Marcelo BertalmÃ-o

List of Publications by Year
in descending order

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132	7,315	279798	118850
papers	citations	23	62
		h-index	g-index

133	133	133	3645
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Image inpainting. , 2000, , .		2,377
2	Simultaneous structure and texture image inpainting. IEEE Transactions on Image Processing, 2003, 12, 882-889.	9.8	790
3	Filling-in by joint interpolation of vector fields and gray levels. IEEE Transactions on Image Processing, 2001, 10, 1200-1211.	9.8	723
4	Navier-stokes, fluid dynamics, and image and video inpainting. , 0, , .		525
5	Variational Problems and Partial Differential Equations on Implicit Surfaces. Journal of Computational Physics, 2001, 174, 759-780.	3.8	288
6	A Comprehensive Framework for Image Inpainting. IEEE Transactions on Image Processing, 2010, 19, 2634-2645.	9.8	214
7	Video Inpainting Under Constrained Camera Motion. IEEE Transactions on Image Processing, 2007, 16, 545-553.	9.8	197
8	Structure and texture filling-in of missing image blocks in wireless transmission and compression applications. IEEE Transactions on Image Processing, 2003, 12, 296-303.	9.8	182
9	Issues About Retinex Theory and Contrast Enhancement. International Journal of Computer Vision, 2009, 83, 101-119.	15.6	151
10	Perceptual Color Correction Through Variational Techniques. IEEE Transactions on Image Processing, 2007, 16, 1058-1072.	9.8	145
11	A Perceptually Inspired Variational Framework for Color Enhancement. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2009, 31, 458-474.	13.9	118
12	An Analysis of Visual Adaptation and Contrast Perception for Tone Mapping. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2011, 33, 2002-2012.	13.9	90
13	Enhanced Variational Image Dehazing. SIAM Journal on Imaging Sciences, 2015, 8, 1519-1546.	2.2	84
14	Video inpainting of occluding and occluded objects. , 2005, , .		82
15	Morphing active contours. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2000, 22, 733-737.	13.9	80
16	On the Duality Between Retinex and Image Dehazing. , 2018, , .		80
17	TV Based Image Restoration with Local Constraints. Journal of Scientific Computing, 2003, 19, 95-122.	2.3	73
18	A Decomposition Framework for Image Denoising Algorithms. IEEE Transactions on Image Processing, 2016, 25, 388-399.	9.8	70

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19	Strong-continuation, contrast-invariant inpainting with a third-order optimal PDE. IEEE Transactions on Image Processing, 2006, 15, 1934-1938.	9.8	68
20	Inpainting surface holes. , 0, , .		56
21	Fusion-based Variational Image Dehazing. IEEE Signal Processing Letters, 2016, , 1-1.	3.6	45
22	Implementing the Retinex algorithm with Wilsonâ€“Cowan equations. Journal of Physiology (Paris), 2009, 103, 69-72.	2.1	38
23	An Inpainting- Based Deinterlacing Method. IEEE Transactions on Image Processing, 2007, 16, 2476-2491.	9.8	31
24	Variational Approach for the Fusion of Exposure Bracketed Pairs. IEEE Transactions on Image Processing, 2013, 22, 712-723.	9.8	30
25	Region tracking on level-sets methods. IEEE Transactions on Medical Imaging, 1999, 18, 448-451.	8.9	27
26	Color Stabilization Along Time and Across Shots of the Same Scene, for One or Several Cameras of Unknown Specifications. IEEE Transactions on Image Processing, 2014, 23, 4564-4575.	9.8	26
27	Denoising an Image by Denoising Its Curvature Image. SIAM Journal on Imaging Sciences, 2014, 7, 187-211.	2.2	25
28	Image Processing for Cinema. , 0, , .		25
29	Perceptual Color Characterization of Cameras. Sensors, 2014, 14, 23205-23229.	3.8	24
30	Gamut Mapping in Cinematography Through Perceptually-Based Contrast Modification. IEEE Journal on Selected Topics in Signal Processing, 2014, 8, 490-503.	10.8	24
31	Retinal Lateral Inhibition Provides the Biological Basis of Long-Range Spatial Induction. PLoS ONE, 2016, 11, e0168963.	2.5	24
32	Movie Denoising by Average of Warped Lines. IEEE Transactions on Image Processing, 2007, 16, 2333-2347.	9.8	23
33	Geometry-Based Demosaicking. IEEE Transactions on Image Processing, 2009, 18, 665-670.	9.8	22
34	Derivatives and inverse of cascaded linear+nonlinear neural models. PLoS ONE, 2018, 13, e0201326.	2.5	21
35	A fast image dehazing method that does not introduce color artifacts. Journal of Real-Time Image Processing, 2020, 17, 607-622.	3.5	20
36	Color illusions also deceive CNNs for low-level vision tasks: Analysis and implications. Vision Research, 2020, 176, 156-174.	1.4	20

