Jan J Koenderink

List of Publications by Year in descending order

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41258 26548 12,848 189 49 107 citations h-index g-index papers 193 193 193 5416 docs citations times ranked citing authors all docs

#	Article	IF	CITATIONS
1	The structure of images. Biological Cybernetics, 1984, 50, 363-370.	0.6	2,104
2	Reflectance and texture of real-world surfaces. ACM Transactions on Graphics, 1999, 18, 1-34.	4.9	1,065
3	Surface shape and curvature scales. Image and Vision Computing, 1992, 10, 557-564.	2.7	980
4	Optic flow. Vision Research, 1986, 26, 161-179.	0.7	746
5	Affine structure from motion. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1991, 8, 377.	0.8	717
6	What Does the Occluding Contour Tell Us about Solid Shape?. Perception, 1984, 13, 321-330.	0.5	417
7	Scale and the differential structure of images. Image and Vision Computing, 1992, 10, 376-388.	2.7	325
8	The Shape of Smooth Objects and the Way Contours End. Perception, 1982, 11, 129-137.	0.5	233
9	Surface perception in pictures. Perception & Psychophysics, 1992, 52, 487-496.	2.3	228
10	Discrimination thresholds for channel-coded systems. Biological Cybernetics, 1992, 66, 543-551.	0.6	165
11	Diffuse and Specular Reflectance from Rough Surfaces. Applied Optics, 1998, 37, 130.	2.1	159
12	Sensitivity to spatiotemporal combined luminance and chromaticity contrast. Journal of the Optical Society of America, 1981, 71, 453.	1.2	154
13	Ambiguity and the â€~Mental Eye' in Pictorial Relief. Perception, 2001, 30, 431-448.	0.5	138
14	Perimetry of contrast detection thresholds of moving spatial sine wave patterns I The near peripheral visual field (eccentricity 0°–8°). Journal of the Optical Society of America, 1978, 68, 845.	1.2	133
15	Sensitivity to spatiotemporal colour contrast in the peripheral visual field. Vision Research, 1983, 23, 1-11.	0.7	132
16	The brain a geometry engine. Psychological Research, 1990, 52, 122-127.	1.0	127
17	Haptic Perception of Spatial Relations. Perception, 1999, 28, 781-795.	0.5	127
18	On So-Called Paradoxical Monocular Stereoscopy. Perception, 1994, 23, 583-594.	0.5	119

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19	Two-dimensional curvature operators. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1988, 5, 1136.	0.8	114
20	Direct Measurement of the Curvature of Visual Space. Perception, 2000, 29, 69-79.	0.5	111
21	Bidirectional Reflection Distribution Function of Thoroughly Pitted Surfaces. International Journal of Computer Vision, 1999, 31, 129-144.	10.9	105
22	Perimetry of contrast detection thresholds of moving spatial sine wave patterns III The target extent as a sensitivity controlling parameter. Journal of the Optical Society of America, 1978, 68, 854.	1.2	102
23	The Structure of Locally Orderless Images. International Journal of Computer Vision, 1999, 31, 159-168.	10.9	96
24	Similar mechanisms underlie curvature comparison by static and dynamic touch. Perception & Psychophysics, 1999, 61, 874-894.	2.3	90
25	Perception of local shape from shading. Perception & Psychophysics, 1993, 54, 145-156.	2.3	88
26	Pictorial surface attitude and local depth comparisons. Perception & Psychophysics, 1996, 58, 163-173.	2.3	87
27	Simultaneous order in nervous nets from a functional standpoint. Biological Cybernetics, 1984, 50, 35-41.	0.6	84
28	Spatiotemporal integration in the detection of coherent motion. Vision Research, 1984, 24, 47-53.	0.7	84
29	Relief: pictorial and otherwise. Image and Vision Computing, 1995, 13, 321-334.	2.7	81
30	Inferring three-dimensional shapes from two-dimensional silhouettes. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1987, 4, 1168.	0.8	80
31	Optical properties (bidirectional reflection distribution functions) of velvet. Applied Optics, 1998, 37, 5974.	2.1	79
32	Perimetry of contrast detection thresholds of moving spatial sine wave patterns II The far peripheral visual field (eccentricity 0°–50°). Journal of the Optical Society of America, 1978, 68, 850.	1.2	76
33	The Visual Light Field. Perception, 2007, 36, 1595-1610.	0.5	74
34	Illuminance texture due to surface mesostructure. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1996, 13, 452.	0.8	71
35	Shape Constancy in Pictorial Relief. Perception, 1996, 25, 155-164.	0.5	69
36	Pointing out of the Picture. Perception, 2004, 33, 513-530.	0.5	68

