

# Guido Masiello

## List of Publications by Year in descending order

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89  
papers

1,924  
citations

236925

25  
h-index

276875

41  
g-index

93  
all docs

93  
docs citations

93  
times ranked

1420  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Multigrid InSAR Technique for Joint Analyses at Single-Look and Multi-Look Scales. IEEE Geoscience and Remote Sensing Letters, 2022, 19, 1-5.	3.1	6
2	Combined IASI-NG and MWS Observations for the Retrieval of Cloud Liquid and Ice Water Path: A Deep Learning Artificial Intelligence Approach. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2022, 15, 3313-3322.	4.9	9
3	Change Detection Techniques with Synthetic Aperture Radar Images: Experiments with Random Forests and Sentinel-1 Observations. Remote Sensing, 2022, 14, 3323.	4.0	24
4	Seasonal variability of degrees of freedom and its effect over time series and spatial patterns of atmospheric gases from satellite: application to carbonyl sulfide (OCS). , 2021, , .		4
5	Cloud liquid and ice water content estimation from satellite: a regression approach based on neural networks. , 2021, , .		2
6	Assessment of air quality with TROPOMI during COVID-19 pandemic: NO2 over the Po valley. , 2021, , .		1
7	Assessment of the accuracy of scaling methods for radiance simulations at far and mid infrared wavelengths. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 271, 107739.	2.3	13
8	Emissivity Based Indices for Drought and Forest Fire. , 2021, , .		2
9	TROPOMI NO2 Tropospheric Column Data: Regridding to 1 km Grid-Resolution and Assessment of their Consistency with In Situ Surface Observations. Remote Sensing, 2020, 12, 2212.	4.0	31
10	Characterization of the Observational Covariance Matrix of Hyper-Spectral Infrared Satellite Sensors Directly from Measured Earth Views. Sensors, 2020, 20, 1492.	3.8	7
11	Optimal Interpolation for Infrared Products from Hyperspectral Satellite Imagers and Sounders. Sensors, 2020, 20, 2352.	3.8	8
12	The Multiple Aperture SAR Interferometry (MAI) Technique for the Detection of Large Ground Displacement Dynamics: An Overview. Remote Sensing, 2020, 12, 1189.	4.0	27
13	Simultaneous retrieval of OCS, and CO2 from the IASI shortwave spectral band: assessment of the accuracy of the retrieval products and validation with in situ observations.. , 2020, , .		5
14	Cloud detection from IASI hyperspectral data: a statistical approach based on neural networks. , 2020, , .		1
15	Emissivity-based vegetation indices to monitor deforestation and forest degradation in the Congo basin rainforest. , 2020, , .		4
16	SEVIRI Hyper-Fast Forward Model with Application to Emissivity Retrieval. Sensors, 2019, 19, 1532.	3.8	6
17	CO2 spectroscopy and forward/inverse radiative transfer modelling in the thermal band using IASI spectra. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 222-223, 65-83.	2.3	17
18	An optimal interpolation scheme for surface and atmospheric parameters: applications to SEVIRI and IASI. , 2019, , .		1

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19	Assessment of cumulative discriminant analysis for cloud detection in the ESA PROBA-V Round Robin exercise. , 2019, , .		0
20	CO2 retrieval algorithm for the Infrared Atmospheric Sounder Interferometer: the potential of retrieving the vertical profile of carbon dioxide from its hot or laser bands in the 800-1200 cm-1 atmospheric window. , 2019, , .		4
21	An application to Mediterranean Sea of the SEVIRI level 2 processor for surface parameters. , 2019, , .		0
22	PCA determination of the radiometric noise of high spectral resolution infrared observations from spectral residuals: Application to IASI. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 206, 8-21.	2.3	19
23	Evaluation of Radiative Transfer Models With Clouds. Journal of Geophysical Research D: Atmospheres, 2018, 123, 6142-6157.	3.3	28
24	Physical Retrieval of Land Surface Emissivity Spectra from Hyper-Spectral Infrared Observations and Validation with In Situ Measurements. Remote Sensing, 2018, 10, 976.	4.0	29
25	Four years of IASI CO2, CH4, N2O retrievals: validation with in situ observations from the Mauna Loa station. , 2018, , .		2
26	Dimensionality reduction through random projections for application to the retrieval of atmospheric parameters from hyperspectral satellite sensors. , 2018, , .		0
27	Assessment of IASI capability for retrieving carbonyl sulphide (OCS). Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 201, 197-208.	2.3	16
28	Using the full IASI spectrum for the physical retrieval of temperature, H2O, HDO, O3, minor and trace gases. AIP Conference Proceedings, 2017, , .	0.4	1
29	The very first multi-temporal and multi-spectral Level-2 SEVIRI processor for the simultaneous physical retrieval of surface temperature and emissivity. AIP Conference Proceedings, 2017, , .	0.4	2
30	All-sky radiative transfer calculations for IASI and IASI-NG: The If-IAI-as code. AIP Conference Proceedings, 2017, , .	0.4	1
31	Consistency of dimensional distributions and refractive indices of desert dust measured over Lampedusa with IASI radiances. Atmospheric Measurement Techniques, 2017, 10, 599-615.	3.1	21
32	Demonstration of random projections applied to the retrieval problem of geophysical parameters from hyper-spectral infrared observations. Applied Optics, 2016, 55, 6576.	2.1	17
33	Physical inversion of the full IASI spectra: Assessment of atmospheric parameters retrievals, consistency of spectroscopy and forward modelling. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 182, 128-157.	2.3	51
34	Hyper fast radiative transfer for the physical retrieval of surface parameters from SEVIRI observations. Journal of Physics: Conference Series, 2015, 633, 012059.	0.4	3
35	SEVIRI Cloud mask by Cumulative Discriminant Analysis. Journal of Physics: Conference Series, 2015, 633, 012056.	0.4	1
36	Operational Monitoring of Trace Gases over the Mediterranean Sea. Advances in Meteorology, 2015, 2015, 1-9.	1.6	1

