Bruno Aiazzi

List of Publications by Year in descending order

145	5,362	186265	161849
papers	citations	28 h-index	54 g-index

149	149	149	1925
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Improving Component Substitution Pansharpening Through Multivariate Regression of MS $+$Pan Data. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 3230-3239.	6.3	862
2	MTF-tailored Multiscale Fusion of High-resolution MS and Pan Imagery. Photogrammetric Engineering and Remote Sensing, 2006, 72, 591-596.	0.6	680
3	Context-driven fusion of high spatial and spectral resolution images based on oversampled multiresolution analysis. IEEE Transactions on Geoscience and Remote Sensing, 2002, 40, 2300-2312.	6.3	679
4	Multispectral and Panchromatic Data Fusion Assessment Without Reference. Photogrammetric Engineering and Remote Sensing, 2008, 74, 193-200.	0.6	625
5	Image fusionâ€"the ARSIS concept and some successful implementation schemes. ISPRS Journal of Photogrammetry and Remote Sensing, 2003, 58, 4-18.	11.1	299
6	Hyper-Sharpening: A First Approach on SIM-GA Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2015, 8, 3008-3024.	4.9	170
7	A Comparison Between Global and Context-Adaptive Pansharpening of Multispectral Images. IEEE Geoscience and Remote Sensing Letters, 2009, 6, 302-306.	3.1	168
8	A Theoretical Analysis of the Effects of Aliasing and Misregistration on Pansharpened Imagery. IEEE Journal on Selected Topics in Signal Processing, 2011, 5, 446-453.	10.8	111
9	Spatial Methods for Multispectral Pansharpening: Multiresolution Analysis Demystified. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 2563-2576.	6.3	95
10	An MTF-based spectral distortion minimizing model for pan-sharpening of very high resolution multispectral images of urban areas. , 0, , .		93
11	Near-lossless compression of 3-D optical data. IEEE Transactions on Geoscience and Remote Sensing, 2001, 39, 2547-2557.	6.3	84
12	Lossless compression of multi/hyper-spectral imagery based on a 3-D fuzzy prediction. IEEE Transactions on Geoscience and Remote Sensing, 1999, 37, 2287-2294.	6.3	81
13	Multiresolution local-statistics speckle filtering based on a ratio Laplacian pyramid. IEEE Transactions on Geoscience and Remote Sensing, 1998, 36, 1466-1476.	6.3	75
14	Nonparametric Change Detection in Multitemporal SAR Images Based on Mean-Shift Clustering. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 2022-2031.	6.3	74
15	Estimation based on entropy matching for generalized Gaussian PDF modeling. IEEE Signal Processing Letters, 1999, 6, 138-140.	3.6	67
16	Bi-cubic interpolation for shift-free pan-sharpening. ISPRS Journal of Photogrammetry and Remote Sensing, 2013, 86, 65-76.	11.1	62
17	Lossless image compression by quantization feedback in a content-driven enhanced Laplacian pyramid. IEEE Transactions on Image Processing, 1997, 6, 831-843.	9.8	50
18	Sensitivity of Pansharpening Methods to Temporal and Instrumental Changes Between Multispectral and Panchromatic Data Sets. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 308-319.	6.3	49