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37	Two-plus-one-dimensional differential geometry. Pattern Recognition Letters, 1994, 15, 439-443.	2.6	67
38	Effects of Texture, Illumination, and Surface Reflectance on Stereoscopic Shape Perception. Perception, 1997, 26, 807-822.	0.5	67
39	On the Affine Structure of Perceptual Space. Psychological Science, 2001, 12, 191-196.	1.8	67
40	Scale space: Its natural operators and differential invariants. Lecture Notes in Computer Science, 1991, , 239-255.	1.0	64
41	The metrics of visual and haptic space based on parallelity judgements. Journal of Mathematical Psychology, 2003, 47, 278-291.	1.0	60
42	Spatiotemporal contrast detection threshold surface is bimodal. Optics Letters, 1979, 4, 32.	1.7	58
43	Spatial and temporal parameters of motion detection in the peripheral visual field. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1985, 2, 252.	0.8	56
44	Haptic curvature discrimination at several regions of the hand. Perception & Psychophysics, 1997, 59, 1225-1240.	2.3	56
45	Texture histograms as a function of irradiation and viewing direction. International Journal of Computer Vision, 1999, 31, 169-184.	10.9	55
46	Haptic Aftereffect of Curved Surfaces. Perception, 1996, 25, 109-119.	0.5	54
47	<title>Local features of smooth shapes: ridges and courses</title> ., 1993,,.		52
48	Perturbation Study of Shading in Pictures. Perception, 1996, 25, 1009-1026.	0.5	52
49	Pictorial relief. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 1998, 356, 1071-1086.	1.6	52
50	Effects of changing viewing conditions on the perceived structure of smoothly curved surfaces Journal of Experimental Psychology: Human Perception and Performance, 1996, 22, 695-706.	0.7	51
51	Second-order optic flow. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1992, 9, 530.	0.8	50
52	Large Systematic Deviations in Visual Parallelism. Perception, 2000, 29, 1467-1482.	0.5	49
53	Mind, rationality, and cognition: An interdisciplinary debate. Psychonomic Bulletin and Review, 2018, 25, 793-826.	1.4	48
54	Depth Relief. Perception, 1995, 24, 115-126.	0.5	47

