

Fabio Rocca

List of Publications by Year in descending order

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127
papers

14,910
citations

57758

44
h-index

58581

82
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129
all docs

129
docs citations

129
times ranked

6683
citing authors

#	ARTICLE	IF	CITATIONS
1	Permanent scatterers in SAR interferometry. IEEE Transactions on Geoscience and Remote Sensing, 2001, 39, 8-20.	6.3	3,804
2	Nonlinear subsidence rate estimation using permanent scatterers in differential SAR interferometry. IEEE Transactions on Geoscience and Remote Sensing, 2000, 38, 2202-2212.	6.3	1,821
3	A New Algorithm for Processing Interferometric Data-Stacks: SqueeSAR. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 3460-3470.	6.3	1,284
4	The BIOMASS mission: Mapping global forest biomass to better understand the terrestrial carbon cycle. Remote Sensing of Environment, 2011, 115, 2850-2860.	11.0	582
5	SAR data focusing using seismic migration techniques. IEEE Transactions on Aerospace and Electronic Systems, 1991, 27, 194-207.	4.7	562
6	The wavenumber shift in SAR interferometry. IEEE Transactions on Geoscience and Remote Sensing, 1994, 32, 855-865.	6.3	535
7	Dynamics of Slow-Moving Landslides from Permanent Scatterer Analysis. Science, 2004, 304, 1952-1955.	12.6	409
8	Monitoring landslides and tectonic motions with the Permanent Scatterers Technique. Engineering Geology, 2003, 68, 3-14.	6.3	399
9	Sar monitoring of progressive and seasonal ground deformation using the permanent scatterers technique. IEEE Transactions on Geoscience and Remote Sensing, 2003, 41, 1685-1701.	6.3	350
10	Submillimeter Accuracy of InSAR Time Series: Experimental Validation. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 1142-1153.	6.3	340
11	Subsidence and flooding in New Orleans. Nature, 2006, 441, 587-588.	27.8	315
12	Multibaseline Polarimetric SAR Tomography of a Boreal Forest at P- and L-Bands. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 232-246.	6.3	207
13	Methods for measuring small displacements of television images. IEEE Transactions on Information Theory, 1976, 22, 573-579.	2.4	200
14	Compensation of tissue absorption in emission tomography. IEEE Transactions on Acoustics, Speech, and Signal Processing, 1979, 27, 213-218.	2.0	197
15	Multibaseline InSAR DEM reconstruction: the wavelet approach. IEEE Transactions on Geoscience and Remote Sensing, 1999, 37, 705-715.	6.3	186
16	Signal/noise separation and velocity estimation. Geophysics, 1984, 49, 1869-1880.	2.6	179
17	The European Space Agency BIOMASS mission: Measuring forest above-ground biomass from space. Remote Sensing of Environment, 2019, 227, 44-60.	11.0	172
18	Modeling Interferogram Stacks. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 3289-3299.	6.3	157

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19	Relating P-Band Synthetic Aperture Radar Tomography to Tropical Forest Biomass. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 967-979.	6.3	154
20	Sentinel 1 SAR interferometry applications: The outlook for sub millimeter measurements. Remote Sensing of Environment, 2012, 120, 156-163.	11.0	150
21	Focusing bistatic synthetic aperture radar using dip move out. IEEE Transactions on Geoscience and Remote Sensing, 2004, 42, 1362-1376.	6.3	129
22	GEOMETRICAL OPTICS AND WAVE THEORY OF CONSTANT OFFSET SECTIONS IN LAYERED MEDIA*. Geophysical Prospecting, 1981, 29, 374-406.	1.9	122
23	SAR tomography for the retrieval of forest biomass and height: Cross-validation at two tropical forest sites in French Guiana. Remote Sensing of Environment, 2016, 175, 138-147.	11.0	118
24	Passive geosynchronous SAR system reusing backscattered digital audio broadcasting signals. IEEE Transactions on Geoscience and Remote Sensing, 1998, 36, 1973-1976.	6.3	110
25	Seismic Migration For Sar Focusing: Interferometrical Applications. IEEE Transactions on Geoscience and Remote Sensing, 1990, 28, 627-640.	6.3	97
26	ZERO MEMORY NON-LINEAR DECONVOLUTION*. Geophysical Prospecting, 1981, 29, 189-228.	1.9	92
27	Improving slant-range resolution with multiple SAR surveys. IEEE Transactions on Aerospace and Electronic Systems, 1993, 29, 135-143.	4.7	90
28	Phase Calibration of Airborne Tomographic SAR Data via Phase Center Double Localization. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 1775-1792.	6.3	82
29	Geosynchronous SAR Focusing With Atmospheric Phase Screen Retrieval and Compensation. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 4397-4404.	6.3	81
30	Residual migration: Applications and limitations. Geophysics, 1985, 50, 110-126.	2.6	75
31	A ground-based parasitic SAR experiment. IEEE Transactions on Geoscience and Remote Sensing, 2000, 38, 2132-2141.	6.3	75
32	High-Accuracy Urban DEM Using Permanent Scatterers. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 3338-3347.	6.3	75
33	Motion compensated image interpolation. IEEE Transactions on Communications, 1990, 38, 215-222.	7.8	74
34	Nearly Zero Inclination Geosynchronous SAR Mission Analysis With Long Integration Time for Earth Observation. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 6379-6391.	6.3	71
35	OFFSET CONTINUATION OF SEISMIC SECTIONS*. Geophysical Prospecting, 1982, 30, 813-828.	1.9	70
36	Eigenvalues and eigenvectors of linearized elastic inversion. Geophysics, 1993, 58, 670-679.	2.6	70