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19	Crisp and Fuzzy Adaptive Spectral Predictions for Lossless and Near-Lossless Compression of Hyperspectral Imagery. IEEE Geoscience and Remote Sensing Letters, 2007, 4, 532-536.	3.1	45
20	Information-theoretic assessment of sampled hyperspectral imagers. IEEE Transactions on Geoscience and Remote Sensing, 2001, 39, 1447-1458.	6.3	42
21	A reduced Laplacian pyramid for lossless and progressive image communication. IEEE Transactions on Communications, 1996, 44, 18-22.	7.8	40
22	Estimating noise and information of multispectral imagery. Optical Engineering, 2002, 41, 656.	1.0	40
23	Information-theoretic heterogeneity measurement for SAR imagery. IEEE Transactions on Geoscience and Remote Sensing, 2005, 43, 619-624.	6.3	40
24	Coherence estimation from multilook incoherent sar imagery. IEEE Transactions on Geoscience and Remote Sensing, 2003, 41, 2531-2539.	6.3	39
25	SAR Image Classification Through Information-Theoretic Textural Features, MRF Segmentation, and Object-Oriented Learning Vector Quantization. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 1116-1126.	4.9	38
26	Multispectral Pansharpening with Radiative Transfer-Based Detail-Injection Modeling for Preserving Changes in Vegetation Cover. Remote Sensing, 2018, 10, 1308.	4.0	38
27	Full-Scale Assessment of Pansharpening Through Polynomial Fitting of Multiscale Measurements. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 6344-6355.	6.3	36
28	<title>Assessment of pyramid-based multisensor image data fusion</title>. , 1998, , .		35
29	Near-lossless image compression by relaxation-labelled prediction. Signal Processing, 2002, 82, 1619-1631.	3.7	34
30	Context modeling for near-lossless image coding. IEEE Signal Processing Letters, 2002, 9, 77-80.	3.6	32
31	Signal-dependent noise modelling and estimation of new-generation imaging spectrometers. , 2009, , .		29
32	A pyramid-based error-bounded encoder: An evaluation on X-ray chest images. Signal Processing, 1997, 59, 173-187.	3.7	25
33	Spectral Distortion in Lossy Compression of Hyperspectral Data. Journal of Electrical and Computer Engineering, 2012, 2012, 1-8.	0.9	25
34	<title>Wavelet and pyramid techniques for multisensor data fusion: a performance comparison varying with scale ratios</title>. , 1999, , .		24
35	Fuzzy logic-based matching pursuits for lossless predictive coding of still images. IEEE Transactions on Fuzzy Systems, 2002, 10, 473-483.	9.8	24
36	Enhanced Gram-Schmidt Spectral Sharpening Based on Multivariate Regression of MS and Pan Data. , 2006, , .		21

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37	Spatial resolution enhancement of ASTER thermal bands. , 2005, , .		19
38	Lossless Compression of Hyperspectral Images Using Multiband Lookup Tables. IEEE Signal Processing Letters, 2009, 16, 481-484.	3.6	19
39	Pyramid-based multiresolution adaptive filters for additive and multiplicative image noise. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 1998, 45, 1092-1097.	2.2	18
40	Advantages of Laplacian pyramids over "Ã trous" wavelet transforms for pansharpening of multispectral images. Proceedings of SPIE, 2012, , .	0.8	16
41	Blind Correction of Local Misalignments Between Multispectral and Panchromatic Images. IEEE Geoscience and Remote Sensing Letters, 2018, 15, 1625-1629.	3.1	15
42	Image fusion through multiresolution oversampled decompositions. , 2008, , 27-66.		13
43	Unsupervised estimation of signal-dependent CCD camera noise. Eurasip Journal on Advances in Signal Processing, 2012, 2012, .	1.7	13
44	Full scale assessment of pansharpening methods and data products. Proceedings of SPIE, 2014, , .	0.8	13
45	Quality assessment of decision-driven pyramid-based fusion of high resolution multispectral with panchromatic image data. , 0, , .		12
46	Multi-resolution estimation of fractal dimension from noisy images. Journal of Electronic Imaging, 2001, 10, 339.	0.9	9
47	Information-theoretic assessment of multi-dimensional signals. Signal Processing, 2005, 85, 903-916.	3.7	9
48	Virtually Lossless Compression of Astrophysical Images. Eurasip Journal on Advances in Signal Processing, 2005, 2005, 1.	1.7	8
49	Low-complexity lossless/near-lossless compression of hyperspectral imagery through classified linear spectral prediction. , 0, , .		8
50	A New Method for MS + Pan Image Fusion Assessment Without Reference. , 2006, , .		8
51	Robust change analysis of SAR data through information-theoretic multitemporal features. , 2007, , .		8
52	Influence of the System MTF on the On-Board Lossless Compression of Hyperspectral Raw Data. Remote Sensing, 2019, 11, 791.	4.0	7
53	Filtering of Interferometric SAR Phase Images as a Fuzzy Matching-Pursuit Blind Estimation. Eurasip Journal on Advances in Signal Processing, 2005, 2005, 1.	1.7	6
54	Snow cover area identification by using a change detection method applied to COSMO-SkyMed images. Journal of Applied Remote Sensing, 2014, 8, 084684.	1.3	6

