

Jean-Michel Morel

List of Publications by Year in descending order

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158
papers

13,922
citations

101384

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162
all docs

162
docs citations

162
times ranked

9434
citing authors

#	ARTICLE	IF	CITATIONS
1	Silhouette Vectorization by Affine Scale-Space. Journal of Mathematical Imaging and Vision, 2022, 64, 41-56.	0.8	2
2	Forgery Detection by Internal Positional Learning of Demosaicing Traces. , 2022, , .		5
3	Non-Semantic Evaluation of Image Forensics Tools: Methodology and Database. , 2022, , .		8
4	Modeling COVID-19 Incidence by the Renewal Equation after Removal of Administrative Bias and Noise. Biology, 2022, 11, 540.	1.3	3
5	Interactive Design of Random Aesthetic Abstract Textures by Composition Principles. Leonardo, 2021, 54, 179-184.	0.2	3
6	Video Denoising by Combining Patch Search and CNNs. Journal of Mathematical Imaging and Vision, 2021, 63, 73-88.	0.8	9
7	Fast, Nonlocal and Neural: A Lightweight High Quality Solution to Image Denoising. IEEE Signal Processing Letters, 2021, 28, 1515-1519.	2.1	11
8	Forgery Detection in Digital Images by Multi-Scale Noise Estimation. Journal of Imaging, 2021, 7, 119.	1.7	14
9	A contrario dip picking for borehole imaging. Geophysics, 2021, 86, V339-V351.	1.4	1
10	Accurate Silhouette Vectorization by Affine Scale-Space. , 2021, , .		1
11	Unsupervised Variability Normalization For Anomaly Detection. , 2021, , .		1
12	Irregular Layout for a Satellite's Interferometric Array. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 9408-9423.	2.3	2
13	Computing the daily reproduction number of COVID-19 by inverting the renewal equation using a variational technique. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	18
14	Analyzing center/surround retinex. Information Sciences, 2020, 512, 741-759.	4.0	7
15	A Review of an Old Dilemma: Demosaicking First, or Denoising First?. , 2020, , .		12
16	Using the IPOL Journal for Online Reproducible Research in Remote Sensing. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 6384-6390.	2.3	4
17	An Adaptive Neural Network for Unsupervised Mosaic Consistency Analysis in Image Forensics. , 2020, , .		20
18	An Extended Exposure Fusion and its Application to Single Image Contrast Enhancement. , 2020, , .		12

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19	A Non-Local CNN for Video Denoising. , 2019, , .		45
20	Reverse Engineering. , 2019, , .		0
21	Detection of Small Anomalies on Moving Background. , 2019, , .		2
22	Image Anomalies: A Review and Synthesis of Detection Methods. Journal of Mathematical Imaging and Vision, 2019, 61, 710-743.	0.8	32
23	Kalman Filtering of Patches for Frame-Recursive Video Denoising. , 2019, , .		11
24	Reliable Demosaicing Detection for Image Forensics. , 2019, , .		3
25	SMOS-HR: A High Resolution L-Band Passive Radiometer for Earth Science and Applications. , 2019, , .		16
26	Model-Blind Video Denoising via Frame-To-Frame Training. , 2019, , .		54
27	Motion Smoothing Strategies for 2D Video Stabilization. SIAM Journal on Imaging Sciences, 2018, 11, 219-251.	1.3	6
28	Video Denoising via Empirical Bayesian Estimation of Space-Time Patches. Journal of Mathematical Imaging and Vision, 2018, 60, 70-93.	0.8	55
29	Non-Local Kalman: A Recursive Video Denoising Algorithm. , 2018, , .		9
30	A Flexible Solution to the Osmosis Equation for Seamless Cloning and Shadow Removal. , 2018, , .		6
31	Reducing Anomaly Detection in Images to Detection in Noise. , 2018, , .		11
32	A Comparison of Patch-Based Models in Video Denoising. , 2018, , .		7
33	Automatic Detection of Demosaicing Image Artifacts and Its Use in Tampering Detection. , 2018, , .		8
34	Covering the Space of Tilts. Application to Affine Invariant Image Comparison. SIAM Journal on Imaging Sciences, 2018, 11, 1230-1267.	1.3	6
35	Automatic JPEG Grid Detection with Controlled False Alarms, and Its Image Forensic Applications. , 2018, , .		0
36	Ego-Motion Classification for Body-Worn Videos. Mathematics and Visualization, 2018, , 221-239.	0.4	2