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37	Diurnal emissivity dynamics in bare versus biocrusted sand dunes. <i>Science of the Total Environment</i> , 2015, 506-507, 422-429.	8.0	29
38	Infrared atmospheric sounder interferometer radiometric noise assessment from spectral residuals. <i>Applied Optics</i> , 2015, 54, 5924.	2.1	20
39	Simultaneous physical retrieval of Martian geophysical parameters using Thermal Emission Spectrometer spectra: the I <sup>2</sup> -MARS algorithm. <i>Applied Optics</i> , 2015, 54, 2334.	1.8	3
40	Kalman filter physical retrieval of surface emissivity and temperature from SEVIRI infrared channels: a validation and intercomparison study. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 2981-2997.	3.1	47
41	Cloud mask via cumulative discriminant analysis applied to satellite infrared observations: scientific basis and initial evaluation. <i>Atmospheric Measurement Techniques</i> , 2014, 7, 3355-3372.	3.1	33
42	Validation of H <sub>2</sub> O continuum absorption models in the wave number range 180–600 cm <sup>-1</sup> with atmospheric emitted spectral radiance measured at the Antarctica Dome-C site. <i>Optics Express</i> , 2014, 22, 16784.	3.4	24
43	Analysis of cirrus cloud spectral signatures in the far infrared. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2014, 141, 49-64.	2.3	19
44	Diurnal variation in Sahara desert sand emissivity during the dry season from IASI observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 1626-1638.	3.3	34
45	Search for Martian methane with TES data: development of a dedicated radiative transfer code: first results. <i>Proceedings of SPIE</i> , 2013, , .	0.8	2
46	Simultaneous physical retrieval of surface emissivity spectrum and atmospheric parameters from infrared atmospheric sounder interferometer spectral radiances. <i>Applied Optics</i> , 2013, 52, 2428.	1.8	61
47	Partially scanned interferogram methodology applied to IASI for the retrieval of CO, CO <sub>2</sub> , CH <sub>4</sub> and N <sub>2</sub> O. <i>Optics Express</i> , 2013, 21, 24753.	3.4	12
48	Comparison of IASI water vapour products over complex terrain with COPS campaign data. <i>Meteorologische Zeitschrift</i> , 2013, 22, 471-487.	1.0	11
49	Kalman filter physical retrieval of surface emissivity and temperature from geostationary infrared radiances. <i>Atmospheric Measurement Techniques</i> , 2013, 6, 3613-3634.	3.1	61
50	Hyperspectral Earth Observation from IASI: Five Years of Accomplishments. <i>Bulletin of the American Meteorological Society</i> , 2012, 93, 347-370.	3.3	357
51	Inversion for atmospheric thermodynamical parameters of IASI data in the principal components space. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2012, 138, 103-117.	2.7	38
52	Validation of line and continuum spectroscopic parameters with measurements of atmospheric emitted spectral radiance from far to mid infrared wave number range. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2012, 113, 1286-1299.	2.3	18
53	Infrared Atmospheric Sounding Interferometer correlation interferometry for the retrieval of atmospheric gases: the case of H <sub>2</sub> O and CO <sub>2</sub> . <i>Applied Optics</i> , 2011, 50, 4516.	2.1	11
54	The use of IASI data to identify systematic errors in the ECMWF forecasts of temperature in the upper stratosphere. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 1009-1021.	4.9	33