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55	The Generic Bilinear Calibration-Estimation Problem. International Journal of Computer Vision, 1997, 23, 217-234.	10.9	47
56	Perception of Movement and Correlation in Stroboscopically Presented Noise Patterns. Perception, 1985, 14, 209-224.	0.5	46
57	The Perception of Doubly Curved Surfaces From Anisotropic Textures. Psychological Science, 2004, 15, 40-46.	1.8	46
58	Amplitude and Spatial-Period Discrimination in Sinusoidal Gratings by Dynamic Touch. Perception, 2001, 30, 1263-1274.	0.5	45
59	Compression of visual space in natural scenes and in their photographic counterparts. Perception & Psychophysics, 1999, 61, 1269-1286.	2.3	42
60	Illumination direction from texture shading. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2003, 20, 987.	0.8	42
61	Pappus in optical space. Perception & Psychophysics, 2002, 64, 380-391.	2.3	40
62	Haptic identification of curved surfaces. Perception & Psychophysics, 1994, 56, 53-61.	2.3	39
63	Irradiation direction from texture. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2003, 20, 1875.	0.8	39
64	Haptic Unilateral and Bilateral Discrimination of Curved Surfaces. Perception, 1996, 25, 739-749.	0.5	38
65	Shape from stereo: A systematic approach using quadratic surfaces. Perception & Psychophysics, 1993, 53, 71-80.	2.3	36
66	Light Direction from Shad(ow)ed Random Gaussian Surfaces. Perception, 2004, 33, 1405-1420.	0.5	36
67	Bidirectional Texture Contrast Function. International Journal of Computer Vision, 2005, 62, 17-34.	10.9	36
68	Structure of light fields in natural scenes. Applied Optics, 2009, 48, 5386.	2.1	36
69	Aging and the haptic perception of 3D surface shape. Attention, Perception, and Psychophysics, 2011, 73, 908-918.	0.7	36
70	Light Source Dependence in Shape from Shading. Vision Research, 1997, 37, 1441-1449.	0.7	35
71	Matching illumination of solid objects. Perception & Psychophysics, 2007, 69, 459-468.	2.3	35
72	Depth. I-Perception, 2011, 2, 541-564.	0.8	35

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73	Influence of the target size on the detection threshold for luminance and chromaticity contrast. Journal of the Optical Society of America, 1980, 70, 1116.	1.2	34
74	Large-Scale Visual Frontoparallels under Full-Cue Conditions. Perception, 2002, 31, 1467-1475.	0.5	33
75	Perceptual representation of visible surfaces. Perception & Psychophysics, 2003, 65, 747-762.	2.3	33
76	On the role of external reference frames on visual judgements of parallelity. Acta Psychologica, 2001, 108, 283-302.	0.7	32
77	Shape from Shading from Images Rendered with Various Surface Types and Light Fields. Perception, 2007, 36, 1191-1213.	0.5	31
78	Wide distribution of external local sign in the normal population. Psychological Research, 2009, 73, 14-22.	1.0	31
79	Representing the light field in finite three-dimensional spaces from sparse discrete samples. Applied Optics, 2009, 48, 450.	2.1	31
80	Shape-from-shading for matte and glossy objects. Acta Psychologica, 2006, 121, 297-316.	0.7	30
81	Receptive field assembly pattern specificity. Journal of Visual Communication and Image Representation, 1992, 3, 1-12.	1.7	29
82	Discrimination of geometric angle in the fronto-parallel plane. Spatial Vision, 1994, 8, 309-328.	1.4	28
83	Haptic parallelity perception on the frontoparallel plane: The involvement of reference frames. Perception & Psychophysics, 2007, 69, 276-286.	2.3	27
84	The Shading Cue in Context. I-Perception, 2010, 1, 159-177.	0.8	27
85	Estimating local shape from shading in the presence of global shading. Perception & Psychophysics, 1993, 54, 334-342.	2.3	26
86	Surface range and attitude probing in stereoscopically presented dynamic scenes Journal of Experimental Psychology: Human Perception and Performance, 1996, 22, 869-878.	0.7	26
87	Haptic Discrimination of Doubly Curved Surfaces. Perception, 1994, 23, 1483-1490.	0.5	25
88	Bidirectional reflectance distribution function of specular surfaces with hemispherical pits. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2002, 19, 2456.	0.8	25
89	Exocentric pointing to opposite targets. Acta Psychologica, 2003, 112, 71-87.	0.7	25
90	Detection of first-order structure in optic flow fields. Vision Research, 1996, 36, 259-270.	0.7	24

