Laurent Itti

List of Publications by Year
in descending order

111 papers	**15,752** citations	71102 **41** h-index	85541 **71** g-index
111 all docs	**111** docs citations	**111** times ranked	**9408** citing authors

#	Article	IF	Citations
1	Multi-scale pulmonary nodule classification with deep feature fusion via residual network. Journal of Ambient Intelligence and Humanized Computing, 2023, 14, 14829-14840.	4.9	5
2	Rapid adaptation of brain–computer interfaces to new neuronal ensembles or participants via generative modelling. Nature Biomedical Engineering, 2023, 7, 546-558.	22.5	15
3	Pupillary responses to differences in luminance, color and set size. Experimental Brain Research, 2022, 240, 1873-1885.	1.5	2
4	Eye tracking identifies biomarkers in α-synucleinopathies versus progressive supranuclear palsy. Journal of Neurology, 2022, 269, 4920-4938.	3.6	6
5	Superior colliculus encodes visual saliency during smooth pursuit eye movements. European Journal of Neuroscience, 2021, 54, 4258-4268.	2.6	17
6	Capturing spike train temporal pattern with wavelet average coefficient for brain machine interface. Scientific Reports, 2021, 11, 19020.	3.3	2
7	Learning visual variation for object recognition. Image and Vision Computing, 2020, 98, 103912.	4.5	8
8	Pose Augmentation: Class-Agnostic Object Pose Transformation for Object Recognition. Lecture Notes in Computer Science, 2020, , 138-155.	1.3	4
9	Efficient Velodyne SLAM with point and plane features. Autonomous Robots, 2019, 43, 1207-1224.	4.8	31
10	Vision-Based Autonomous Path Following Using a Human Driver Control Model With Reliable Input-Feature Value Estimation. IEEE Transactions on Intelligent Vehicles, 2019, 4, 497-506.	12.7	15
11	Detection of Children/Youth With Fetal Alcohol Spectrum Disorder Through Eye Movement, Psychometric, and Neuroimaging Data. Frontiers in Neurology, 2019, 10, 80.	2.4	26
12	Learning Invariant Features in Modulatory Networks through Conflict and Ambiguity. Neural Computation, 2019, 31, 344-387.	2.2	1
13	Laminar organization of the superior colliculus priority map. Journal of Vision, 2019, 19, 133a.	0.3	0
14	shapeDTW: Shape Dynamic Time Warping. Pattern Recognition, 2018, 74, 171-184.	8.1	134
15	Inertial Machine Monitoring System for Automated Failure Detection. , 2018, , .		9
16	Multi-Scale Adversarial Feature Learning for Saliency Detection. Symmetry, 2018, 10, 457.	2.2	16
17	Superior colliculus neurons encode a visual saliency map during free viewing of natural dynamic video. Nature Communications, 2017, 8, 14263.	12.8	127
18	Biologically plausible learning in neural networks with modulatory feedback. Neural Networks, 2017, 88, 32-48.	5.9	10

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19	Until the demise of the functional field of view. Behavioral and Brain Sciences, 2017, 40, e140.	0.7	0
20	Superior colliculus encodes visual saliency before the primary visual cortex. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 9451-9456.	7.1	102
21	Learning to Recognize Objects by Retaining Other Factors of Variation. , 2017, , .		3
22	Impact of Neuroscience in Robotic Vision Localization and Navigation. Cognitive Science and Technology, 2017, , 235-276.	0.4	0
23	Saliency prediction based on new deep multi-layer convolution neural network. , 2017, , .		2
24	Image salient object detection with refined deep features via convolution neural network. Journal of Electronic Imaging, 2017, 26, 1.	0.9	7
25	iLab-20M: A Large-Scale Controlled Object Dataset to Investigate Deep Learning. , 2016, , .		29
26	Classifying Time Series Using Local Descriptors with Hybrid Sampling. IEEE Transactions on Knowledge and Data Engineering, 2016, 28, 623-637.	5.7	31
27	Learning a Combined Model of Visual Saliency for Fixation Prediction. IEEE Transactions on Image Processing, 2016, 25, 1566-1579.	9.8	50
28	Mining Videos for Features that Drive Attention. , 2015, , 311-326.		3
29	New Eye-Tracking Techniques May Revolutionize Mental Health Screening. Neuron, 2015, 88, 442-444.	8.1	42
30	Augmented saliency model using automatic 3D head pose detection and learned gaze following in natural scenes. Vision Research, 2015, 116, 113-126.	1.4	35
31	Optimal attentional modulation of a neural population. Frontiers in Computational Neuroscience, 2014, 8, 34.	2.1	9
32	Complementary effects of gaze direction and early saliency in guiding fixations during free viewing. Journal of Vision, 2014, 14, 3-3.	0.3	45
33	Feature-based attention is independent of object appearance. Journal of Vision, 2014, 14, 3-3.	0.3	4
34	Integrating human context and occlusion reasoning to improve handheld object tracking. , 2014, , .		1
35	Attention-aware rendering, mobile graphics and games. , 2014, , .		6
36	Transient Pupil Response Is Modulated by Contrast-Based Saliency. Journal of Neuroscience, 2014, 34, 408-417.	3.6	83