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55	Reproducibility of Pansharpening Methods and Quality Indexes versus Data Formats. Remote Sensing, 2021, 13, 4399.	4.0	6
56	<title>Lossless image compression based on recursive nonlinear interpolation</title>. , 1997, 3164, 413.		5
57	<title>Near-lossless compression of multi/hyperspectral image data through a fuzzy-matching-pursuit interband prediction</title>. , 2002, , .		5
58	SAR image segmentation through information-theoretic heterogeneity features and tree-structured Markov random fields. , 0, , .		5
59	Near-Lossless Compression of Hyperspectral Imagery Through Crisp/Fuzzy Adaptive DPCM. , 2006, , 147-177.		5
60	Pansharpening of hyperspectral images: a critical analysis of requirements and assessment on simulated PRISMA data. , 2013, , .		5
61	Change Detection in Multitemporal Images Through Single- and Multi-scale Approaches. Signals and Communication Technology, 2018, , 325-355.	0.5	5
62	<title>Pyramid-based multisensor image data fusion</title>. , 1997, , .		4
63	Lossy compression of multispectral remote-sensing images through multiresolution data fusion techniques. , 2003, , .		4
64	Robust unsupervised nonparametric change detection of SAR images. , 2012, , .		4
65	Influence of spatial resolution on pan-sharpening results. , 2012, , .		4
66	Context-Sensitive Pan-Sharpening of Multispectral Images. , 2007, , 121-125.		4
67	<title>Multiresolution adaptive noise filtering based on Laplacian pyramids</title>. , 1996, , .		3
68	<title>Signal-dependent noise modeling for adaptive multiresolution local-statistics filtering</title>. , 1999, , .		3
69	<title>Context modeling for joint spectral and radiometirc distortion minimization in pyramid-based fusion of MS and P image data</title>. , 2003, , .		3
70	<title>Advanced methods for onboard lossless compression of hyperspectral data</title>. , 2004, , .		3
71	<title>Tradeoff between radiometric and spectral distortion in lossy compression of hyperspectral imagery</title>. , 2004, 5208, 141.		3
72	Land cover classification of built-up areas through enhanced fuzzy nearest-mean reclustering of textural features from X- and C-band polarimetric SAR data. , 2004, , .		3