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91	Motion detection from photopic to low scotopic luminance levels. Vision Research, 2000, 40, 187-199.	0.7	24
92	The Influence of Illumination Direction on the Pictorial Reliefs of Lambertian Surfaces. Perception, 2005, 34, 275-287.	0.5	24
93	Haptic perception disambiguates visual perception of 3D shape. Experimental Brain Research, 2009, 193, 639-644.	0.7	24
94	The structure of the human motion detection system. IEEE Transactions on Systems, Man, and Cybernetics, 1983, SMC-13, 916-922.	0.9	22
95	Surface Gradients, Contours and the Perception of Surface Attitude in Images of Complex Scenes. Perception, 1996, 25, 701-713.	0.5	21
96	The Structure of Relief. Advances in Imaging and Electron Physics, 1998, , 65-150.	0.1	21
97	The combined influence of binocular disparity and shading on pictorial shape. Perception & Psychophysics, 2001, 63, 1038-1047.	2.3	21
98	Frequency discrimination between and within line gratings by dynamic touch. Perception & Psychophysics, 2002, 64, 969-980.	2.3	21
99	Perception of Illumination Direction in Images of 3-D Convex Objects: Influence of Surface Materials and Light Fields. Perception, 2006, 35, 625-645.	0.5	21
100	Exocentric pointing in depth. Vision Research, 2008, 48, 716-723.	0.7	21
101	Light fields and shape from shading. Journal of Vision, 2011, 11, 21-21.	0.1	21
102	Visual Size Invariance Does Not Apply to Geometric Angle and Speed of Rotation. Perception, 1993, 22, 177-184.	0.5	20
103	Investigation into the Origin of the Haptic Aftereffect of Curved Surfaces. Perception, 1997, 26, 101-117.	0.5	20
104	Does monocular visual space contain planes?. Acta Psychologica, 2010, 134, 40-47.	0.7	19
105	Specularities on Surfaces with Tangential Hairs or Grooves. Computer Vision and Image Understanding, 2000, 78, 320-335.	3.0	18
106	Haptic discrimination of stimuli varying in amplitude and width. Experimental Brain Research, 2002, 146, 32-37.	0.7	18
107	The visual contour in depth. Perception & Psychophysics, 1997, 59, 828-838.	2.3	17
108	Influence of shape on haptic curvature perception. Acta Psychologica, 1999, 100, 267-289.	0.7	17

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109	Visual space under free viewing conditions. Perception & Psychophysics, 2005, 67, 1177-1189.	2.3	17
110	Awareness of the Light Field: The Case of Deformation. I-Perception, 2012, 3, 467-480.	0.8	17
111	Illuminance critical points on generic smooth surfaces. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1993, 10, 844.	0.8	16
112	Perceptual localization of surface position Journal of Experimental Psychology: Human Perception and Performance, 1997, 23, 1481-1492.	0.7	16
113	Surface roughness from highlight structure. Applied Optics, 1999, 38, 2886.	2.1	16
114	Reflectance from locally glossy thoroughly pitted surfaces. Computer Vision and Image Understanding, 2005, 98, 211-222.	3.0	16
115	Measuring 3D Point Configurations in Pictorial Space. I-Perception, 2011, 2, 77-111.	0.8	16
116	An Image Description for Object Definition, Based on Extremal Regions in the Stack., 1986,, 24-37.		16
117	Extraction of optical velocity by use of multi-input Reichardt detectors. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1994, 11, 1222.	0.8	15
118	The prior statistics of object colors. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2010, 27, 206.	0.8	15
119	Looking behavior and potential human interactions during locomotion. Journal of Vision, 2020, 20, 5.	0.1	15
120	Influence of surface attitude and curvature scaling on discrimination of binocularly presented curved surfaces. Vision Research, 1994, 34, 2409-2423.	0.7	14
121	Anisotropy in Haptic Curvature and Shape Perception. Perception, 1998, 27, 573-589.	O . 5	14
122	Haptic after-effect of successively touched curved surfaces. Acta Psychologica, 2001, 106, 247-263.	0.7	14
123	Correspondence in pictorial space. Perception & Psychophysics, 1997, 59, 813-827.	2.3	13
124	Depth in Box Spaces. Seeing and Perceiving, 2012, 25, 339-349.	0.4	13
125	Shading, a View from the Inside. Seeing and Perceiving, 2012, 25, 303-338.	0.4	13
126	Virtual Psychophysics. Perception, 1999, 28, 669-674.	0.5	12