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37	Three Gorges Dam stability monitoring with time-series InSAR image analysis. Science China Earth Sciences, 2011, 54, 720-732.	5.2	70
38	Advanced Radar Geosynchronous Observation System: ARGOS. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 1406-1410.	3.1	64
39	Tracking moving objects in television images. Signal Processing, 1979, 1, 133-140.	3.7	61
40	SYNTHETIC APERTURE RADAR:A NEW APPLICATION FOR WAVE EQUATION TECHNIQUES1. Geophysical Prospecting, 1989, 37, 809-830.	1.9	60
41	Capabilities of BIOMASS Tomography for Investigating Tropical Forests. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 965-975.	6.3	57
42	Radar Interferometry: 20 Years of Development in Time Series Techniques and Future Perspectives. Remote Sensing, 2020, 12, 1364.	4.0	57
43	Higher-Order Permanent Scatterers Analysis. Eurasip Journal on Advances in Signal Processing, 2005, 2005, 1.	1.7	56
44	Modeling seismic impedance with Markov chains. Geophysics, 1980, 45, 1351-1372.	2.6	55
45	A Combination of Space and Terrestrial Geodetic Techniques to Monitor Land Subsidence: Case Study, the Southeastern Po Plain, Italy. Journal of Geophysical Research, 2007, 112, .	3.3	51
46	InSAR Water Vapor Data Assimilation into Mesoscale Model MM5: Technique and Pilot Study. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2015, 8, 3859-3875.	4.9	46
47	Radar tomography for NDT: comparison of techniques. Journal of Applied Geophysics, 1999, 41, 259-269.	2.1	43
48	Phenomenology of Ground Scattering in a Tropical Forest Through Polarimetric Synthetic Aperture Radar Tomography. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 4430-4437.	6.3	39
49	Calibration of atmospheric effects on SAR interferograms by GPS and local atmosphere models: first results. Journal of Atmospheric and Solar-Terrestrial Physics, 2001, 63, 1343-1357.	1.6	38
50	Flexible Dynamic Block Adaptive Quantization for Sentinel-1 SAR Missions. IEEE Geoscience and Remote Sensing Letters, 2010, 7, 766-770.	3.1	37
51	Focusing SAR data with time-varying Doppler centroid. IEEE Transactions on Geoscience and Remote Sensing, 1992, 30, 550-559.	6.3	35
52	ALGAE: A Fast Algebraic Estimation of Interferogram Phase Offsets in Space-Varying Geometries. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 2343-2353.	6.3	35
53	Options for continuous radar Earth observations. Science China Information Sciences, 2017, 60, 1.	4.3	34
54	Ground-Based Array for Tomographic Imaging of the Tropical Forest in P-Band. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 4460-4472.	6.3	32