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73	Interband detail modeling for multiresolution fusion of very high resolution multispectral images. , 2004, , .		3
74	Information-Theoretic Assessment of Fusion of Multispectral and Panchromatic Images. , 2006, , .		3
75	An unsupervised method for quality assessment of despeckling: an evaluation on COSMO-SkyMed data. Proceedings of SPIE, 2011, , .	0.8	3
76	Multispectral pansharpening based on pixel modulation: state of the art and new results. Proceedings of SPIE, 2011, , .	0.8	3
77	An Investigation on the Prime and Twin Prime Number Functions by Periodical Binary Sequences and Symmetrical Runs in a Modified Sieve Procedure. Symmetry, 2019, 11, 775.	2.2	3
78	Quality Issues for Compression of Hyperspectral Imagery Through Spectrally Adaptive DPCM. , 2012, , 115-147.		3
79	Impact of a spatial decorrelation of the noise on the estimation accuracy of temporal changes in the scene from a couple of single-look SAR images. , 2020, , .		3
80	<title>Pyramid approach to fusion of Landsat TM and SPOT-PAN data to yield multispectral high-resolution images for environmental archaeology</title>. , 1996, 2960, 153.		2
81	<title>Multifiltering approach to adaptive speckle reduction in textured SAR images</title>. , 1997, , .		2
82	<title>Unsupervised assessment and pyramidal filtering of colored speckle</title>. , 1999, , .		2
83	<title>Hybrid despeckling filter driven by a novel homogeneity feature</title>. , 2000, , .		2
84	Interband structure modeling for oversampled multiresolution analysis-based Pan-sharpening of very high resolution multispectral images. , 2003, , .		2
85	Information-theoretic assessment of ASTER super-spectral imagery. , 2005, , .		2
86	<title>An information-theoretic feature for identifying changes in multitemporal SAR images: an evaluation for the detection of flooded areas</title>. , 2007, , .		2
87	Satellite-based enhancement of archaeological marks through data fusion techniques. Proceedings of SPIE, 2008, , .	0.8	2
88	Information-theoretic multitemporal features for change analysis from SAR images. Proceedings of SPIE, 2008, , .	0.8	2
89	Development and validation of multitemporal image analysis methodologies for multirisk monitoring of critical structures and infrastructures. , 2012, , .		2
90	Hyper-sharpening of hyperspectral data: A first approach. , 2014, , .		2

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91	Contentâ€driven pyramid compression of medical images for errorâ€free archival and progressive transmission. European Transactions on Telecommunications, 1995, 6, 301-310.	1.2	1
92	<title>Reversible compression of 2D and 3D data through a fuzzy linear prediction with context-based arithmetic coding</title>. , 1998, , .		1
93	<title>Lossless compression of multispectral images based on a bidirectional spectral prediction</title>. , 1999, , .		1
94	<title>Quality issues for archival of ancient documents</title>. , 2000, , .		1
95	Wavelet and multirate denoising for signal-dependent noise. , 2000, , .		1
96	<title>Quality issues in remote sensing image compression: near-lossless coding of optical and microwave data</title>. , 2001, , .		1
97	Land cover classification of urban and sub-urban areas via fuzzy nearest-mean reclustering of SAR features. , 2003, , .		1
98	NEAR-LOSSLESS COMPRESSION OF REMOTE-SENSING DATA. , 2003, , 503-532.		1
99	Spectral information extraction from very high resolution images through multiresolution fusion. , 2004, , .		1
100	<title>Near-lossless compression of hyperspectral data through classified spectral prediction</title>. , 2005, , .		1
101	Automated Content Extraction from SAR Data. , 2006, , .		1
102	Fast classified pansharpening with spectral and spatial distortion optimization. , 2012, , .		1
103	An experimental setup for multiresolution despeckling of COSMO-SkyMed image products. Proceedings of SPIE, 2012, , .	0.8	1
104	Information-theoretic assessment of on-board near-lossless compression of hyperspectral data. Journal of Applied Remote Sensing, 2013, 7, 074597.	1.3	1
105	Performance of pansharpening methods varying with input data formats. , 2021, , .		1
106	Automatic Fine Alignment of Multispectral and Panchromatic Images. , 2020, , .		1
107	<title>Lossless image compression based on a generalized recursive interpolation</title>. , 1996, , .		0
108	<title>Lossless compression of medical images based on an enhanced generalized multidimensional S-Transform</title>. , 1996, , .		0