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37	A Precision Analysis of Camera Distortion Models. IEEE Transactions on Image Processing, 2017, 26, 2694-2704.	6.0	74
38	Conservative Scale Recomposition for Multiscale Denoising (The Devil is in the High Frequency Detail). SIAM Journal on Imaging Sciences, 2017, 10, 1603-1626.	1.3	5
39	Straight subjective contour detector. , 2017, , .		1
40	Global Patch Search Boosts Video Denoising. , 2017, , .		7
41	A Theory of Optimal Flutter Shutter for Probabilistic Velocity Models. SIAM Journal on Imaging Sciences, 2016, 9, 445-480.	1.3	1
42	On the Mathematical Foundations of Computational Photography. Journal of Mathematical Imaging and Vision, 2016, 54, 378-397.	0.8	1
43	A Conditional Multiscale Locally Gaussian Texture Synthesis Algorithm. Journal of Mathematical Imaging and Vision, 2016, 56, 260-279.	0.8	12
44	An Analysis of the Factors Affecting Keypoint Stability in Scale-Space. Journal of Mathematical Imaging and Vision, 2016, 56, 554-572.	0.8	4
45	An Inquiry on Contrast Enhancement Methods for Satellite Images. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 7044-7054.	2.7	18
46	Affine Invariant Distance Using Multiscale Analysis. Journal of Mathematical Imaging and Vision, 2016, 55, 199-209.	0.8	4
47	Influence of Unknown Exterior Samples on Interpolated Values for Band-Limited Images. SIAM Journal on Imaging Sciences, 2016, 9, 152-184.	1.3	2
48	Multiscale Image Blind Denoising. IEEE Transactions on Image Processing, 2015, 24, 3149-3161.	6.0	75
49	IPOL: A new journal for fully reproducible research; analysis of four years development. , 2015, , .		11
50	Comparing feature detectors: A bias in the repeatability criteria. , 2015, , .		7
51	A Contrario 2D Point Alignment Detection. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2015, 37, 499-512.	9.7	23
52	Nonparametric Multiscale Blind Estimation of Intensity-Frequency-Dependent Noise. IEEE Transactions on Image Processing, 2015, 24, 3162-3175.	6.0	19
53	Exploring the Space of Abstract Textures by Principles and Random Sampling. Journal of Mathematical Imaging and Vision, 2015, 53, 332-345.	0.8	4
54	Towards a Bayesian Video Denoising Method. Lecture Notes in Computer Science, 2015, , 107-117.	1.0	8

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55	Local Smoothing Neighborhood Filters. , 2015, , 1599-1643.		6
56	Multiscale Exemplar Based Texture Synthesis by Locally Gaussian Models. Lecture Notes in Computer Science, 2015, , 435-443.	1.0	1
57	Optimizing the Data Adaptive Dual Domain Denoising Algorithm. Lecture Notes in Computer Science, 2015, , 358-365.	1.0	0
58	What is the right center/surround for Retinex?. , 2014, , .		6
59	An analysis of scale-space sampling in SIFT. , 2014, , .		7
60	A contrario detection of good continuation of points. , 2014, , .		2
61	Locally Gaussian exemplar based texture synthesis. , 2014, , .		5
62	Nonparametric noise estimation method for raw images. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2014, 31, 863.	0.8	31
63	Improving the matching precision of SIFT. , 2014, , .		1
64	Numerical analysis of differential operators on raw point clouds. Numerische Mathematik, 2014, 127, 255-289.	0.9	9
65	Finding Vanishing Points via Point Alignments in Image Primal and Dual Domains. , 2014, , .		57
66	Can a Single Image Denoising Neural Network Handle All Levels of Gaussian Noise?. IEEE Signal Processing Letters, 2014, 21, 1150-1153.	2.1	23
67	Psychophysics, Gestalts and Games. Lecture Notes in Morphogenesis, 2014, , 217-242.	0.2	1
68	Boosting monte carlo rendering by ray histogram fusion. ACM Transactions on Graphics, 2014, 33, 1-15.	4.9	45
69	A Nonlocal Bayesian Image Denoising Algorithm. SIAM Journal on Imaging Sciences, 2013, 6, 1665-1688.	1.3	238
70	An Optimal Blind Temporal Motion Blur Deconvolution Filter. IEEE Signal Processing Letters, 2013, 20, 523-526.	2.1	4
71	SURE Guided Gaussian Mixture Image Denoising. SIAM Journal on Imaging Sciences, 2013, 6, 999-1034.	1.3	39
72	A Proof of Equivalence between Level Lines Shortening and Curvature Motion in Image Processing. SIAM Journal on Mathematical Analysis, 2013, 45, 1047-1067.	0.9	2