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37	Human vs. Computer in Scene and Object Recognition. , 2014, , .		27
38	Defending Yarbus: Eye movements reveal observers' task. Journal of Vision, 2014, 14, 29-29.	0.3	180
39	Autonomous Mobile Robot Localization and Navigation Using a Hierarchical Map Representation Primarily Guided by Vision. Journal of Field Robotics, 2014, 31, 408-440.	6.0	12
40	What/Where to Look Next? Modeling Top-Down Visual Attention in Complex Interactive Environments. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2014, 44, 523-538.	9.3	80
41	What stands out in a scene? A study of human explicit saliency judgment. Vision Research, 2013, 91, 62-77.	1.4	120
42	Mobile robot navigation system in outdoor pedestrian environment using vision-based road recognition. , 2013, , .		22
43	Finding planes in LiDAR point clouds for real-time registration. , 2013, , .		53
44	High-throughput classification of clinical populations from natural viewing eye movements. Journal of Neurology, 2013, 260, 275-284.	3.6	123
45	Analysis of Scores, Datasets, and Models in Visual Saliency Prediction. , 2013, , .		146
46	Deep Learning on Natural Viewing Behaviors to Differentiate Children with Fetal Alcohol Spectrum Disorder. Lecture Notes in Computer Science, 2013, , 178-185.	1.3	2
47	Mobile robot monocular vision navigation based on road region and boundary estimation. , 2012, , .		32
48	Saliency mapping enhanced by symmetry from local phase. , 2012, , .		1
49	Modeling the influence of action on spatial attention in visual interactive environments. , 2012, , .		2
50	Salient Object Detection: A Benchmark. Lecture Notes in Computer Science, 2012, , 414-429.	1.3	241
51	Exploiting local and global patch rarities for saliency detection. , 2012, , .		259
52	Influence of the amount of context learned for improving object classification when simultaneously learning object and contextual cues. Visual Cognition, 2012, 20, 580-602.	1.6	2
53	Neuromorphic Bayesian Surprise for Far-Range Event Detection. , 2012, , .		1
54	Residual Attention Guidance in Blindsight Monkeys Watching Complex Natural Scenes. Current Biology, 2012, 22, 1429-1434.	3.9	57

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55	Adaptive object tracking by learning background context. , 2012, , .		113
56	Evidence for Arousal-Biased Competition in Perceptual Learning. Frontiers in Psychology, 2012, 3, 241.	2.1	50
57	Top-down influences on visual attention during listening are modulated by observer sex. Vision Research, 2012, 65, 62-76.	1.4	38
58	Linking visual response properties in the superior colliculus to saccade behavior. European Journal of Neuroscience, 2012, 35, 1738-1752.	2.6	87
59	Multilayer real-time video image stabilization. , 2011, , .		15
60	Mechanisms of top-down attention. Trends in Neurosciences, 2011, 34, 210-224.	8.6	364
61	Visual adaptation and novelty responses in the superior colliculus. European Journal of Neuroscience, 2011, 34, 766-779.	2.6	51
62	Saliency and Gist Features for Target Detection in Satellite Images. IEEE Transactions on Image Processing, 2011, 20, 2017-2029.	9.8	167
63	Beobot 2.0: Cluster architecture for mobile robotics. Journal of Field Robotics, 2011, 28, 278-302.	6.0	9
64	Visual attention guided bit allocation in video compression. Image and Vision Computing, 2011, 29, 1-14.	4.5	191
65	Scene classification with a sparse set of salient regions. , 2011, , .		32
66	Multilayer control of skiing robot. , 2011, , .		0
67	A Bayesian model for efficient visual search and recognition. Vision Research, 2010, 50, 1338-1352.	1.4	98
68	Of bits and wows: A Bayesian theory of surprise with applications to attention. Neural Networks, 2010, 23, 649-666.	5.9	223
69	Training Top-Down Attention Improves Performance on a Triple-Conjunction Search Task. PLoS ONE, 2010, 5, e9127.	2.5	16
70	Mobile robot vision navigation &amp; localization using Gist and Saliency. , 2010, , .		31
71	Centralized server environment for educational robotics. , 2009, , .		1
72	Color-Related Signals in the Primate Superior Colliculus. Journal of Neuroscience, 2009, 29, 12159-12166.	3.6	91

