Tony Lindeberg

List of Publications by Year
in descending order

91 papers	9,862 citations	218381 26 h-index	102304 66 g-index
103 all docs	103 docs citations	103 times ranked	6028 citing authors

#	Article	IF	Citations
1	Scale-Covariant and Scale-Invariant Gaussian Derivative Networks. Journal of Mathematical Imaging and Vision, 2022, 64, 223-242.	0.8	11
2	Scale-Invariant Scale-Channel Networks: Deep Networks That Generalise to Previously Unseen Scales. Journal of Mathematical Imaging and Vision, 2022, 64, 506-536.	0.8	8
3	Understanding when spatial transformer networks do not support invariance, and what to do about it. , 2021, , .		9
4	Scale-Covariant and Scale-Invariant Gaussian Derivative Networks. Lecture Notes in Computer Science, 2021, , 3-14.	1.0	6
5	Normative theory of visual receptive fields. Heliyon, 2021, 7, e05897.	1.4	14
6	Exploring the ability of CNN s to generalise to previously unseen scales over wide scale ranges. , 2021, , .		8
7	Scale Selection. , 2021, , 1110-1123.		1
8	Provably Scale-Covariant Continuous Hierarchical Networks Based on Scale-Normalized Differential Expressions Coupled in Cascade. Journal of Mathematical Imaging and Vision, 2020, 62, 120-148.	0.8	11
9	Provably Scale-Covariant Networks from Oriented Quasi Quadrature Measures in Cascade. Lecture Notes in Computer Science, 2019, , 328-340.	1.0	1
10	Dense Scale Selection Over Space, Time, and Space-Time. SIAM Journal on Imaging Sciences, 2018, 11, 407-441.	1.3	12
11	Spatio-Temporal Scale Selection in Video Data. Journal of Mathematical Imaging and Vision, 2018, 60, 525-562.	0.8	12
12	Prediction of three articulatory categories in vocal sound imitations using models for auditory receptive fields. Journal of the Acoustical Society of America, 2018, 144, 1467-1483.	0.5	6
13	Dynamic Texture Recognition Using Time-Causal and Time-Recursive Spatio-Temporal Receptive Fields. Journal of Mathematical Imaging and Vision, 2018, 60, 1369-1398.	0.8	9
14	Dynamic Texture Recognition Using Time-Causal Spatio-Temporal Scale-Space Filters. Lecture Notes in Computer Science, 2017, , 16-28.	1.0	1
15	Temporal Scale Selection in Time-Causal Scale Space. Journal of Mathematical Imaging and Vision, 2017, 58, 57-101.	0.8	9
16	Spatio-Temporal Scale Selection in Video Data. Lecture Notes in Computer Science, 2017, , 3-15.	1.0	3
17	Time-Causal and Time-Recursive Spatio-Temporal Receptive Fields. Journal of Mathematical Imaging and Vision, 2016, 55, 50-88.	0.8	26
18	Image Matching Using Generalized Scale-Space Interest Points. Journal of Mathematical Imaging and Vision, 2015, 52, 3-36.	0.8	128

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19	Scale-Space Theory for Auditory Signals. Lecture Notes in Computer Science, 2015, , 3-15.	1.0	5
20	Separable Time-Causal and Time-Recursive Spatio-Temporal Receptive Fields. Lecture Notes in Computer Science, 2015, , 90-102.	1.0	5
21	Idealized Computational Models for Auditory Receptive Fields. PLoS ONE, 2015, 10, e0119032.	1.1	13
22	Scale Selection. , 2014, , 701-713.		17
23	Scale Selection Properties of Generalized Scale-Space Interest Point Detectors. Journal of Mathematical Imaging and Vision, 2013, 46, 177-210.	0.8	107
24	Invariance of visual operations at the level of receptive fields. BMC Neuroscience, 2013, 14, .	0.8	1
25	A computational theory of visual receptive fields. Biological Cybernetics, 2013, 107, 589-635.	0.6	90
26	Generalized Axiomatic Scale-Space Theory. Advances in Imaging and Electron Physics, 2013, , 1-96.	0.1	19
27	Invariance of visual operations at the level of receptive fields. PLoS ONE, 2013, 8, e66990.	1.1	22
28	Image Matching Using Generalized Scale-Space Interest Points. Lecture Notes in Computer Science, 2013, , 355-367.	1.0	14
29	Composed complex-cue histograms: An investigation of the information content in receptive field based image descriptors for object recognition. Computer Vision and Image Understanding, 2012, 116, 538-560.	3.0	23
30	Scale Invariant Feature Transform. Scholarpedia Journal, 2012, 7, 10491.	0.3	302
31	Generalized Gaussian Scale-Space Axiomatics Comprising Linear Scale-Space, Affine Scale-Space and Spatio-Temporal Scale-Space. Journal of Mathematical Imaging and Vision, 2011, 40, 36-81.	0.8	90
32	Local velocity-adapted motion events for spatio-temporal recognition. Computer Vision and Image Understanding, 2007, 108, 207-229.	3.0	118
33	Velocity adaptation of spatio-temporal receptive fields for direct recognition of activities: an experimental study. Image and Vision Computing, 2004, 22, 105-116.	2.7	22
34	Velocity adaptation of space-time interest points. , 2004, , .		37
35	A Distance Measure and a Feature Likelihood Map Concept for Scale-Invariant Model Matching. International Journal of Computer Vision, 2003, 52, 97-120.	10.9	11
36	Real-Time Scale Selection in Hybrid Multi-scale Representations. Lecture Notes in Computer Science, 2003, , 148-163.	1.0	42

