Thierry Bouwmans

List of Publications by Year
in descending order

101 papers	5,114 citations	236612 25 h-index
104 all docs	104 docs citations	104 times ranked

155451 55 g-index
2957 citing authors

#	Article	IF	Citations
1	Traditional and recent approaches in background modeling for foreground detection: An overview. Computer Science Review, 2014, 11-12, 31-66.	10.2	556
2	Robust PCA via Principal Component Pursuit: A review for a comparative evaluation in video surveillance. Computer Vision and Image Understanding, 2014, 122, 22-34.	3.0	370
3	Background Modeling using Mixture of Gaussians for Foreground Detection - A Survey. Recent Patents on Computer Science, 2008, 1, 219-237.	0.5	360
4	Decomposition into low-rank plus additive matrices for background/foreground separation: A review for a comparative evaluation with a large-scale dataset. Computer Science Review, 2017, 23, 1-71.	10.2	259
5	Deep neural network concepts for background subtraction:A systematic review and comparative evaluation. Neural Networks, 2019, 117, 8-66.	3.3	250
6	Robust Subspace Learning: Robust PCA, Robust Subspace Tracking, and Robust Subspace Recovery. IEEE Signal Processing Magazine, 2018, 35, 32-55.	4.6	249
7	On the Applications of Robust PCA in Image and Video Processing. Proceedings of the IEEE, 2018, 106, 1427-1457.	16.4	177
8	New trends on moving object detection in video images captured by a moving camera: A survey. Computer Science Review, 2018, 28, 157-177.	10.2	172
9	Background subtraction in real applications: Challenges, current models and future directions. Computer Science Review, 2020, 35, 100204.	10.2	171
10	Recent Advanced Statistical Background Modeling for Foreground Detection - A Systematic Survey. Recent Patents on Computer Science, 2011, 4, 147-176.	0.5	138
11	Background Modeling using Mixture of Gaussians for Foreground Detection - A Survey. Recent Patents on Computer Science, 2010, 1, 219-237.	0.5	110
12	Background–Foreground Modeling Based on Spatiotemporal Sparse Subspace Clustering. IEEE Transactions on Image Processing, 2017, 26, 5840-5854.	6.0	103
13	Human Pose Estimation from Monocular Images: A Comprehensive Survey. Sensors, 2016, 16, 1966.	2.1	97
14	Recent Advanced Statistical Background Modeling for Foreground Detection - A Systematic Survey. Recent Patents on Computer Science, 2011, 4, 147-176.	0.5	92
15	An eXtended Center-Symmetric Local Binary Pattern for Background Modeling and Subtraction in Videos. , 2015, , .		89
16	Moving Object Detection in Complex Scene Using Spatiotemporal Structured-Sparse RPCA. IEEE Transactions on Image Processing, 2019, 28, 1007-1022.	6.0	82
17	On the role and the importance of features for background modeling and foreground detection. Computer Science Review, 2018, 28, 26-91.	10.2	78
18	STATISTICAL BACKGROUND MODELING FOR FOREGROUND DETECTION: A SURVEY. , 2009, , 181-199.		73

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19	Fuzzy integral for moving object detection. , 2008, , .		72
20	Subspace Learning for Background Modeling: A Survey. Recent Patents on Computer Science, 2009, 2, 223-234.	0.5	71
21	Scene background initialization: A taxonomy. Pattern Recognition Letters, 2017, 96, 3-11.	2.6	69
22	Spatiotemporal Low-Rank Modeling for Complex Scene Background Initialization. IEEE Transactions on Circuits and Systems for Video Technology, 2018, 28, 1315-1329.	5.6	68
23	Type-2 Fuzzy Mixture of Gaussians Model: Application to Background Modeling. Lecture Notes in Computer Science, 2008, , 772-781.	1.0	66
24	Handbook of Robust Low-Rank and Sparse Matrix Decomposition. , 0, , .		59
25	Rethinking PCA for Modern Data Sets: Theory, Algorithms, and Applications [Scanning the Issue]. Proceedings of the IEEE, 2018, 106, 1274-1276.	16.4	58
26	Moving objects detection with a moving camera: A comprehensive review. Computer Science Review, 2020, 38, 100310.	10.2	56
27	Robust Principal Component Analysis for Background Subtraction: Systematic Evaluation and Comparative Analysis. , 0, , .		53
28	A Fuzzy Background Modeling Approach for Motion Detection in Dynamic Backgrounds. Communications in Computer and Information Science, 2012, , 177-185.	0.4	49
29	Foreground detection based on low-rank and block-sparse matrix decomposition. , 2012, , .		48
30	Online Stochastic Tensor Decomposition for Background Subtraction in Multispectral Video Sequences. , 2015, , .		48
31	Background Subtraction via Superpixel-Based Online Matrix Decomposition with Structured Foreground Constraints. , 2015, , .		40
32	Double-constrained RPCA based on saliency maps for foreground detection in automated maritime surveillance. , 2015, , .		39
33	LRSLibrary: Low-Rank and Sparse Tools for Background Modeling and Subtraction in Videos. , 2016, , 426-440.		38
34	Incremental and Multi-feature Tensor Subspace Learning Applied for Background Modeling and Subtraction. Lecture Notes in Computer Science, 2014, , 94-103.	1.0	33
35	A fuzzy approach for background subtraction. , 2008, , .		31
36	Fuzzy statistical modeling of dynamic backgrounds for moving object detection in infrared videos. , 2009, , .		30