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55	Vertical Structure of P-Band Temporal Decorrelation at the Paracou Forest: Results From TropiScat. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 1438-1442.	3.1	31
56	Sar Interferometry And Its Applications. Surveys in Geophysics, 2000, 21, 159-176.	4.6	30
57	Asymptotically efficient blind deconvolution. Signal Processing, 1990, 20, 193-209.	3.7	29
58	Performance and Requirements of GEO SAR Systems in the Presence of Radio Frequency Interferences. Remote Sensing, 2018, 10, 82.	4.0	29
59	The Impact of Temporal Decorrelation on BIOMASS Tomography of Tropical Forests. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 1297-1301.	3.1	28
60	Burst-mode SARs for wide-swath surveys. Canadian Journal of Remote Sensing, 2007, 33, 27-38.	2.4	26
61	Along-Track Multistatic Synthetic Aperture Radar Formations of Minisatellites. Remote Sensing, 2020, 12, 124.	4.0	25
62	Combination of low- and high-resolution SAR images for differential interferometry. IEEE Transactions on Geoscience and Remote Sensing, 1999, 37, 2035-2049.	6.3	24
63	EnVision: taking the pulse of our twin planet. Experimental Astronomy, 2012, 33, 337-363.	3.7	23
64	INTERPRETATION OF MAGNETIC ANOMALIES USING SPECTRAL ESTIMATION TECHNIQUES*. Geophysical Prospecting, 1975, 23, 663-681.	1.9	21
65	Diameters of the Orbital Tubes in Long-Term Interferometric SAR Surveys. IEEE Geoscience and Remote Sensing Letters, 2004, 1, 224-227.	3.1	19
66	On the impact of propagation disturbances on SAR Tomography: Analysis and compensation. , 2009, , .		18
67	Impact of atmospheric water vapor on the design of a Ku band geosynchronous SAR system. , 2009, , .		17
68	GEMINI: Geosynchronous SAR for Earth Monitoring by Interferometry and Imaging. , 2012, , .		17
69	A FREQUENCY DOMAIN APPROACH TO TWO-DIMENSIONAL MIGRATION *. Geophysical Prospecting, 1978, 26, 750-772.	1.9	15
70	The ASI Integrated Sounder-SAR System Operating in the UHF-VHF Bands: First Results of the 2018 Helicopter-Borne Morocco Desert Campaign. Remote Sensing, 2019, 11, 1845.	4.0	14
71	P band penetration in tropical and boreal forests: Tomographical results. , 2011, , .		13
72	OFFSET CONTINUATION IN THEORY AND PRACTICE*. Geophysical Prospecting, 1984, 32, 1045-1073.	1.9	12

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73	ARGOS: A fractioned geosynchronous SAR. Acta Astronautica, 2019, 164, 444-457.	3.2	12
74	Reproducibility and Replicability in SAR Remote Sensing. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 3834-3843.	4.9	12
75	Blind deconvolution for Doppler centroid estimation in high frequency SAR. IEEE Transactions on Geoscience and Remote Sensing, 1991, 29, 934-941.	6.3	11
76	Paradigm Changes in Surface-Motion Estimation From SAR: Lessons From 16 Years of Sino-European Cooperation in the Dragon Program. IEEE Geoscience and Remote Sensing Magazine, 2020, 8, 8-21.	9.6	11
77	Compact and Free-Floating Satellite MIMO SAR Formations. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-12.	6.3	11
78	AFTER-STACK MULTICHANNEL FILTERS WITHOUT MIXING EFFECTS *. Geophysical Prospecting, 1974, 22, 330-344.	1.9	10
79	Mitigation of atmospheric delay in InSAR: The ESA Metawave project. , 2011, , .		10
80	FDBAQ a novel encoding scheme for Sentinel-1. , 2009, , .		9
81	GMES Sentinel-1 FDBAQ performance analysis. , 2009, , .		8
82	Results on spatial-temporal atmospheric phase screen retrieval from long-term GEOSAR acquisition. , 2012, , .		8
83	Design of a computerized emission tomographic system. Signal Processing, 1979, 1, 125-131.	3.7	7
84	Forest structure from longer wavelength SRS. , 2010, , .		7
85	Algorithms for image reconstruction after nonuniform sampling. IEEE Transactions on Acoustics, Speech, and Signal Processing, 1987, 35, 1185-1189.	2.0	6
86	Deformation Monitoring by Long Term D-InSAR Analysis in Three Gorges Area, China. , 2008, , .		6
87	PSInSAR Analysis over the Three Gorges Dam and urban areas in China. , 2009, , .		6
88	A Ku-band geosynchronous Synthetic Aperture Radar mission analysis with medium transmitted power and medium-sized antenna. , 2011, , .		6
89	SAR tomography of natural environments: Signal processing, applications, and future challenges. , 2016, , .		6
90	METHODS FOR CONTOURING IRREGULARLY SPACED DATA*. Geophysical Prospecting, 1977, 25, 96-119.	1.9	5

