Mauro Dalla Mura

List of Publications by Year
in descending order

164 papers	**6,991** citations	101496 **36** h-index	60583 **81** g-index
171 all docs	**171** docs citations	**171** times ranked	**4204** citing authors

#	Article	IF	Citations
1	A Critical Comparison Among Pansharpening Algorithms. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 2565-2586.	2.7	943
2	Morphological Attribute Profiles for the Analysis of Very High Resolution Images. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 3747-3762.	2.7	626
3	Classification of Hyperspectral Images by Using Extended Morphological Attribute Profiles and Independent Component Analysis. IEEE Geoscience and Remote Sensing Letters, 2011, 8, 542-546.	1.4	340
4	Extended profiles with morphological attribute filters for the analysis of hyperspectral data. International Journal of Remote Sensing, 2010, 31, 5975-5991.	1.3	339
5	A Survey on Spectral–Spatial Classification Techniques Based on Attribute Profiles. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 2335-2353.	2.7	312
6	Simultaneous extraction of roads and buildings in remote sensing imagery with convolutional neural networks. ISPRS Journal of Photogrammetry and Remote Sensing, 2017, 130, 139-149.	4.9	304
7	Contrast and Error-Based Fusion Schemes for Multispectral Image Pansharpening. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 930-934.	1.4	291
8	A New Benchmark Based on Recent Advances in Multispectral Pansharpening: Revisiting Pansharpening With Classical and Emerging Pansharpening Methods. IEEE Geoscience and Remote Sensing Magazine, 2021, 9, 53-81.	4.9	175
9	Challenges and Opportunities of Multimodality and Data Fusion in Remote Sensing. Proceedings of the IEEE, 2015, 103, 1585-1601.	16.4	165
10	Remotely Sensed Image Classification Using Sparse Representations of Morphological Attribute Profiles. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 5122-5136.	2.7	157
11	Fusion of Multispectral and Panchromatic Images Based on Morphological Operators. IEEE Transactions on Image Processing, 2016, 25, 2882-2895.	6.0	151
12	A Pansharpening Method Based on the Sparse Representation of Injected Details. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 180-184.	1.4	145
13	Classification of Remote Sensing Optical and LiDAR Data Using Extended Attribute Profiles. IEEE Journal on Selected Topics in Signal Processing, 2012, 6, 856-865.	7.3	139
14	Random Subspace Ensembles for Hyperspectral Image Classification With Extended Morphological Attribute Profiles. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 4768-4786.	2.7	130
15	Context-Adaptive Pansharpening Based on Image Segmentation. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 753-766.	2.7	119
16	Pansharpening Based on Semiblind Deconvolution. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 1997-2010.	2.7	108
17	An Unsupervised Technique Based on Morphological Filters for Change Detection in Very High Resolution Images. IEEE Geoscience and Remote Sensing Letters, 2008, 5, 433-437.	1.4	106
18	Automatic Generation of Standard Deviation Attribute Profiles for Spectral–Spatial Classification of Remote Sensing Data. IEEE Geoscience and Remote Sensing Letters, 2013, 10, 293-297.	1.4	106