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37	Fully Automatic Segmentation of MRI Brain Images Using Probabilistic Anisotropic Diffusion and Multi-scale Watersheds. Lecture Notes in Computer Science, 2003, , 641-656.	1.0	6
38	Space-time interest points. , 2003, , .		906
39	Interest Point Detection and Scale Selection in Space-Time. Lecture Notes in Computer Science, 2003, , 372-387.	1.0	16
40	Time-Recursive Velocity-Adapted Spatio-Temporal Scale-Space Filters. Lecture Notes in Computer Science, 2002, , 52-67.	1.0	7
41	On the Representation and Matching of Qualitative Shape at Multiple Scales. Lecture Notes in Computer Science, 2002, , 759-775.	1.0	17
42	A database generator for human brain imaging. Trends in Neurosciences, 2001, 24, 562-564.	4.2	41
43	Evaluation of using absolute versus relative base level when analyzing brain activation images using the scale-space primal sketch. Medical Image Analysis, 2001, 5, 89-110.	7.0	3
44	Tracking of Multi-state Hand Models Using Particle Filtering and a Hierarchy of Multi-scale Image Featuresâ‹†. , 2001, , 63-74.		38
45	A Multi-scale Feature Likelihood Map for Direct Evaluation of Object Hypothesesâ‹†. , 2001, , 98-110.		3
46	Qualitative Multiscale Feature Hierarchies for Object Tracking. Journal of Visual Communication and Image Representation, 2000, 11, 115-129.	1.7	20
47	Automatic extraction of roads from aerial images based on scale space and snakes. Machine Vision and Applications, 2000, 12, 23-31.	1.7	178
48	An automatic assessment scheme for steel quality inspection. Machine Vision and Applications, 2000, 12, 113-128.	1.7	74
49	Fingerprint enhancement by shape adaptation of scale-space operators with automatic scale selection. IEEE Transactions on Image Processing, 2000, 9, 2027-2042.	6.0	88
50	Analysis of brain activation patterns using a 3-D scale-space primal sketch. Human Brain Mapping, 1999, 7, 166-194.	1.9	24
51	Qualitative Multi-scale Feature Hierarchies for Object Tracking. Lecture Notes in Computer Science, 1999, , 117-128.	1.0	8
52	Feature Detection with Automatic Scale Selection. , 1998, 30, 79-116.		1,784
53	Edge Detection and Ridge Detection with Automatic Scale Selection. , 1998, 30, 117-156.		667
54	Feature Tracking with Automatic Selection of Spatial Scales. Computer Vision and Image Understanding, 1998, 71, 385-392.	3.0	91