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127	Perception of illuminance flow in the case of anisotropic rough surfaces. Perception & Psychophysics, 2007, 69, 895-903.	2.3	12
128	Geometry of imaginary spaces. Journal of Physiology (Paris), 2012, 106, 173-182.	2.1	12
129	Perspectives on Colour Space. , 2003, , 1-63.		12
130	Structure from motion: A tolerance analysis. Perception & Psychophysics, 1996, 58, 449-459.	2.3	11
131	The Influence of Stimulus Tilt on Haptic Curvature Matching and Discrimination by Dynamic Touch. Perception, 1998, 27, 869-880.	0.5	11
132	Horizontal–vertical anisotropy in visual space. Acta Psychologica, 2006, 123, 219-239.	0.7	11
133	Large Scale Differences between Haptic and Visual Judgments of Curvature. Perception, 1997, 26, 313-320.	0.5	10
134	Scale invariance in near space: pointing under influence of context. Acta Psychologica, 2002, 110, 63-81.	0.7	10
135	Haptic Detection of Sine-Wave Gratings. Perception, 2005, 34, 869-885.	0.5	10
136	Chromatic Dimensions Earthy, Watery, Airy, and Fiery. Perception, 2015, 44, 1153-1178.	0.5	10
137	Images: Regular Tempered Distributions. , 1994, , 651-659.		10
138	Locating the singular point in first-order optical flow fields Journal of Experimental Psychology: Human Perception and Performance, 1998, 24, 1415-1430.	0.7	9
139	Blur and Disorder. Journal of Visual Communication and Image Representation, 2000, 11, 237-244.	1.7	9
140	Detection of Amplitude Modulation and Frequency Modulation in Tactual Gratings: A Critical Bandwidth for Active Touch. Perception, 2003, 32, 1259-1271.	0.5	9
141	Bidirectional Texture Contrast Function. International Journal of Computer Vision, 2005, 62, 17-34.	10.9	9
142	Shape, Surface Roughness and Human Perception. , 2008, , 197-222.		9
143	Bidirectional Texture Contrast Function. Lecture Notes in Computer Science, 2002, , 808-822.	1.0	9
144	Detection of vorticity in optical flow fields. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1994, 11, 48.	0.8	8

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145	Detection of divergence in optical flow fields. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1996, 13, 227.	0.8	8
146	Local image operators and iconic structure. Lecture Notes in Computer Science, 1997, , 66-93.	1.0	8
147	Monocular discrimination of rigidly and nonrigidly moving objects. Perception & Psychophysics, 1997, 59, 1266-1279.	2.3	8
148	Effects of Context on a Visual 3-D Pointing Task. Perception, 2007, 36, 75-90.	0.5	8
149	Contrast discrimination: Invariant to spatial parameters. Vision Research, 1988, 28, 811-818.	0.7	7
150	Estimating the gradient direction of a luminance ramp. Vision Research, 1993, 33, 1639-1643.	0.7	7
151	Perception of Surface Reflectance of 3-D Geometrical Shapes: Influence of the Lighting Mode. Perception, 2003, 32, 1311-1324.	0.5	7
152	Intermanual and intramanual tactual grating discrimination. Experimental Brain Research, 2005, 163, 123-127.	0.7	7
153	Detection of the sign of expansion as a function of field size and eccentricity. Perception & Psychophysics, 1996, 58, 401-408.	2.3	6
154	Illuminance Flow. Lecture Notes in Computer Science, 2003, , 90-97.	1.0	6
155	Ambiguity in Pictorial Depth. Perception, 2007, 36, 1290-1304.	0.5	6
156	Pictorial Depth Probed through Relative Sizes. I-Perception, 2011, 2, 992-1013.	0.8	6
157	Geometry of Pictorial Relief. Annual Review of Vision Science, 2018, 4, 451-474.	2.3	6
158	Image Structure. , 1988, , 67-104.		6
159	Different concepts of â€~â€~ray'' in optics: link between resolving power and radiometry. American Journa of Physics, 1982, 50, 1012-1015.	0.3	5
160	Spatial properties of light fields in natural scenes. , 2007, , .		5
161	Space perception in pictures. Proceedings of SPIE, 2011, , .	0.8	5
162	Detection of light and flicker at low luminance levels in the human peripheral visual system I Psychophysical experiments. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1984, 1, 764.	0.8	4