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19	A Novel Technique for Optimal Feature Selection in Attribute Profiles Based on Genetic Algorithms. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 3514-3528.	2.7	105
20	Machine Learning for Volcano-Seismic Signals: Challenges and Perspectives. IEEE Signal Processing Magazine, 2018, 35, 20-30.	4.6	103
21	Dynamic Multicontext Segmentation of Remote Sensing Images Based on Convolutional Networks. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 7503-7520.	2.7	102
22	Change Detection in VHR Images Based on Morphological Attribute Profiles. IEEE Geoscience and Remote Sensing Letters, 2013, 10, 636-640.	1.4	92
23	Hyperspectral Image Segmentation Using a New Spectral Unmixing-Based Binary Partition Tree Representation. IEEE Transactions on Image Processing, 2014, 23, 3574-3589.	6.0	79
24	Automatic Feature Learning for Spatio-Spectral Image Classification With Sparse SVM. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 6062-6074.	2.7	71
25	A Variational Pansharpening Approach Based on Reproducible Kernel Hilbert Space and Heaviside Function. IEEE Transactions on Image Processing, 2018, 27, 4330-4344.	6.0	71
26	Seismic vulnerability assessment of urban environments in moderate-to-low seismic hazard regions using association rule learning and support vector machine methods. Natural Hazards, 2015, 76, 1111-1141.	1.6	67
27	A Benchmarking Protocol for Pansharpening: Dataset, Preprocessing, and Quality Assessment. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 6102-6118.	2.3	67
28	Spectral–Spatial Classification of Multispectral Images Using Kernel Feature Space Representation. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 288-292.	1.4	65
29	An Assessment of Existing Methodologies to Retrieve Snow Cover Fraction from MODIS Data. Remote Sensing, 2018, 10, 619.	1.8	58
30	Multiple Morphological Component Analysis Based Decomposition for Remote Sensing Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 3083-3102.	2.7	56
31	Classification of hyperspectral data using extended attribute profiles based on supervised and unsupervised feature extraction techniques. International Journal of Image and Data Fusion, 2012, 3, 269-298.	0.8	54
32	Multiple Morphological Profiles From Multicomponent-Base Images for Hyperspectral Image Classification. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 4653-4669.	2.3	53
33	Pansharpening Based on Deconvolution for Multiband Filter Estimation. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 540-553.	2.7	47
34	A new extended linear mixing model to address spectral variability. , 2014, , .		44
35	MultiResolution Analysis and Component Substitution techniques for hyperspectral Pansharpening. , 2014, , .		44
36	Automatic Classification of Volcano Seismic Signatures. Journal of Geophysical Research: Solid Earth, 2018, 123, 10,645.	1.4	43

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37	GPU Framework for Change Detection in Multitemporal Hyperspectral Images. International Journal of Parallel Programming, 2019, 47, 272-292.	1.1	39
38	Taking Optimal Advantage of Fine Spatial Resolution: Promoting partial image reconstruction for the morphological analysis of very-high-resolution images. IEEE Geoscience and Remote Sensing Magazine, 2017, 5, 8-28.	4.9	38
39	Retrieval of the Height of Buildings From WorldView-2 Multi-Angular Imagery Using Attribute Filters and Geometric Invariant Moments. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2012, 5, 71-79.	2.3	37
40	Multimorphological Superpixel Model for Hyperspectral Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 6950-6963.	2.7	36
41	Low-Rank Decomposition and Total Variation Regularization of Hyperspectral Video Sequences. IEEE Transactions on Geoscience and Remote Sensing, 2018, 56, 1680-1694.	2.7	36
42	Sentinel-2 Sharpening Using a Reduced-Rank Method. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 6408-6420.	2.7	36
43	Automatic Attribute Profiles. IEEE Transactions on Image Processing, 2017, 26, 1859-1872.	6.0	35
44	Extended Self-Dual Attribute Profiles for the Classification of Hyperspectral Images. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 1690-1694.	1.4	33
45	Object Tracking by Hierarchical Decomposition of Hyperspectral Video Sequences: Application to Chemical Gas Plume Tracking. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 4567-4585.	2.7	31
46	Automatic fish sounds classification. Journal of the Acoustical Society of America, 2018, 143, 2834-2846.	0.5	31
47	Vector Attribute Profiles for Hyperspectral Image Classification. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 3208-3220.	2.7	30
48	Morphological Attribute Profiles With Partial Reconstruction. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 1738-1756.	2.7	28
49	Fusion of Spectral and Spatial Information for Classification of Hyperspectral Remote-Sensed Imagery by Local Graph. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 583-594.	2.3	27
50	Self-dual Attribute Profiles for the Analysis of Remote Sensing Images. Lecture Notes in Computer Science, 2011, , 320-330.	1.0	27
51	A critical comparison of pansharpening algorithms. , 2014, , .		25
52	Remote Sensing Image Classification Using Attribute Filters Defined Over the Tree of Shapes. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 3899-3911.	2.7	25
53	Multi-resolution analysis techniques and nonlinear PCA for hybrid pansharpening applications. Multidimensional Systems and Signal Processing, 2016, 27, 807-830.	1.7	25
54	Combining Morphological Attribute Profiles via an Ensemble Method for Hyperspectral Image Classification. IEEE Geoscience and Remote Sensing Letters, 2016, , 1-5.	1.4	24