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37	Real-time, accurate depth of field using anisotropic diffusion and programmable graphics cards. , 0, , .		18
38	Visual Acuity in Day for Night. International Journal of Computer Vision, 2006, 69, 109-117.	15.6	17
39	From image processing to computational neuroscience: a neural model based on histogram equalization. Frontiers in Computational Neuroscience, 2014, 8, 71.	2.1	16
40	Visual illusions via neural dynamics: Wilsonâ€“Cowan-type models and the efficient representation principle. Journal of Neurophysiology, 2020, 123, 1606-1618.	1.8	16
41	A contrario hierarchical image segmentation. , 2009, , .		15
42	Gamut Extension for Cinema. IEEE Transactions on Image Processing, 2017, 26, 1595-1606.	9.8	15
43	Region Based Segmentation Using the Tree of Shapes. , 2006, , .		14
44	A Contrario Selection of Optimal Partitions for Image Segmentation. SIAM Journal on Imaging Sciences, 2013, 6, 1274-1317.	2.2	14
45	Evidence for the intrinsically nonlinear nature of receptive fields in vision. Scientific Reports, 2020, 10, 16277.	3.3	14
46	On Covariant Derivatives and Their Applications to Image Regularization. SIAM Journal on Imaging Sciences, 2014, 7, 2393-2422.	2.2	13
47	Spectral Sharpening of Color Sensors: Diagonal Color Constancy and Beyond. Sensors, 2014, 14, 3965-3985.	3.8	13
48	System gamma as a function of image- and monitor-dynamic range. Journal of Vision, 2016, 16, 4.	0.3	13
49	Convolutional Neural Networks Can Be Deceived by Visual Illusions. , 2019, , .		13
50	Vision Models for Wide Color Gamut Imaging in Cinema. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2021, 43, 1777-1790.	13.9	12
51	Simultaneous Blind Gamma Estimation. IEEE Signal Processing Letters, 2015, 22, 1316-1320.	3.6	11
52	Optimized Tone Curve for In-Camera Image Processing. IS&T International Symposium on Electronic Imaging, 2016, 28, 1-7.	0.4	11
53	Physical-based optimization for non-physical image dehazing methods. Optics Express, 2020, 28, 9327.	3.4	11
54	Analysis of retinal and cortical components of Retinex algorithms. Journal of Electronic Imaging, 2017, 26, 031208.	0.9	10

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55	Structure and texture filling-in of missing image blocks in wireless transmission and compression. , 0, , .		9
56	A reevaluation of Whittle (1986, 1992) reveals the link between detection thresholds, discrimination thresholds, and brightness perception. Journal of Vision, 2019, 19, 16.	0.3	9
57	In Praise of Artifice Reloaded: Caution With Natural Image Databases in Modeling Vision. Frontiers in Neuroscience, 2019, 13, 8.	2.8	9
58	Visual Information flow in Wilson-Cowan networks. Journal of Neurophysiology, 2020, 123, 2249-2268.	1.8	9
59	Color Matching Images With Unknown Non-Linear Encodings. IEEE Transactions on Image Processing, 2020, 29, 4435-4444.	9.8	9
60	PDE-Based Image and Surface Inpainting. , 2006, , 33-61.		9
61	Variational problems and PDEs on implicit surfaces. , 0, , .		8
62	Angular-Based Preprocessing for Image Denoising. IEEE Signal Processing Letters, 2018, 25, 219-223.	3.6	8
63	A Cortical-Inspired Model for Orientation-Dependent Contrast Perception: A Link with Wilson-Cowan Equations. Lecture Notes in Computer Science, 2019, , 472-484.	1.3	8
64	Cortical-Inspired Wilsonâ€“Cowan-Type Equations for Orientation-Dependent Contrast Perception Modelling. Journal of Mathematical Imaging and Vision, 2021, 63, 263-281.	1.3	8
65	Inpainting. , 2014, , 401-416.		8
66	Contrast sensitivity functions in autoencoders. Journal of Vision, 2022, 22, 8.	0.3	8
67	A Geometric Model of Brightness Perception and Its Application to Color Images Correction. Journal of Mathematical Imaging and Vision, 2018, 60, 849-881.	1.3	7
68	Statistics of natural images as a function of dynamic range. Journal of Vision, 2019, 19, 13.	0.3	7
69	Brightness perception and encoding curves. , 2020, , 95-129.		7
70	Retinal Processing Optimizes Contrast Coding. Journal of Vision, 2016, 16, 1151.	0.3	7
71	Practical Use Suggests a Re-evaluation of HDR Objective Quality Metrics. , 2019, , .		6
72	A Variational Framework for Single Image Dehazing. Lecture Notes in Computer Science, 2015, , 259-270.	1.3	6

