in Macular Degeneration. , 2010, 51, 6826.		57
58	Wayfinding with words: spatial learning and navigation using dynamically updated verbal descriptions. Psychological Research, 2007, 71, 347-358.	1.7	54
59	Space domain properties of a spatial frequency channel in human vision. Vision Research, 1978, 18, 959-969.	1.4	52
60	The viewpoint complexity of an object-recognition task. Vision Research, 1998, 38, 2335-2350.	1.4	52
61	Is word recognition different in central and peripheral vision?. Vision Research, 2003, 43, 2837-2846.	1.4	52
62	Psychophysics of Reading—XIV. The Page Navigation Problem in Using Magnifiers. Vision Research, 1996, 36, 3723-3733.	1.4	51
63	Nonlinear Mixed-Effects Modeling of MNREAD Data. , 2008, 49, 828.		51
64	Symmetry and constancy in the perception of negative and positive luminance contrast. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1984, 1, 309.	1.5	50
65	Contrast discrimination in peripheral vision. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1987, 4, 1594.	1.5	50
66	Variability in stepping direction explains the veering behavior of blind walkers.. Journal of Experimental Psychology: Human Perception and Performance, 2007, 33, 183-200.	0.9	50
67	Development of a Reading Accessibility Index Using the MNREAD Acuity Chart. JAMA Ophthalmology, 2016, 134, 398.	2.5	50
68	Psychophysics of Reading in Normal and Low Vision. , 0, , .		50
69	A power law for perceived contrast in human vision. Vision Research, 1981, 21, 791-799.	1.4	45
70	Development of a training protocol to improve reading performance in peripheral vision. Vision Research, 2010, 50, 36-45.	1.4	45
71	Comparing performance on the MNREAD iPad application with the MNREAD acuity chart. Journal of Vision, 2018, 18, 8.	0.3	44
72	Sensory analysis in vision and audition. Behavioral and Brain Sciences, 1988, 11, 301-302.	0.7	42

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73	Relationship between slow visual processing and reading speed in people with macular degeneration. <i>Vision Research</i> , 2007, 47, 2943-2955.	1.4	42
74	Assessment of Indoor Route-finding Technology for People who are Visually Impaired. <i>Journal of Visual Impairment and Blindness</i> , 2010, 104, 135-147.	0.7	41
75	Effect of pattern complexity on the visual span for Chinese and alphabet characters. <i>Journal of Vision</i> , 2014, 14, 6-6.	0.3	41
76	Stereo matching precedes dichoptic masking. <i>Vision Research</i> , 1994, 34, 1047-1060.	1.4	40
77	Psychophysics of Reading. XVII. Low-Vision Performance with Four Types of Electronically Magnified Text. <i>Optometry and Vision Science</i> , 1998, 75, 183-190.	1.2	40
78	Precision of position signals for letters. <i>Vision Research</i> , 2009, 49, 1948-1960.	1.4	40
79	Invariant Recognition of Natural Objects in the Presence of Shadows. <i>Perception</i> , 2000, 29, 383-398.	1.2	36
80	Higher-contrast requirements for recognizing low-pass-filtered letters. <i>Journal of Vision</i> , 2013, 13, 13-13.	0.3	35
81	Spatial-frequency cutoff requirements for pattern recognition in central and peripheral vision. <i>Vision Research</i> , 2011, 51, 1995-2007.	1.4	34
82	Sensory and cognitive influences on the training-related improvement of reading speed in peripheral vision. <i>Journal of Vision</i> , 2013, 13, 14-14.	0.3	34
83	Convergence accommodation. <i>Journal of the Optical Society of America</i> , 1983, 73, 332.	1.2	31
84	Retinotopically Specific Reorganization of Visual Cortex for Tactile Pattern Recognition. <i>Current Biology</i> , 2009, 19, 596-601.	3.9	31
85	Spatial-frequency requirements for reading revisited. <i>Vision Research</i> , 2012, 62, 139-147.	1.4	31
86	Accommodation to stimuli in peripheral vision. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1987, 4, 1681.	1.5	30
87	Glenn A. Fry Award Lecture 1990: Three Perspectives on Low Vision Reading. <i>Optometry and Vision Science</i> , 1991, 68, 763-769.	1.2	30
88	The "Uniqueness Constraint"™ and Binocular Masking. <i>Perception</i> , 1995, 24, 49-65.	1.2	30
89	Low-Vision Reading Speed: Influences of Linguistic Inference and Aging. <i>Optometry and Vision Science</i> , 2006, 83, 166-177.	1.2	30
90	Reading with a Head-Mounted Video Magnifier. <i>Optometry and Vision Science</i> , 1999, 76, 755-763.	1.2	29