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55	Using Multiple Subpixel Shifted Images With Spatial–Spectral Information in Soft-Then-Hard Subpixel Mapping. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 2950-2959.	2.3	21
56	Classification of hyperspectral images with Extended Attribute Profiles and feature extraction techniques. , 2010, , .		20
57	Learning to semantically segment high-resolution remote sensing images. , 2016, , .		20
58	Band Assignment Approaches for Hyperspectral Sharpening. IEEE Geoscience and Remote Sensing Letters, 2017, 14, 739-743.	1.4	18
59	Analysis of Multitemporal Classification Techniques for Forecasting Image Time Series. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 953-957.	1.4	17
60	Soft-Then-Hard Super-Resolution Mapping Based on Pansharpening Technique for Remote Sensing Image. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2019, 12, 334-344.	2.3	17
61	The Evolution of the Morphological Profile: from Panchromatic to Hyperspectral Images. , 2011, , 123-146.		16
62	Automatic Multichannel Volcano-Seismic Classification Using Machine Learning and EMD. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 1322-1331.	2.3	16
63	An Introduction to Deep Morphological Networks. IEEE Access, 2021, 9, 114308-114324.	2.6	14
64	Modeling structural information for building extraction with morphological attribute filters. Proceedings of SPIE, 2009, , .	0.8	13
65	Superresolution Land Cover Mapping Based on Pixel-, Subpixel-, and Superpixel-Scale Spatial Dependence With Pansharpening Technique. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2019, 12, 4082-4098.	2.3	13
66	Fusion of hyperspectral imaging and LiDAR for forest monitoring. Data Handling in Science and Technology, 2019, 32, 281-303.	3.1	13
67	Morphological attribute filters for the analysis of very high resolution remote sensing images. , 2009, , .		11
68	Global and local Gram-Schmidt methods for hyperspectral pansharpening. , 2015, , .		11
69	Semiautomatic classification of cementitious materials using scanning electron microscope images. Journal of Electronic Imaging, 2015, 24, 061109.	0.5	11
70	Braids of partitions for the hierarchical representation and segmentation of multimodal images. Pattern Recognition, 2019, 95, 162-172.	5.1	11
71	Sentinel-2 Sharpening Using a Single Unsupervised Convolutional Neural Network With MTF-Based Degradation Model. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 6882-6896.	2.3	11
72	Hierarchical Analysis of Remote Sensing Data: Morphological Attribute Profiles and Binary Partition Trees. Lecture Notes in Computer Science, 2011, , 306-319.	1.0	11

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73	A comparison of self-dual attribute profiles based on different filter rules for classification. , 2014, , .		10
74	Hyperspectral Local Intrinsic Dimensionality. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 4063-4078.	2.7	10
75	Hyperspectral Image Classification Using Tensor CP Decomposition. , 2019, , .		10
76	Attribute Profiles from Partitioning Trees. Lecture Notes in Computer Science, 2017, , 381-392.	1.0	10
77	Evaluation of ICA-Based ICTD for PolSAR Data Analysis Using a Sliding Window Approach: Convergence Rate, Gaussian Sources, and Spatial Correlation. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 4262-4271.	2.7	9
78	Hyperspectral image inpainting based on collaborative total variation. , 2017, , .		9
79	Classification using Extended Morphological Attribute Profiles based on different feature extraction techniques. , 2011, , .		8
80	Hyperspectral image segmentation using a new spectral mixture-based binary partition tree representation. , 2013, , .		8
81	Gas plume detection and tracking in hyperspectral video sequences using Binary Partition Trees. , 2014, , .		8
82	Spherical Symmetry of Complex Stochastic Models in Multivariate High-Resolution PolSAR Images. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 4250-4261.	2.7	7
83	Hyperspectral and Lidar: Complementary Tools to Identify Benthic Features and Assess the Ecological Status of Sabellaria alveolata Reefs. Frontiers in Marine Science, 2020, 7, .	1.2	7
84	Hyperspectral Image Classification Based on Mathematical Morphology and Tensor Decomposition. Mathematical Morphology - Theory and Applications, 2020, 4, 1-30.	0.6	7
85	A novel supervised feature selection technique based on genetic algorithms. , 2012, , .		6
86	Unmixing-based gas plume tracking in LWIR hyperspectral video sequences. , 2016, , .		6
87	A variational pansharpening approach based on reproducible kernel Hilbert space and heaviside function. , 2017, , .		6
88	Evaluation of the New Information in the $\{H\}/alpha$ Feature Space Provided by ICA in PolSAR Data Analysis. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 6893-6909.	2.7	6
89	Binary partition tree-based local spectral unmixing. , 2014, , .		5
90	Thermal sharpening of VIIRS data. , 2016, , .		5