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73	A tone mapping operator based on neural and psychophysical models of visual perception. Proceedings of SPIE, 2015, , .	0.8	5
74	High quality video in high dynamic range scenes from interlaced dual-ISO footage. IS&T International Symposium on Electronic Imaging, 2016, 2016, 1-7.	0.4	5
75	Local denoising applied to RAW images may outperform non-local patch-based methods applied to the camera output. IS&T International Symposium on Electronic Imaging, 2016, 28, 1-8.	0.4	5
76	Log-encoding estimation for color stabilization of cinematic footage. , 2016, , .		5
77	Spatial gamut mapping among non-inclusive gamuts. Journal of Visual Communication and Image Representation, 2018, 54, 204-212.	2.8	5
78	Generalized Gradient on Vector Bundle â€“ Application to Image Denoising. Lecture Notes in Computer Science, 2013, , 12-23.	1.3	5
79	The Wilson-Cowan model describes Contrast Response and Subjective Distortion. Journal of Vision, 2017, 17, 657.	0.3	5
80	<title>Neuro3D: an interactive 3D reconstruction system of serial sections using automatic registration</title>. , 1998, 3261, 117.		4
81	A Nonlocal Variational Formulation for the Improvement of Tone Mapped Images. SIAM Journal on Imaging Sciences, 2014, 7, 2340-2363.	2.2	4
82	Photorealistic style transfer for video. Signal Processing: Image Communication, 2021, 95, 116240.	3.2	4
83	Contrast invariant inpainting with a 3rd order, optimal PDE. , 2005, , .		3
84	Local denoising based on curvature smoothing can visually outperform non-local methods on photographs with actual noise. , 2016, , .		3
85	PERFORMANCE EVALUATION OF OBJECTIVE QUALITY METRICS ON HLG-BASED HDR IMAGE CODING. , 2018, , .		3
86	Issues with Common Assumptions about the Camera Pipeline and Their Impact in HDR Imaging from Multiple Exposures. SIAM Journal on Imaging Sciences, 2019, 12, 1627-1642.	2.2	3
87	Extensions and applications. , 2020, , 247-293.		3
88	Vision models fine-tuned by cinema professionals for High Dynamic Range imaging in movies. Multimedia Tools and Applications, 2021, 80, 2537-2563.	3.9	3
89	Investigating the Effect of Lateral Inhibition in the Retinal Circuitry on Lightness Contrast and Assimilation: A Model Study. Journal of Vision, 2015, 15, 633.	0.3	3
90	Perceptual Dynamic Range for In-Camera Image Processing. , 2015, , .		3