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91	The science and measurement concepts underlying the BIOMASS mission. , 2012, , .		5
92	Tomographic SAR analysis of subsurface ice structure in Greenland: First results. , 2013, , .		5
93	Multistatic wavenumber tessellation: Ideas for high resolution P-band SAR missions. , 2017, , .		5
94	Synthetic aperture radar focusing with polyphase filters. Signal Processing, 1989, 18, 397-411.	3.7	4
95	Polarimetric and structural properties of forest scenarios as imaged by longer wavelength SRS. , 2010, , .		4
96	Three-dimensional seismic-while-drilling (SWD) migration in the angular frequency domain. Geophysics, 2005, 70, S111-S120.	2.6	3
97	Sentinel 1: Interferometric applications. , 2009, , .		3
98	SKP-shrinkage estimator for SAR multi-baselines applications. , 2010, , .		3
99	SAR imaging of forest structure at longer wavelengths. , 2010, , .		3
100	The BIOMASS mission retrieval algorithms: Results from recent campaigns. , 2012, , .		3
101	Perspectives of Sentinel - 1 for InSAR applications. , 2012, , .		3
102	Airborne and satellite SAR tomography: a tool to investigate forests and glaciers structures. Annals of GIS, 2016, 22, 103-112.	3.1	3
103	Mitigation of Atmospheric Water-vapour Effects on Spaceborne Interferometric SAR Imaging through the MM5 Numerical Model. Progress in Electromagnetics Research Symposium: [proceedings] Progress in Electromagnetics Research Symposium, 2010, 6, 262-266.	0.4	3
104	ASAR parallel-track PS analysis in urban sites. , 2007, , .		2
105	DEM reconstruction with SqueeSAR. , 2012, , .		2
106	Biomass tomography: A new opportunity to observe the earth forests. , 2014, , .		2
107	Ice penetration depth estimation from super-resolution SAR tomography. , 2014, , .		2
108	Comments on "Influence of the Statistical Properties of Phase and Intensity on Closure Phase" IEEE Transactions on Geoscience and Remote Sensing, 2021, 59, 6277-6278.	6.3	2

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109	Space-borne SARs: impact of wavelengths and scan modes on ground motion studies. <i>Annals of GIS</i> , 2010, 16, 69-79.	3.1	1
110	Impact of atmospheric propagation in a Ka-band space-borne SAR for imaging and interferometry. , 2012, , .		1
111	Assessment of the P- and L-band SAR tomography for the characterization of tropical forests. , 2015, , .		1
112	A processing driven approach to airborne multi-baseline SAR tomography. , 2015, , .		1
113	LSÈDIP: An adaptive dipÊbased subtraction of predicted multiples. , 2008, , .		1
114	A Mimo Multi-Static SAR Satellite Formation for High Resolution 3D Imaging at Longer Wavelengths. , 2021, , .		1
115	An Iso-Frequency MIMO SAR Formation for Wide-Swath Imaging, Interferometry and Tomography. , 2020, , .		1
116	3-D tsunami coastal hazard mapping in Sri Lanka by very-high resolution, airborne and spaceborne remote-sensing. , 2007, , .		0
117	18 Years of interferometry, as seen from POLIMI. , 2009, , .		0
118	ALGAE: A fast algebraic estimation of interferogram phase offsets in space varying geometries. , 2010, , .		0
119	Numerical weather prediction models and SAR interferometry: synergic use for meteorological and INSAR applications. , 2011, , .		0
120	Coherence linearity and SKP-structured matrices in multi-baseline PolInSAR. , 2011, , .		0
121	Phenomenology of ground scattering in tropical forests through polarimetric SAR tomography. , 2012, , .		0
122	Temporal Decorrelation impacts on repeat pass tomography in a tropical forest. , 2015, , .		0
123	3D imaging of an alpine glacier: Signal processing of data from the AlpTomoSAR campaign. , 2015, , .		0
124	Point-target free phase calibration of InSAR data stacks. , 2016, , .		0
125	Three- and Four-Dimensional Topographic Measurement and Validation. <i>Remote Sensing</i> , 2021, 13, 2861.	4.0	0
126	Aliasing and irregular sampling for Kirchhoff integral operators. , 2000, , .		0

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127	Crossâ€spread imaging by 3D diffraction tomography. , 2001, , .		0