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73	The Flutter Shutter Paradox. SIAM Journal on Imaging Sciences, 2013, 6, 813-847.	1.3	17
74	Audio restoration from multiple copies. , 2013, , .		6
75	High-precision camera distortion measurements with a "cecalibration harp". Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 2134.	0.8	16
76	Subpixel Point Spread Function Estimation from Two Photographs at Different Distances. SIAM Journal on Imaging Sciences, 2012, 5, 1234-1260.	1.3	11
77	A formalization of the flutter shutter. Journal of Physics: Conference Series, 2012, 386, 012001.	0.3	3
78	Photographing Paintings by Image Fusion. SIAM Journal on Imaging Sciences, 2012, 5, 1055-1087.	1.3	17
79	The collaboration of grouping laws in vision. Journal of Physiology (Paris), 2012, 106, 266-283.	2.1	4
80	Secrets of image denoising cuisine. Acta Numerica, 2012, 21, 475-576.	6.3	206
81	Fourier implementation of Poisson image editing. Pattern Recognition Letters, 2012, 33, 342-348.	2.6	33
82	Meaningful Matches in Stereovision. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2012, 34, 930-942.	9.7	38
83	The Non-parametric Sub-pixel Local Point Spread Function Estimation Is a Well Posed Problem. International Journal of Computer Vision, 2012, 96, 175-194.	10.9	34
84	Mesh Segmentation and Model Extraction. Lecture Notes in Computer Science, 2012, , 236-252.	1.0	5
85	Local Smoothing Neighborhood Filters. , 2011, , 1159-1201.		3
86	Self-similarity-based image denoising. Communications of the ACM, 2011, 54, 109-117.	3.3	30
87	How Accurate Can Block Matches Be in Stereo Vision?. SIAM Journal on Imaging Sciences, 2011, 4, 472-500.	1.3	26
88	Image Visualization and Restoration by Curvature Motions. Multiscale Modeling and Simulation, 2011, 9, 834-871.	0.6	4
89	Scale Space Meshing of Raw Data Point Sets. Computer Graphics Forum, 2011, 30, 1630-1642.	1.8	50
90	Random Phase Textures: Theory and Synthesis. IEEE Transactions on Image Processing, 2011, 20, 257-267.	6.0	115