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163	Simulating the Detection of First-order Optical Flow Components. Vision Research, 1996, 36, 3539-3547.	0.7	4
164	Cast Shadows in Wide Perspective. Perception, 2011, 40, 938-948.	0.5	4
165	Perception of the Potential for Interaction in Social Scenes. I-Perception, 2021, 12, 204166952110402.	0.8	4
166	RECEPTIVE FIELD TAXONOMY., 1990,, 295-301.		4
167	Image Structure. Informatik Aktuell, 1997, , 3-35.	0.4	4
168	Optimum flux-detection in the absence of a priori knowledge about the signal. Biological Cybernetics, 1983, 48, 61-68.	0.6	3
169	Detection of temporal order of noise-like luminance functions. Perception & Psychophysics, 1994, 55, 28-41.	2.3	3
170	Interaction of Depth Probes and Style of Depiction. I-Perception, 2012, 3, 528-540.	0.8	3
171	Shape constancy in pictorial relief. Lecture Notes in Computer Science, 1996, , 149-164.	1.0	2
172	<title>Directing the mental eye in pictorial perception</title> ., 2000, 3959, 2.		2
173	Pictorial relief for equiluminant images. , 2005, , .		2
174	Ecological Optics and the Creative Eye. , 2005, , 271-304.		2
175	Texture, illumination, and material perception. , 2015, , .		2
176	Estimating the Illumination Direction From Three-Dimensional Texture of Brownian Surfaces. I-Perception, 2017, 8, 204166951770194.	0.8	2
177	Parcellation: A reflection of the structure of the animal's world. Behavioral and Brain Sciences, 1984, 7, 343-344.	0.4	1
178	Using motor tasks to quantitatively judge 3-D surface curvatures. Perception & Psychophysics, 1999, 61, 1116-1139.	2.3	1
179	<title>Pictorial space correspondence in photographs of an object in different poses</title> ., 2001, 4299, 321.		1
180	Schopenhauer's "Parts of Daylight―In The Light of Modern Colorimetry. , 2003, , 251-266.		1

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181	Design Principles for a Front-End Visual System. , 1989, , 111-118.		1
182	Detection of light and flicker at low luminance levels in the human peripheral visual system II A mechanistic model. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1985, 2, 408.	0.8	0
183	Detection of spatial discontinuities in first-order optical flow fields. Perception & Psychophysics, 1997, 59, 567-579.	2.3	0
184	Comment on Visual acuity by Christopher L. Andreadis. Visual Impairment Research, 2001, 3, 59-65.	0.2	0
185	Illuminance Flow Estimation by Regression. International Journal of Computer Vision, 2010, 90, 304-312.	10.9	0
186	Osculating Paraboloids., 2021,, 933-939.		0
187	Osculating Paraboloids. , 2014, , 575-580.		0
188	Some Aspects of Mr Image Processing and Display: Simulation Studies, Multiresolution Segmentation, and Adaptive Histogram Equalization., 1986,, 38-61.		0
189	Affective Responses to Image Color Combinations. Art and Perception, 2021, 9, 1-60.	0.6	0