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91	Denoising an Image by Denoising Its Components in a Moving Frame. Lecture Notes in Computer Science, 2014, , 375-383.	1.3	3
92	An active regions approach for the segmentation of 3D biological tissue. , 2005, , .		2
93	Fusion of Bracketing Pictures. , 2009, , .		2
94	Color matching for stereoscopic cinema. , 2013, , .		2
95	Gamut extension for cinema: psychophysical evaluation of the state of the art and a new algorithm. , 2015, , .		2
96	Perceptually-based Gamut Extension Algorithm for Emerging Wide Color Gamut Display and Projection Technologies. , 2016, , .		2
97	Special Section Guest Editorial: Retinex at 50. Journal of Electronic Imaging, 2017, 26, 031201.	0.9	2
98	Color-matching Shots from Different Cameras Having Unknown Gamma or Logarithmic Encoding Curves. , 2017, , .		2
99	Photorealistic Style Transfer for Cinema Shoots. , 2018, , .		2
100	Adaptation and efficient coding. , 2020, , 65-93.		2
101	Gamut Mapping through Perceptually-Based Contrast Reduction. Lecture Notes in Computer Science, 2014, , 1-11.	1.3	2
102	Modeling lightness induction with Wilson-Cowan equations. Journal of Vision, 2014, 14, 56-56.	0.3	2
103	A class of nonlocal variational problems on a vector bundle for color image local contrast reduction/enhancement. Geometry Imaging and Computing, 2015, 2, 187-236.	0.8	2
104	On the synthesis of visual illusions using deep generative models. Journal of Vision, 2022, 22, 2.	0.3	2
105	A Multi-Modal Approach to Perceptual Tone Mapping. , 2009, , .		1
106	A Variational Method for the Optimization of Tone Mapping Operators. Lecture Notes in Computer Science, 2014, , 505-516.	1.3	1
107	The influence of lightness, and the crispening effect on the perceived contrast of textured images. IS&T International Symposium on Electronic Imaging, 2016, 2016, 1-5.	0.4	1
108	Automatic, Viewing-Condition Dependent Contrast Grading based on Perceptual Models. , 2016, , .		1

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109	Automatic, Fast and Perceptually Accurate Gamut Mapping Based on Vision Science Models. , 2017, , .		1
110	A Connection Between Image Processing and Artificial Neural Networks Layers Through a Geometric Model of Visual Perception. Lecture Notes in Computer Science, 2019, , 459-471.	1.3	1
111	A Study of Objective Quality Metrics for HLG-Based HDR/WCG Image Coding. Smpte Motion Imaging Journal, 2021, 130, 53-65.	0.2	1
112	The potential effect of the electrical coupling among horizontal cells on enhancing local contrast signals in the parasol retinal pathway. Journal of Vision, 2014, 14, 60-60.	0.3	1
113	Brightness Assimilation Predicted Already at Retinal Level Due to the Effect of Wide Receptive-fields of Inhibitory Feedback Cells. Journal of Vision, 2016, 16, 44.	0.3	1
114	<title>Image enhancement for a low-cost TEM acquisition system</title>. , 1998, , .		0
115	In-camera, Photorealistic Style Transfer for On-set Automatic Grading. , 2018, , .		0
116	Three Approaches to Improve Denoising Results that Do Not Involve Developing New Denoising Methods. Advances in Computer Vision and Pattern Recognition, 2018, , 295-329.	1.3	0
117	Vision models for gamut mapping in cinema. , 2020, , 185-213.		0
118	Vision models for tone mapping in cinema. , 2020, , 215-246.		0
119	The biological basis of vision: LGN, visual cortex and L+NL models. , 2020, , 47-63.		0
120	Histogram equalisation and vision models. , 2020, , 157-184.		0
121	Open problems: an argument for new vision models rather than new algorithms. , 2020, , 295-300.		0
122	Retinal Noise Emulation: A Novel Artistic Tool for Cinema That Also Improves Compression Efficiency. IEEE Access, 2020, 8, 67263-67276.	4.2	0
123	Matching visual induction effects on screens of different size. Journal of Vision, 2021, 21, 10.	0.3	0
124	Inpainting. , 2021, , 670-687.		0
125	Harmonic Flow for Histogram Matching. Lecture Notes in Computer Science, 2014, , 145-156.	1.3	0
126	A model of color constancy and efficient coding can predict lightness induction. Journal of Vision, 2014, 14, 84-84.	0.3	0

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127	The Perceived Quality of Undistorted Natural Images. Journal of Vision, 2014, 14, 82-82.	0.3	0
128	Is there a preference for linearity when viewing natural images?. Journal of Vision, 2014, 14, 58-58.	0.3	0
129	The intrinsic error of exposure fusion for HDR imaging, and a way to reduce it. , 2015, , .		0
130	Duality Principle for Image Regularization and Perceptual Color Correction Models. Lecture Notes in Computer Science, 2015, , 449-460.	1.3	0
131	Variational Methods for Gamut Mapping in Cinema and Television. Mathematics and Visualization, 2018, , 67-100.	0.6	0
132	Physically Plausible Dehazing for Non-physical Dehazing Algorithms. Lecture Notes in Computer Science, 2019, , 233-244.	1.3	0