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91	Fattening Free Block Matching. Journal of Mathematical Imaging and Vision, 2011, 41, 109-121.	0.8	11
92	The IPOL Initiative: Publishing and Testing Algorithms on Line for Reproducible Research in Image Processing. Procedia Computer Science, 2011, 4, 716-725.	1.2	13
93	An L<inf>1</inf>-based variational model for Retinex theory and its application to medical images. , 2011, , .		39
94	Is SIFT scale invariant?. Inverse Problems and Imaging, 2011, 5, 115-136.	0.6	51
95	High Fidelity Scan Merging. Computer Graphics Forum, 2010, 29, 1643-1651.	1.8	9
96	Fast Cartoon + Texture Image Filters. IEEE Transactions on Image Processing, 2010, 19, 1978-1986.	6.0	172
97	Image Denoising Methods. A New Nonlocal Principle. SIAM Review, 2010, 52, 113-147.	4.2	358
98	LSD: A Fast Line Segment Detector with a False Detection Control. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2010, 32, 722-732.	9.7	1,366
99	A PDE Formalization of Retinex Theory. IEEE Transactions on Image Processing, 2010, 19, 2825-2837.	6.0	160
100	Three-step image rectification. , 2010, , .		22
101	A fully affine invariant image comparison method. , 2009, , .		96
102	Fast implementation of color constancy algorithms. , 2009, , .		22
103	Self-Similarity Driven Color Demosaicking. IEEE Transactions on Image Processing, 2009, 18, 1192-1202.	6.0	113
104	ASIFT: A New Framework for Fully Affine Invariant Image Comparison. SIAM Journal on Imaging Sciences, 2009, 2, 438-469.	1.3	1,215
105	Nonlocal Image and Movie Denoising. International Journal of Computer Vision, 2008, 76, 123-139.	10.9	640
106	On Straight Line Segment Detection. Journal of Mathematical Imaging and Vision, 2008, 32, 313-347.	0.8	79
107	From Gestalt Theory to Image Analysis. Interdisciplinary Applied Mathematics, 2008, , .	0.2	204
108	Monocular Depth by Nonlinear Diffusion. , 2008, , .		12

#	ARTICLE	IF	CITATIONS
109	Topology Preserving Linear Filtering Applied to Medical Imaging. SIAM Journal on Imaging Sciences, 2008, 1, 26-50.	1.3	10
110	A Theory of Shape Identification. Lecture Notes in Mathematics, 2008, , .	0.1	52
111	Comparison of distances between measures. Applied Mathematics Letters, 2007, 20, 427-432.	1.5	9
112	The staircasing effect in neighborhood filters and its solution. IEEE Transactions on Image Processing, 2006, 15, 1499-1505.	6.0	187
113	An A Contrario Decision Method for Shape Element Recognition. International Journal of Computer Vision, 2006, 69, 295-315.	10.9	56
114	Neighborhood filters and PDEs. Numerische Mathematik, 2006, 105, 1-34.	0.9	119
115	Shape Recognition Based on an a Contrario Methodology. Modeling and Simulation in Science, Engineering and Technology, 2006, , 107-136.	0.4	1
116	Shape Smoothing and PDEs. , 2005, , 573-586.		0
117	A Review of Image Denoising Algorithms, with a New One. Multiscale Modeling and Simulation, 2005, 4, 490-530.	0.6	3,516
118	Partial Differential Equations for Morphological Operators. , 2005, , 369-390.		4
119	Gestalt Theory and Computer Vision. , 2004, , 71-101.		48
120	A Note on Two Classical Enhancement Filters and Their Associated PDE's. International Journal of Computer Vision, 2003, 52, 153-160.	10.9	29
121	Computational gestalts and perception thresholds. Journal of Physiology (Paris), 2003, 97, 311-324.	2.1	54
122	On the Theory of Planar Shape. Multiscale Modeling and Simulation, 2003, 1, 1-24.	0.6	28
123	A grouping principle and four applications. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2003, 25, 508-513.	9.7	117
124	A variational model of irrigation patterns. Interfaces and Free Boundaries, 2003, 5, 391-416.	0.2	67
125	Maximal meaningful events and applications to image analysis. Annals of Statistics, 2003, 31, 1822.	1.4	48
126	Dequantizing image orientation. IEEE Transactions on Image Processing, 2002, 11, 1129-1140.	6.0	22