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37	Background subtraction via incremental maximum margin criterion: a discriminative subspace approach. Machine Vision and Applications, 2012, 23, 1083-1101.	1.7	30
38	Motion-Aware Graph Regularized RPCA for background modeling of complex scenes. , 2016, , .		28
39	Guest Editorial Introduction to the Special Issue on Group and Crowd Behavior Analysis for Intelligent Multicamera Video Surveillance. IEEE Transactions on Circuits and Systems for Video Technology, 2017, 27, 405-408.	5.6	25
40	Moving Object Detection for Event-based Vision using Graph Spectral Clustering. , 2021, , .		24
41	OR-PCA with dynamic feature selection for robust background subtraction. , 2015, , .		23
42	Deep detector classifier (DeepDC) for moving objects segmentation and classification in video surveillance. IET Image Processing, 2020, 14, 1490-1501.	1.4	23
43	Foreground Detection Using the Choquet Integral. , 2008, , .		22
44	Robust PCA and Robust Subspace Tracking: A Comparative Evaluation. , 2018, , .		22
45	Stochastic Decomposition into Low Rank and Sparse Tensor for Robust Background Subtraction. , 2015, , .		21
46	Comparison of Background Subtraction Methods for a Multimedia Application. , 2007, , .		20
47	Moving Object Detection on RGB-D Videos Using Graph Regularized Spatiotemporal RPCA. Lecture Notes in Computer Science, 2017, , 230-241.	1.0	20
48	Subspace Learning for Background Modeling: A Survey. Recent Patents on Computer Science, 2010, 2, 223-234.	0.5	20
49	Robust background subtraction to global illumination changes via multiple features-based online robust principal components analysis with Markov random field. Journal of Electronic Imaging, 2015, 24, 043011.	0.5	19
50	Semi-Supervised Background Subtraction Of Unseen Videos: Minimization Of The Total Variation Of Graph Signals. , 2020, , .		19
51	Graph Moving Object Segmentation. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2020, PP, 1-1.	9.7	19
52	The Emerging Field of Graph Signal Processing for Moving Object Segmentation. Communications in Computer and Information Science, 2021, , 31-45.	0.4	18
53	Comparison of Matrix Completion Algorithms for Background Initialization in Videos. Lecture Notes in Computer Science, 2015, , 510-518.	1.0	16
54	Superpixel-based online wagging one-class ensemble for feature selection in foreground/background separation. Pattern Recognition Letters, 2017, 100, 144-151.	2.6	15

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55	Moving Object Detection via Robust Low Rank Matrix Decomposition with IRLS Scheme. Lecture Notes in Computer Science, 2012, , 665-674.	1.0	15
56	Special issue on background modeling for foreground detection in real-world dynamic scenes. Machine Vision and Applications, 2014, 25, 1101-1103.	1.7	14
57	Depth extended online RPCA with spatiotemporal constraints for robust background subtraction. , 2015, , .		14
58	Graph CNN for Moving Object Detection in Complex Environments from Unseen Videos. , 2021, , .		14
59	Reconstruction of Time-Varying Graph Signals via Sobolev Smoothness. IEEE Transactions on Signal and Information Processing Over Networks, 2022, 8, 201-214.	1.6	14
60	GraphBGS: Background Subtraction via Recovery of Graph Signals. , 2021, , .		12
61	OR-PCA with MRF for Robust Foreground Detection in Highly Dynamic Backgrounds. Lecture Notes in Computer Science, 2015, , 284-299.	1.0	11
62	Combining ARF and OR-PCA for Robust Background Subtraction of Noisy Videos. Lecture Notes in Computer Science, 2015, , 340-351.	1.0	11
63	Foreground Detection by Robust PCA Solved via a Linearized Alternating Direction Method. Lecture Notes in Computer Science, 2012, , 115-122.	1.0	11
64	Extraction of line segments from fuzzy images. Pattern Recognition Letters, 2001, 22, 1405-1418.	2.6	9
65	Online Weighted One-Class Ensemble for feature selection in background/foreground separation. , 2016, , .		9
66	Introduction to the Issue on Robust Subspace Learning and Tracking: Theory, Algorithms, and Applications. IEEE Journal on Selected Topics in Signal Processing, 2018, 12, 1127-1130.	7.3	9
67	On the Minimization of Sobolev Norms of Time-Varying Graph Signals: Estimation of New Coronavirus Disease 2019 Cases. , 2020, , .		9
68	SemiSegSAR: A Semi-Supervised Segmentation Algorithm for Ship SAR Images. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	1.4	9
69	Improving OR-PCA via smoothed spatially-consistent low-rank modeling for background subtraction. , 2017, , .		8
70	SBMI-LTD. , 2017, , .		8
71	VORTICAL STRUCTURES ANALYSIS IN JET FLOWS USING A CLASSICAL 2D-PIV SYSTEM AND TIME RESOLVED VISUALIZATION IMAGE PROCESSING. Journal of Flow Visualization and Image Processing, 2008, 15, 275-300.	0.3	7
72	Moving Objects Segmentation Based on DeepSphere in Video Surveillance. Lecture Notes in Computer Science, 2019, , 307-319.	1.0	7