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91	Use of Deep Features for the Automatic Classification of Fish Sounds. , 2018, , .		5
92	A Low-Rank Method for Sentinel-2 Sharpening Using Cyclic Descent. , 2018, , .		5
93	Learning Endmember Dynamics in Multitemporal Hyperspectral Data Using A State-Space Model Formulation. , 2020, , .		5
94	Sub-Pixel Mapping Model Based on Total Variation Regularization and Learned Spatial Dictionary. Remote Sensing, 2021, 13, 190.	1.8	5
95	Classification of Hyperspectral Images as Tensors Using Nonnegative CP Decomposition. Lecture Notes in Computer Science, 2019, , 189-201.	1.0	5
96	Study on the capabilities of morphological attribute profiles in change detection on VHR images. , 2010, , .		4
97	GAS plume detection in hyperspectral video sequence using low rank representation. , 2016, , .		4
98	Special issue on multimodal data fusion for multidimensional signal processing. Multidimensional Systems and Signal Processing, 2016, 27, 801-805.	1.7	4
99	Machine learning for automatic classification of volcano-seismic signatures. , 2017, , .		4
100	Some Issues in Computing the CP Decomposition of NonNegative Tensors. Lecture Notes in Computer Science, 2018, , 57-66.	1.0	4
101	Individual Tree Segmentation Based on Mean Shift and Crown Shape Model for Temperate Forest. IEEE Geoscience and Remote Sensing Letters, 2020, , 1-5.	1.4	4
102	Capacity and Limits of Multimodal Remote Sensing: Theoretical Aspects and Automatic Information Theory-Based Image Selection. IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 5598-5618.	2.7	4
103	Alternating sequential filters with morphological attribute operators for the analysis of remote sensing images. , 2010, , .		3
104	Fusion of hyperspectral and lidar data using morphological attribute profiles. , 2011, , .		3
105	Classification of hyperspectral images based on weighted DMPS. , 2012, , .		3
106	A method for improving the consistency property of pansharpening algorithms. , 2014, , .		3
107	Context-adaptive Pansharpening based on binary partition tree segmentation. , 2014, , .		3
108	Improved subpixel monitoring of seasonal snow cover: A case study in the Alps. , 2014, , .		3

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109	From local to global unmixing of hyperspectral images to reveal spectral variability. , 2016, , .		3
110	Region-based classification of remote sensing images with the morphological tree of shapes. , 2016, , .		3
111	LiDAR information extraction by attribute filters with partial reconstruction. , 2016, , .		3
112	A comparative noise robustness study of tree representations for attribute profile construction. , 2017, , .		3
113	Collaborative total variation for hyperspectral pansharpening. , 2017, , .		3
114	Tensor-Based Learning Framework for Automatic Multichannel Volcano-Seismic Classification. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 4517-4529.	2.3	3
115	Gas characterization based on a snapshot interferometric imaging spectrometer. , 2019, , .		3
116	A deep learning approach based on morphological profiles for Hyperspectral Image unmixing. , 2022, , .		3
117	Multi-band semiblind deconvolution for pansharpening applications. , 2015, , .		2
118	Multispectral and hyperspectral data fusion based on SAM minimization band assignment approach. , 2016, , .		2
119	Using time series to improve endmembers estimation on multispectral images for snow monitoring. , 2017, , .		2
120	Image Fusion and Reconstruction of Compressed Data: A Joint Approach. , 2018, , .		2
121	Spatial Characterization Of Marine Vegetation Using Semisupervised Hyperspectral Unmixing. , 2019, , .		2
122	Classification of hyperspectral images by using morphological attribute filters and Independent Component Analysis. , 2010, , .		1
123	A general approach to the spatial simplification of remote sensing images based on morphological connected filters. , 2011, , .		1
124	High-performance computing in image registration. , 2012, , .		1
125	Integration of photogrammetric DSM and advanced image analysis for the classification of urban areas. , 2012, , .		1
126	Augmented reality: Fusing the real and synthetic worlds. , 2012, , .		1