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127	Geometry and Color in Natural Images. <i>Journal of Mathematical Imaging and Vision</i> , 2002, 16, 89-105.	0.8	56
128	Are Natural Images of Bounded Variation?. <i>SIAM Journal on Mathematical Analysis</i> , 2001, 33, 634-648.	0.9	79
129	Connected components of sets of finite perimeter and applications to image processing. <i>Journal of the European Mathematical Society</i> , 2001, 3, 39-92.	0.7	107
130	Edge Detection by Helmholtz Principle. <i>Journal of Mathematical Imaging and Vision</i> , 2001, 14, 271-284.	0.8	141
131	Meaningful Alignments. <i>International Journal of Computer Vision</i> , 2000, 40, 7-23.	10.9	271
132	Topographic Maps and Local Contrast Changes in Natural Images. <i>International Journal of Computer Vision</i> , 1999, 33, 5-27.	10.9	136
133	The Size of Objects in Natural and Artificial Images. <i>Advances in Imaging and Electron Physics</i> , 1999, , 167-242.	0.1	42
134	An axiomatic approach to image interpolation. <i>IEEE Transactions on Image Processing</i> , 1998, 7, 376-386.	6.0	263
135	Variational Methods in Image Segmentation (Jean-Michel Morel and Sergio Solimini). <i>SIAM Review</i> , 1996, 38, 179-180.	4.2	0
136	Self-similarity Driven Demosaicking. <i>Image Processing on Line</i> , 0, 1, 51-56.	0.0	16
137	Non-Local Means Denoising. <i>Image Processing on Line</i> , 0, 1, 208-212.	0.0	616
138	Image Color Cube Dimensional Filtering and Visualization. <i>Image Processing on Line</i> , 0, 1, 57-69.	0.0	3
139	Micro-Texture Synthesis by Phase Randomization. <i>Image Processing on Line</i> , 0, 1, 213-237.	0.0	30
140	Simplest Color Balance. <i>Image Processing on Line</i> , 0, 1, 297-315.	0.0	81
141	Retinex Poisson Equation: a Model for Color Perception. <i>Image Processing on Line</i> , 0, 1, 39-50.	0.0	30
142	ASIFT: An Algorithm for Fully Affine Invariant Comparison. <i>Image Processing on Line</i> , 0, 1, 11-38.	0.0	223
143	LSD: a Line Segment Detector. <i>Image Processing on Line</i> , 0, 2, 35-55.	0.0	577
144	Implementation of the "Non-Local Bayes" (NL-Bayes) Image Denoising Algorithm. <i>Image Processing on Line</i> , 0, 3, 1-42.	0.0	65

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145	Multiscale Retinex. Image Processing on Line, 0, 4, 71-88.	0.0	230
146	Screened Poisson Equation for Image Contrast Enhancement. Image Processing on Line, 0, 4, 16-29.	0.0	48
147	The Noise Clinic: a Blind Image Denoising Algorithm. Image Processing on Line, 0, 5, 1-54.	0.0	120
148	An Unsupervised Point Alignment Detection Algorithm. Image Processing on Line, 0, 5, 296-310.	0.0	4
149	An Unsupervised Algorithm for Detecting Good. Image Processing on Line, 0, 7, 81-92.	0.0	2
150	Multi-Scale DCT Denoising. Image Processing on Line, 0, 7, 288-308.	0.0	11
151	The Image Curvature Microscope: Accurate Curvature Computation at Subpixel Resolution. Image Processing on Line, 0, 7, 197-217.	0.0	9
152	Numerical Simulation of Landscape Evolution Models. Image Processing on Line, 0, 8, 219-250.	0.0	4
153	Fast Affine Invariant Image Matching. Image Processing on Line, 0, 8, 251-281.	0.0	11
154	Accelerating Monte Carlo Renderers by Ray Histogram Fusion. Image Processing on Line, 0, 5, 55-72.	0.0	0
155	How to Reduce Anomaly Detection in Images to Anomaly Detection in Noise. Image Processing on Line, 0, 9, 391-412.	0.0	5
156	Local JPEG Grid Detector via Blocking Artifacts, a Forgery Detection Tool. Image Processing on Line, 0, 10, 24-42.	0.0	2
157	Temporal Repetition Detector for Time Series of Spectrally Limited Satellite Imagers. Image Processing on Line, 0, 10, 62-77.	0.0	4
158	A Daily Measure of the SARS-CoV-2 Effective Reproduction Number for all Countries. Image Processing on Line, 0, 10, 191-210.	0.0	5