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55	A scale selection principle for estimating image deformations. Image and Vision Computing, 1998, 16, 961-977.	2.7	33
56	Use your hand as a 3-D mouse, or, relative orientation from extended sequences of sparse point and line correspondences using the affine trifocal tensor. Lecture Notes in Computer Science, 1998, , 141-157.	1.0	24
57	Linear spatio-temporal scale-space. Lecture Notes in Computer Science, 1997, , 113-127.	1.0	19
58	On automatic selection of temporal scales in time-causal scale-space. Lecture Notes in Computer Science, 1997, , 94-113.	1.0	18
59	Shape-adapted smoothing in estimation of 3-D shape cues from affine deformations of local 2-D brightness structure. Image and Vision Computing, 1997, 15, 415-434.	2.7	196
60	Segmentation and Classification of Edges Using Minimum Description Length Approximation and Complementary Junction Cues. Computer Vision and Image Understanding, 1997, 67, 88-98.	3.0	71
61	On the handling of spatial and temporal scales in feature tracking. Lecture Notes in Computer Science, 1997, , 128-139.	1.0	4
62	Edge detection and ridge detection with automatic scale selection. , 1996, , .		189
63	Direct computation of shape cues using scale-adapted spatial derivative operators. International Journal of Computer Vision, 1996, 17, 163-191.	10.9	113
64	Scale-space with casual time direction. Lecture Notes in Computer Science, 1996, , 229-240.	1.0	28
65	SEGMENTATION AND CLASSIFICATION OF EDGES USING MINIMUM DESCRIPTION LENGTH APPROXIMATION AND COMPLEMENTARY JUNCTION CUES. , 1995, , 39-52.		5
66	Direct computation of shape cues by scale-space operations. , 1994, , 349-382.		8
67	Scale selection for differential operators. , 1994, , 317-348.		33
68	Scale-Space Theory in Computer Vision. , 1994, , .		1,271
69	Scale-space theory: a basic tool for analyzing structures at different scales. Journal of Applied Statistics, 1994, 21, 225-270.	0.6	827
70	Shape-adapted smoothing in estimation of 3-D depth cues from affine distortions of local 2-D brightness structure. Lecture Notes in Computer Science, 1994, , 389-400.	1.0	40
71	Scale-Space Behaviour and Invariance Properties of Differential Singularities. , 1994, , 591-600.		1
72	Scale-Space for N-Dimensional Discrete Signals. , 1994, , 571-590.		4

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73	Discrete derivative approximations with scale-space properties: A basis for low-level feature extraction. Journal of Mathematical Imaging and Vision, 1993, 3, 349-376.	0.8	81
74	Detecting salient blob-like image structures and their scales with a scale-space primal sketch: A method for focus-of-attention. International Journal of Computer Vision, 1993, 11, 283-318.	10.9	534
75	Effective scale: a natural unit for measuring scale-space lifetime. IEEE Transactions on Pattern Analysis and Machine Intelligence, 1993, 15, 1068-1074.	9.7	46
76	Scale-space behaviour of local extrema and blobs. Journal of Mathematical Imaging and Vision, 1992, 1, 65-99.	0.8	63
77	Scale-space primal sketch: construction and experiments. Image and Vision Computing, 1992, 10, 3-18.	2.7	38
78	Active detection and classification of junctions by foveation with a head-eye system guided by the scale-space primal sketch. Lecture Notes in Computer Science, 1992, , 701-709.	1.0	21
79	Qualitative Shape—Some Computational Aspects. , 1992, , 231-248.		1
80	Extraction of Shape Features and Experiments on Cue Integration. , 1992, , 350-379.		0
81	On the computation of a scale-space primal sketch. Journal of Visual Communication and Image Representation, 1991, 2, 55-78.	1.7	30
82	Analysis of aerosol images using the scale-space primal sketch. Machine Vision and Applications, 1991, 4, 135-144.	1.7	2
83	On scale and resolution in active analysis of local image structure. Image and Vision Computing, 1990, 8, 289-296.	2.7	19
84	On scale and resolution in the analysis of local image structure. Lecture Notes in Computer Science, 1990, , 1-12.	1.0	3
85	Scale-space for discrete signals. IEEE Transactions on Pattern Analysis and Machine Intelligence, 1990, 12, 234-254.	9.7	501
86	Construction of a scale-space primal sketch. , 1990, , .		19
87	Junction detection with automatic selection of detection scales and localization scales. , 0, , .		33
88	Direct estimation of affine image deformations using visual front-end operations with automatic scale selection. , 0, , .		19
89	Automatic scale selection as a pre-processing stage to interpreting real-world data. , 0, , .		2
90	Classification of carbide distributions using scale selection and directional distributions. , 0, , .		2

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91	Hand gesture recognition using multi-scale colour features, hierarchical models and particle filtering. , 0, , .		180