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91	Learning Building Layouts with Non-Geometric Visual Information: The Effects of Visual Impairment and Age. <i>Perception</i> , 2008, 37, 1677-1699.	1.2	29
92	Low Vision and Plasticity: Implications for Rehabilitation. <i>Annual Review of Vision Science</i> , 2016, 2, 321-343.	4.4	28
93	The binocular computation of visual direction. <i>Vision Research</i> , 1996, 36, 27-41.	1.4	26
94	Recognition of Ramps and Steps by People with Low Vision. , 2013, 54, 288.		25
95	Discrimination of compound gratings: Spatial-frequency channels or local features?. <i>Vision Research</i> , 1995, 35, 2685-2695.	1.4	24
96	The effect of contrast on reading speed in dyslexia. <i>Vision Research</i> , 2000, 40, 1921-1935.	1.4	24
97	Visual accessibility of ramps and steps. <i>Journal of Vision</i> , 2010, 10, 8-8.	0.3	24
98	Seeing Steps and Ramps with Simulated Low Acuity. <i>Optometry and Vision Science</i> , 2012, 89, E1299-E1307.	1.2	23
99	Pictorial depth cues: a new slant. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 1995, 12, 17.	1.5	22
100	Sensory factors limiting horizontal and vertical visual span for letter recognition. <i>Journal of Vision</i> , 2014, 14, 3-3.	0.3	22
101	Fonts Designed for Macular Degeneration: Impact on Reading. , 2018, 59, 4182.		22
102	Spatial-frequency properties of letter identification in amblyopia. <i>Vision Research</i> , 2002, 42, 1571-1581.	1.4	21
103	Relationship Between Acuity and Contrast Sensitivity: Differences Due to Eye Disease. , 2020, 61, 40.		21
104	Camera calibration for natural image studies and vision research. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2009, 26, 30.	1.5	20
105	Preneural limitations on letter identification in central and peripheral vision. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2002, 19, 2349.	1.5	19
106	Training improves reading speed in peripheral vision: Is it due to attention?. <i>Journal of Vision</i> , 2010, 10, 18-18.	0.3	19
107	Combining Path Integration and Remembered Landmarks When Navigating without Vision. <i>PLoS ONE</i> , 2013, 8, e72170.	2.5	19
108	Indoor Spatial Updating with Reduced Visual Information. <i>PLoS ONE</i> , 2016, 11, e0150708.	2.5	17

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109	Simulating visibility under reduced acuity and contrast sensitivity. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2017, 34, 583.	1.5	17
110	Adaptation to a spatial impulse: Implications for Fourier transform models of visual processing. <i>Vision Research</i> , 1976, 16, 1407-1418.	1.4	16
111	Extending the MNREAD sentence corpus: Computer-generated sentences for measuring visual performance in reading. <i>Vision Research</i> , 2019, 158, 11-18.	1.4	16
112	Contrast Sensitivity Function as a Screening Test. <i>Optometry and Vision Science</i> , 1986, 63, 265-270.	1.2	15
113	How People with Low Vision Achieve Magnification in Digital Reading. <i>Optometry and Vision Science</i> , 2018, 95, 711-719.	1.2	15
114	Reading Acuity as a Predictor of Low-Vision Reading Performance. , 2018, 59, 4798.		15
115	Evaluation and Comparison of Artificial Intelligence Vision Aids: Orcam MyEye 1 and Seeing AI. <i>Journal of Visual Impairment and Blindness</i> , 2021, 115, 277-285.	0.7	14
116	The development of an automated sentence generator for the assessment of reading speed. <i>Behavioral and Brain Functions</i> , 2008, 4, 14.	3.3	13
117	Linking crowding, visual span, and reading. <i>Journal of Vision</i> , 2017, 17, 11.	0.3	12
118	Multifocal Intraocular Lenses and Glare. <i>Optometry and Vision Science</i> , 1993, 70, 487-495.	1.2	11
119	Motion Parallax: Effects of Blur, Contrast, and Field Size in Normal and Low Vision. <i>Perception</i> , 1997, 26, 1529-1538.	1.2	11
120	Variability in the Length and Frequency of Steps of Sighted and Visually Impaired Walkers. <i>Journal of Visual Impairment and Blindness</i> , 2005, 99, 741-754.	0.7	11
121	Training peripheral vision to read: Boosting the speed of letter processing. <i>Vision Research</i> , 2018, 152, 51-60.	1.4	11
122	Beneficial Effects of Spatial Remapping for Reading With Simulated Central Field Loss. , 2018, 59, 1105.		11
123	Learning to Read Vertical Text in Peripheral Vision. <i>Optometry and Vision Science</i> , 2014, 91, 1097-1105.	1.2	10
124	Comparing the visual spans for faces and letters. <i>Journal of Vision</i> , 2015, 15, 7.	0.3	9
125	Indoor Spatial Updating With Impaired Vision. , 2016, 57, 6757.		9
126	Remote Sighted Assistants for Indoor Location Sensing of Visually Impaired Pedestrians. <i>ACM Transactions on Applied Perception</i> , 2017, 14, 1-14.	1.9	9