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55	Interferometric vs Spectral IASI Radiances: Effective Data-Reduction Approaches for the Satellite Sounding of Atmospheric Thermodynamical Parameters. <i>Remote Sensing</i> , 2010, 2, 2323-2346.	4.0	29
56	Impact of new water vapor continuum coefficients in the far infrared on atmospheric fluxes and cooling rates. , 2009, , .		0
57	Evaluation of a dimensionâ€reductionâ€based statistical technique for Temperature, Water Vapour and Ozone retrievals from IASI radiances. , 2009, , .		0
58	Application of the ĩfâ€IASI radiative transfer model to IASI. , 2009, , .		2
59	Potential of the MTCâ€IRS mission to resolve small scale variability of atmospheric humidity. , 2009, , .		2
60	UV Raman lidar measurements of relative humidity for the characterization of cirrus cloud microphysical properties. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 8799-8811.	4.9	50
61	Technical Note: Functional sliced inverse regression to infer temperature, water vapour and ozone from IASI data. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 5321-5330.	4.9	28
62	Application of ĩfâ€IASI to IASI: retrieval products evaluation and radiative transfer consistency. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 8771-8783.	4.9	40
63	Spectrally resolved observations of atmospheric emitted radiance in the H <sub>2</sub> O rotation band. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	42
64	The Farâ€infrared Earth. <i>Reviews of Geophysics</i> , 2008, 46, .	23.0	93
65	Interferometer for ground-based observations of emitted spectral radiance from the troposphere: evaluation and retrieval performance. <i>Applied Optics</i> , 2008, 47, 3909.	2.1	25
66	Retrieval of foreign-broadened water vapor continuum coefficients from emitted spectral radiance in the H <sub>2</sub> O rotational band from 240 to 590 cm <sup>-1</sup> . <i>Optics Express</i> , 2008, 16, 15816.	3.4	39
67	EAQUATE: An International Experiment For Hyperspectral Atmospheric Sounding Validation. <i>Bulletin of the American Meteorological Society</i> , 2008, 89, 203-218.	3.3	37
68	Aerosol optical properties variation on different mountain sites in Italy. <i>Proceedings of SPIE</i> , 2007, , .	0.8	0
69	A comparison of radiative transfer models for simulating Atmospheric Infrared Sounder (AIRS) radiances. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	72
70	REFIR/BB initial observations in the water vapour rotational band: Results from a field campaign. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2007, 103, 524-535.	2.3	8
71	Intercomparison of line-parameter spectroscopic databases using downwelling spectral radiance. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2007, 133, 191-202.	2.7	19
72	Demonstration and validation of the ĩfâ€IASI inversion scheme with NAST-I data. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2007, 133, 217-232.	2.7	30

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73	Capability of High Spectral Resolution Observations in the Infrared to Detect Water Vapor Structures. , 2007, , .		1
74	The Italian phase of the EAQUATE measurement campaign. , 2005, , .		2
75	IMG retrieval and comparison with TOMS/ADEOS columnar ozone: an analysis based on tropical soundings. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 95, 331-348.	2.3	8
76	Cloud Detection, Temperature and Water Vapor Retrieval from Hyperspectral Infrared Sounder Observations. , 2005, , .		0
77	Retrieving N2O from nadir-viewing infrared spectrometers. Tellus, Series B: Chemical and Physical Meteorology, 2004, 56, 249-261.	1.6	10
78	Dimensionality-reduction approach to the thermal radiative transfer equation inverse problem. Geophysical Research Letters, 2004, 31, n/a-n/a.	4.0	22
79	Exploiting quartz spectral signature for the detection of cloud-affected satellite infrared observations over African desert areas. Applied Optics, 2004, 43, 2305.	2.1	6
80	Qualifying IMG tropical spectra for clear sky. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 77, 131-148.	2.3	31
81	An effective water vapor self-broadening scheme for look-up-table-based radiative transfer. , 2003, 4882, 52.		7
82	Infrared atmospheric sounding interferometer performance for temperature and water vapor retrieval. , 2002, 4539, 94.		0
83	Homomorphism between cloudy and clear spectral radiance in the 800-900-cm <sup>-1</sup> atmospheric window region. Applied Optics, 2002, 41, 965.	2.1	15
84	The I <sub>f</sub> -IASI code for the calculation of infrared atmospheric radiance and its derivatives. Environmental Modelling and Software, 2002, 17, 651-667.	4.5	103
85	IMG evidence of chlorofluorocarbon absorption in the atmospheric window region 800-900 cm <sup>-1</sup> . Journal of Quantitative Spectroscopy and Radiative Transfer, 2002, 72, 623-635.	2.3	8
86	<title>Simultaneous temperature and water vapor profile from IASI radiances</title>. , 2001, , .		0
87	<title>Fully quadratic convergent inversion scheme for IASI</title>. , 2001, , .		0
88	Mean spherical model for strongly coupled dusty plasmas. Physics of Plasmas, 2000, 7, 3198-3203.	1.9	13
89	Fourier Transform Spectroscopy with Partially Scanned Interferograms as a Tool to Retrieve Atmospheric Gases Concentrations from High Spectral Resolution Satellite Observations - Methodological Aspects and Application to IASI. , 0, , .		0