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109	<title>Fuzzy clustering and soft switching of linear regression models for reversible image compression</title>. , 1998, , .		0
110	A distributed implementation of fuzzy clustering and switching of linear regression models for lossless compression of imagery and 3D data. , 0, , .		0
111	<title>Multiresolution texture analysis of SAR images</title>. , 1998, , .		0
112	<title>Virtually lossless compression of medical images through classified prediction and context-based arithmetic coding</title>. , 1998, 3653, 1033.		0
113	<title>Multiresolution estimation of fractal dimension from images affected by signal-dependent noise</title>. , 1999, 3813, 251.		0
114	<title>Trends in lossless image compression: adaptive vs. classified prediction and context modeling for entropy coding</title>. , 1999, , .		0
115	<title>Near-lossless image compression: a key to high-quality data distribution</title>. , 2000, , .		0
116	<title>Near-lossless compression by relaxation-labeled 3D prediction</title>. , 2000, 4310, 53.		0
117	<title>Lossless image compression by adaptive contextual encoding</title>. , 2000, , .		0
118	<title>Fuzzy blending of relaxation-labeled predictors for high-performance lossless image compression</title>. , 2000, 3962, 41.		0
119	<title>Heterogeneity-driven hybrid denoising</title>. , 2001, 4304, 209.		0
120	<title>Relative error-constrained compression for synthetic aperture radar data</title>. , 2001, , .		0
121	<title>New trends in despeckling: undecimated-wavelet shrinkage and fuzzy matching-pursuits estimation</title>. , 2002, , .		0
122	<title>Blind estimation of interferometric SAR phase images through fuzzy matching-pursuits</title>. , 2002, , .		0
123	Effects of nonuniform spectral sampling in hyperspectral sensors. , 2003, , .		0
124	Quality issues for hyperspectral data dissemination: radiometric and spectral distortions in lossy compression. , 2003, , .		0
125	Near-lossless image compression by adaptive prediction: new developments and comparison of algorithms. , 2003, 4793, 1.		0
126	Fuzzy nearest mean reclustering of SAR pixel features: assessments on land use classification. , 2003, 4883, 113.		0

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127	Information-theoretic textural features of SAR images: an assessment for land cover classification. , 2004, , .		0
128	Quicklook coherence estimation from multilook SAR imagery. , 2004, , .		0
129	Fuzzy predictor calculation for on-board lossless compression of hyperspectral imagery by adaptive DPCM. , 2004, 5238, 266.		0
130	<title>Virtually lossless compression of scientific data: an application to astrophysical images</title>. , 2005, , .		0
131	Fusion of microwave and optical images through intensity modulation by SAR textural features. , 2005, 5980, 99.		0
132	A modified band add-on spectral angle mapper (BAO-SAM) distance metrics: a new tool to evaluate lossy compression of hyperspectral imagery. , 2006, , .		0
133	Distortion Characterization of Compressed Hyperspectral Imagery through Band Add-On Modified Spectral Angle Mapper Distance Metrics. , 2006, , .		0
134	Assessment of quality parameters for a new-generation hyperspectral imager. , 2007, , .		0
135	Interband distortion allocation in lossy compression of hyperspectral imagery: impact on global distortion metrics and discrimination of materials. , 2007, , .		0
136	Lossless Compression of Hyperspectral Imagery Via Lookup Tables and Classified Linear Spectral Prediction. , 2008, , .		0
137	A theoretical evaluation of aliasing and misregistration effects on pansharpening methods. Proceedings of SPIE, 2010, , .	0.8	0
138	Recent achievements in lossless compression of hyperspectral data. , 2010, , .		0
139	Multiresolution map despeckling of COSMO-SkyMed images. , 2012, , .		0
140	OPTIMA: advanced methods for the analysis, integration and optimization of PRISMA mission products. Proceedings of SPIE, 2015, , .	0.8	0
141	Large area robust identification of snow cover from multitemporal COSMO-SkyMed images. , 2015, , .		0
142	Reproducibility of Spectral and Radiometric Normalized Similarity Indices for Multiband Images. , 2019, , .		0
143	<title>Information-theoretic assessment of imaging systems via data compression</title>. , 2001, , .		0
144	Quality Assessment of Remote-Sensing Multi-Band Optical Images. , 2007, , 355-375.		0

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145	Deployment of pansharpening for correction of local misalignments between MS and Pan. , 2018, , .		0