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127	Assessment of Indoor Route-finding Technology for People with Visual Impairment. <i>Journal of Visual Impairment and Blindness</i> , 2010, 104, 135-147.	0.7	9
128	Spatial learning and navigation using a virtual verbal display. <i>ACM Transactions on Applied Perception</i> , 2010, 7, 1-22.	1.9	8
129	Comparing the minimum spatial-frequency content for recognizing Chinese and alphabet characters. <i>Journal of Vision</i> , 2018, 18, 1.	0.3	8
130	Reconciling print-size and display-size constraints on reading. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 30276-30284.	7.1	8
131	Online Survey of Digital Reading by Adults with Low Vision. <i>Optometry and Vision Science</i> , 2020, 97, 249-256.	1.2	8
132	Simulated central vision loss impairs implicit location probability learning. <i>Cortex</i> , 2021, 138, 241-252.	2.4	8
133	Spatial-Frequency Masking with Briefly Pulsed Patterns. <i>Perception</i> , 1978, 7, 161-166.	1.2	7
134	The Low Vision Timeline: An Interactive History. <i>Visual Impairment Research</i> , 2008, 10, 67-75.	0.2	7
135	New Challenges in Low-Vision Research. <i>Optometry and Vision Science</i> , 2012, 89, 1244-1245.	1.2	7
136	Locating the cortical bottleneck for slow reading in peripheral vision. <i>Journal of Vision</i> , 2015, 15, 3.	0.3	7
137	Korean reading speed: Effects of print size and retinal eccentricity. <i>Vision Research</i> , 2018, 150, 8-14.	1.4	7
138	Saccade Planning in Reading With Central Scotomas: Comparison of Human and Ideal Performance. , 2000, , 667-682.		7
139	Does Vertical Reading Help People with Macular Degeneration: An Exploratory Study. <i>PLoS ONE</i> , 2017, 12, e0170743.	2.5	7
140	Identification and Detection of Simple 3D Objects with Severely Blurred Vision. , 2012, 53, 7997.		6
141	Incidental Memory of Younger and Older Adults for Objects Encountered in a Real World Context. <i>PLoS ONE</i> , 2014, 9, e99051.	2.5	5
142	Common constraints limit Korean and English character recognition in peripheral vision. <i>Journal of Vision</i> , 2018, 18, 5.	0.3	5
143	Preserved tactile acuity in older pianists. <i>Attention, Perception, and Psychophysics</i> , 2019, 81, 2619-2625.	1.3	4
144	Reading with letter transpositions in central and peripheral vision. <i>Journal of Vision</i> , 2019, 19, 17.	0.3	4

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145	Gaze behavior during navigation with reduced acuity. <i>Experimental Eye Research</i> , 2019, 183, 20-28.	2.6	4
146	How can basic research on spatial cognition enhance the visual accessibility of architecture for people with low vision?. <i>Cognitive Research: Principles and Implications</i> , 2021, 6, 3.	2.0	4
147	A Unified Rule for Binocular Contrast Summation Applies to Normal Vision and Common Eye Diseases. , 2021, 62, 6.		4
148	Variability in the Length and Frequency of Steps of Sighted and Visually Impaired Walkers. <i>Journal of Visual Impairment and Blindness</i> , 2005, 99, 741-754.	0.7	4
149	To the Editor: Reliability Testing of the Dutch Version of the Radner Reading Charts. <i>Optometry and Vision Science</i> , 2008, 85, 1201-1202.	1.2	3
150	Driving With Central Field Loss. <i>JAMA Ophthalmology</i> , 2013, 131, 393.	2.5	3
151	Prentice Medal Lecture 2013. <i>Optometry and Vision Science</i> , 2014, 91, 696-706.	1.2	3
152	Visual factors in reading. <i>Vision Research</i> , 2019, 161, 60-62.	1.4	3
153	Simulating Visibility and Reading Performance in Low Vision. <i>Frontiers in Neuroscience</i> , 2021, 15, 671121.	2.8	3
154	Visual and Auditory Spatial Localization in Younger and Older Adults. <i>Frontiers in Aging Neuroscience</i> , 2022, 14, 838194.	3.4	3
155	<title>Currency features for visually impaired people</title>. , 1996, 2659, 44.		2
156	49.1: Invited Paper: Psychophysics of Reading: Implications for Displaying Text. <i>Digest of Technical Papers SID International Symposium</i> , 2004, 35, 1359.	0.3	2
157	Theories of reading should predict reading speed. <i>Behavioral and Brain Sciences</i> , 2012, 35, 297-298.	0.7	2
158	Evaluating the Visibility of Architectural Features for People with Low Vision – A Quantitative Approach. <i>LEUKOS - Journal of Illuminating Engineering Society of North America</i> , 2022, 18, 154-172.	2.9	2
159	Comment on letter to the editor: is dyslexia caused by a visual deficit? (Skottun, B. C., 2001). <i>Vision Research</i> , 2001, 41, 3071.	1.4	1
160	Do image descriptions underlie word recognition in reading?. <i>British Journal of Psychology</i> , 2010, 101, 33-39.	2.3	1
161	Effects of age and target modality on spatial localization on the horizontal plane. <i>Journal of Vision</i> , 2019, 19, 117b.	0.3	1
162	Reply to J. H. Verbaken. <i>Optometry and Vision Science</i> , 1987, 64, 293-295.	1.2	0

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163	Validating a model of architectural hazard visibility with low-vision observers. PLoS ONE, 2021, 16, e0260267.	2.5	0
164	Spatial attentional learning in simulated central vision loss. Journal of Vision, 2020, 20, 577.	0.3	0