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73	Bayesian surprise attracts human attention. Vision Research, 2009, 49, 1295-1306.	1.4	850
74	Automatic computation of an image's statistical surprise predicts performance of human observers on a natural image detection task. Vision Research, 2009, 49, 1620-1637.	1.4	11
75	Biologically Inspired Mobile Robot Vision Localization. IEEE Transactions on Robotics, 2009, 25, 861-873.	10.3	191
76	Storing and recalling information for vision localization. , 2008, , .		7
77	Biologically-inspired robotics vision monte-carlo localization in the outdoor environment. , 2007, , .		35
78	Beyond bottom-up: Incorporating task-dependent influences into a computational model of spatial attention. , 2007, , .		165
79	Search Goal Tunes Visual Features Optimally. Neuron, 2007, 53, 605-617.	8.1	279
80	Rapid Biologically-Inspired Scene Classification Using Features Shared with Visual Attention. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2007, 29, 300-312.	13.9	467
81	The role of memory in guiding attention during natural vision. Journal of Vision, 2006, 6, 4.	0.3	64
82	Attention and the minimal subscene. , 2006, , 289-346.		19
83	Combining bottom-up and top-down attentional influences. , 2006, , .		4
84	Visual causes versus correlates of attentional selection in dynamic scenes. Vision Research, 2006, 46, 4333-4345.	1.4	197
85	Quantitative modelling of perceptual salience at human eye position. Visual Cognition, 2006, 14, 959-984.	1.6	79
86	Photorealistic Attention-Based Gaze Animation. , 2006, , .		17
87	Distributed biologically based real time tracking in the absence of prior target information. , 2005, , .		4
88	Computational modeling and exploration of contour integration for visual saliency. Biological Cybernetics, 2005, 93, 188-212.	1.3	32
89	A Brief and Selective History of Attention. , 2005, , xxiii-xxxii.		17
90	Quantifying the contribution of low-level saliency to human eye movements in dynamic scenes. Visual Cognition, 2005, 12, 1093-1123.	1.6	263

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91	Modeling the influence of task on attention. Vision Research, 2005, 45, 205-231.	1.4	543
92	Components of bottom-up gaze allocation in natural images. Vision Research, 2005, 45, 2397-2416.	1.4	591
93	Attention and Scene Understanding. , 2005, , 197-203.		19
94	Realistic avatar eye and head animation using a neurobiological model of visual attention. , 2004, , .		141
95	Automatic Foveation for Video Compression Using a Neurobiological Model of Visual Attention. IEEE Transactions on Image Processing, 2004, 13, 1304-1318.	9.8	637
96	Biologically inspired feature-based categorization of objects. , 2004, , .		4
97	<title>Teaching the computer subjective notions of feature connectedness in a visual scene for real-time vision</title>. , 2004, , .		2
98	Utilization and viability of biologically-inspired algorithms in a dynamic multiagent camera surveillance system. , 2003, , .		2
99	Modelling Primate Visual Attention. Chapman & Hall/CRC Mathematical and Computational Biology Series, 2003, , .	0.1	11
100	A Goal Oriented Attention Guidance Model. Lecture Notes in Computer Science, 2002, , 453-461.	1.3	66
101	Attentional Selection for Object Recognition â€" A Gentle Way. Lecture Notes in Computer Science, 2002, , 472-479.	1.3	136
102	A New Robotics Platform for Neuromorphic Vision: Beobots. Lecture Notes in Computer Science, 2002, , 558-566.	1.3	4
103	Segmentation of Progressive Multifocal Leukoencephalopathy Lesions in Fluidâ€Attenuated Inversion Recovery Magnetic Resonance Imaging. Journal of Neuroimaging, 2001, 11, 412-417.	2.0	22
104	Computational modelling of visual attention. Nature Reviews Neuroscience, 2001, 2, 194-203.	10.2	3,766
105	Feature combination strategies for saliency-based visual attention systems. Journal of Electronic Imaging, 2001, 10, 161.	0.9	375
106	Changes in cerebral metabolism are detected prior to perfusion changes in early HIV-CMC: A coregistered1H MRS and SPECT study. Journal of Magnetic Resonance Imaging, 2000, 12, 859-865.	3.4	48
107	Revisiting spatial vision: toward a unifying model. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2000, 17, 1899.	1.5	79
108	Effect of ecstasy [3,4-methylenedioxymethamphetamine (MDMA)] on cerebral blood flow: a co-registered SPECT and MRI study. Psychiatry Research - Neuroimaging, 2000, 98, 15-28.	1.8	81

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109	A saliency-based search mechanism for overt and covert shifts of visual attention. Vision Research, 2000, 40, 1489-1506.	1.4	2,623
110	Correlation of regional cerebral blood flow from perfusion MRI and SPECT in normal subjects. Magnetic Resonance Imaging, 1999, 17, 349-354.	1.8	37
111	Robust multimodality registration for brain mapping. , 1997, 5, 3-17.		47