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127	Robust path opening versus path opening for the detection of hedgerows in rural landscapes. , 2014, , .		1
128	Evaluation of ICA based ICTD for PolSAR data analysis in tropical forest scenario. , 2015, , .		1
129	Remote sensing image classification based on multiple morphological component analysis. , 2015, , .		1
130	Automatic morphological attribute profiles. , 2015, , .		1
131	Processing high resolution images of urban areas with self-dual attribute filters. , 2015, , .		1
132	Snow cover estimation based on spectral unmixing. , 2016, , .		1
133	Hyperspectral pansharpening using convex optimization and collaborative total variation regularization. , 2016, , .		1
134	Snow Cover Estimation From Image Time Series Based on Spectral Unmixing. IEEE Geoscience and Remote Sensing Letters, 2019, 16, 337-341.	1.4	1
135	Applications in remote sensing—natural landscapes. Data Handling in Science and Technology, 2020, 32, 371-410.	3.1	1
136	Applications in remote sensing—anthropogenic activities. Data Handling in Science and Technology, 2020, 32, 411-452.	3.1	1
137	Integration of spectral information and photogrammetric DSM for urban areas classification. ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 0, II-3/W3, 67-72.	0.0	1
138	Pansharpening of images acquired with color filter arrays. , 2018, , .		1
139	Characterisation of a Snapshot Fourier Transform Imaging Spectrometer Based on an Array of Fabry-Perot Interferometers. , 2020, , .		1
140	FUSION OF LIDAR AND HYPERSPECTRAL DATA FOR SEMANTIC SEGMENTATION OF FOREST TREE SPECIES. International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, 0, XLIII-B3-2020, 487-494.	0.2	1
141	Estimation of Leaf Angle Distribution Based on Statistical Properties of Leaf Shading Distribution. , 2020, , .		1
142	Hierarchical watershed segmentation based on gradient image simplification. , 2012, , .		0
143	Detection of hedges based on attribute filters. , 2012, , .		0
144	Real-world DEM harmonisation through photo re-projection. , 2012, , .		0

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145	Feature preserving method for creating visual appearance models and virtual views from collective images. , 2012, , .		0
146	A comparison study between windowing and binary partition trees for hyperspectral image information mining. , 2013, , .		0
147	Create the relevant spatial filterbank in the hyperspectral jungle. , 2013, , .		0
148	Selective and robust d-dimensional path operators. , 2014, , .		0
149	Introduction of the IEEE French Section Geoscience and Remote Sensing Society Chapter [Chapters]. IEEE Geoscience and Remote Sensing Magazine, 2014, 2, 59-61.	4.9	0
150	An analysis of collaborative representation schemes for the classification of hyperspectral images. , 2015, , .		0
151	Semi-automatic classification of cementitious materials using scanning electron microscope images. Proceedings of SPIE, 2015, , .	0.8	0
152	Foreword to the Special Issue on Information Extraction From High-Spatial-Resolution Optical Remotely Sensed Imagery. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2015, 8, 1872-1875.	2.3	0
153	ANALYZING REMOTE SENSING IMAGES WITH HIERARCHIAL MORPHOLOGICAL REPRESENTATIONS. , 2016, , 313-330.		0
154	A comparison between real and complex Schott spherical symmetry test for PolSAR data analysis. , 2017, , .		0
155	Information extraction by blind source separation from polarimetric SAR data. , 2017, , .		0
156	Tree-based supervised feature extraction method based on self-dual attribute profiles. , 2017, , .		0
157	Spatial Resolution Enhancement of Optical Images Based on Tensor Decomposition. , 2018, , .		0
158	Contact Based Hierarchical Segmentation for Granular Materials. Lecture Notes in Computer Science, 2019, , 428-440.	1.0	0
159	Constructing a Braid of Partitions from Hierarchies of Partitions. Lecture Notes in Computer Science, 2019, , 111-123.	1.0	0
160	Estimation of Diffuse Component of Global Radiation Based on Leaf-Scale Crop Images. , 2019, , .		0
161	Isotropic Total Variation Minimization for Sub-Pixel Mapping. , 2019, , .		0
162	Sub-pixel Mapping Method based on Total Variation Minimization and Spectral Dictionary. , 2020, , .		0

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163	Tree of Shapes Cut for Material Segmentation Guided by a Design. , 2020, , .		0
164	Sub-Pixel Mapping Method Based on K-SVD Dictionary Learning and Total Variation Minimization. , 2020, , .		0