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73	A Novel Algorithm Based on a Common Subspace Fusion for Visual Object Tracking. IEEE Access, 2022, 10, 24690-24703.	2.6	7
74	GMM Background Modeling Using Divergence-Based Weight Updating. Lecture Notes in Computer Science, 2017, , 282-290.	1.0	6
75	Dynamic Background Subtraction Using Least Square Adversarial Learning. , 2020, , .		6
76	A new stereomatching algorithm based on linear features and the fuzzy integral. Pattern Recognition Letters, 2001, 22, 133-146.	2.6	5
77	Fuzzy foreground detection for infrared videos. , 2008, , .		5
78	DEEP LEARNING BASED BACKGROUND SUBTRACTION: A SYSTEMATIC SURVEY. , 2020, , 51-73.		5
79	Traditional Approaches in Background Modeling for Static Cameras. , 2014, , 1-1-1-54.		4
80	Editorialâ€"Scene background modeling and initialization. Pattern Recognition Letters, 2017, 96, 1-2.	2.6	4
81	Complete Moving Object Detection in the Context of Robust Subspace Learning. , 2019, , .		4
82	Alive Fishes Species Characterization from Video Sequences. Lecture Notes in Computer Science, 2002, , 689-698.	1.0	4
83	Unsupervised Adversarial Learning for Dynamic Background Modeling. Communications in Computer and Information Science, 2020, , 248-261.	0.4	4
84	From Moving Objects Detection to Classification and Recognition: A Review for Smart Environments. , 2020, , 289-316.		3
85	Multi sensory system for the recovery of 3D structure; industrial applications. , 0, , .		2
86	Background Modeling via Incremental Maximum Margin Criterion. Lecture Notes in Computer Science, 2011, , 394-403.	1.0	2
87	Fuzzy statistical modeling of dynamic backgrounds for moving object detection in infrared videos. , 2009, , .		2
88	Towards an Effective Approach for Face Recognition with DCGANs Data Augmentation. Lecture Notes in Computer Science, 2020, , 463-475.	1.0	2
89	Dual Information-Based Background Model For Moving Object Detection. , 2020, , .		1
90	Visual Surveillance of Human Activities: Background Subtraction Challenges and Methods. , 2019, , 43-66.		1

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91	Visual Surveillance of Natural Environments: Background Subtraction Challenges and Methods. , 2019, , 67-86.		1
92	Introduction to the Special Issue on Multimodal Machine Learning for Human Behavior Analysis. ACM Transactions on Multimedia Computing, Communications and Applications, 2020, 16, 1-2.	3.0	1
93	Background/Foreground Separation: Guided Attention based Adversarial Modeling (GAAM) versus Robust Subspace Learning Methods. , 2021, , .		1
94	A fuzzy model in trinocular vision matching. , 0, , .		0
95	Recent Approaches in Background Modeling for Static Cameras. , 2014, , 2-1-2-40.		0
96	Stochastic RPCA for Background/Foreground Separation. , 2016, , 457-480.		0
97	Multi-feature fusion based background subtraction for video sequences with strong background changes. , 2017, , .		0
98	Detection of Moving Objects. Journal of Imaging, 2018, 4, 93.	1.7	0
99	Robust Foreground Segmentation inÂRGBD Data from Complex Scenes UsingÂAdversarial Networks. Communications in Computer and Information Science, 2021, , 3-16.	0.4	0
100	Moving Objects Detection in Video Processing:. , 2021, , 171-181.		0
101	Estimation of the Hidden Message Length in Steganography: A Deep Learning Approach. Lecture Notes in Computer Science, 2020, , 333-341.	1.0	0