

# 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	Hyperspectral Earth Observation from IASI: Five Years of Accomplishments. Bulletin of the American Meteorological Society, 2012, 93, 347-370.	3.3	357
2	The I <sup>2</sup> f-IASI code for the calculation of infrared atmospheric radiance and its derivatives. Environmental Modelling and Software, 2002, 17, 651-667.	4.5	103
3	The Far-Infrared Earth. Reviews of Geophysics, 2008, 46, .	23.0	93
4	A comparison of radiative transfer models for simulating Atmospheric Infrared Sounder (AIRS) radiances. Journal of Geophysical Research, 2007, 112, .	3.3	72
5	Simultaneous physical retrieval of surface emissivity spectrum and atmospheric parameters from infrared atmospheric sounder interferometer spectral radiances. Applied Optics, 2013, 52, 2428.	1.8	61
6	Kalman filter physical retrieval of surface emissivity and temperature from geostationary infrared radiances. Atmospheric Measurement Techniques, 2013, 6, 3613-3634.	3.1	61
7	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
8	UV Raman lidar measurements of relative humidity for the characterization of cirrus cloud microphysical properties. Atmospheric Chemistry and Physics, 2009, 9, 8799-8811.	4.9	50
9	Kalman filter physical retrieval of surface emissivity and temperature from SEVIRI infrared channels: a validation and intercomparison study. Atmospheric Measurement Techniques, 2015, 8, 2981-2997.	3.1	47
10	Spectrally resolved observations of atmospheric emitted radiance in the H <sub>2</sub> O rotation band. Geophysical Research Letters, 2008, 35, .	4.0	42
11	Application of I <sup>2</sup> f-IASI to IASI: retrieval products evaluation and radiative transfer consistency. Atmospheric Chemistry and Physics, 2009, 9, 8771-8783.	4.9	40
12	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> . Optics Express, 2008, 16, 15816.	3.4	39
13	Inversion for atmospheric thermodynamical parameters of IASI data in the principal components space. Quarterly Journal of the Royal Meteorological Society, 2012, 138, 103-117.	2.7	38
14	EAQUATE: An International Experiment For Hyperspectral Atmospheric Sounding Validation. Bulletin of the American Meteorological Society, 2008, 89, 203-218.	3.3	37
15	Diurnal variation in Sahara desert sand emissivity during the dry season from IASI observations. Journal of Geophysical Research D: Atmospheres, 2014, 119, 1626-1638.	3.3	34
16	The use of IASI data to identify systematic errors in the ECMWF forecasts of temperature in the upper stratosphere. Atmospheric Chemistry and Physics, 2011, 11, 1009-1021.	4.9	33
17	Cloud mask via cumulative discriminant analysis applied to satellite infrared observations: scientific basis and initial evaluation. Atmospheric Measurement Techniques, 2014, 7, 3355-3372.	3.1	33
18	Qualifying IMG tropical spectra for clear sky. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 77, 131-148.	2.3	31

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19	TROPOMI NO <sub>2</sub> Tropospheric Column Data: Regridding to 1 km Grid-Resolution and Assessment of their Consistency with In Situ Surface Observations. <i>Remote Sensing</i> , 2020, 12, 2212.	4.0	31
20	Demonstration and validation of the I <sup>†</sup> -IASI inversion scheme with NAST-I data. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2007, 133, 217-232.	2.7	30
21	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
22	Diurnal emissivity dynamics in bare versus biocrusted sand dunes. <i>Science of the Total Environment</i> , 2015, 506-507, 422-429.	8.0	29
23	Physical Retrieval of Land Surface Emissivity Spectra from Hyper-Spectral Infrared Observations and Validation with In Situ Measurements. <i>Remote Sensing</i> , 2018, 10, 976.	4.0	29
24	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
25	Evaluation of Radiative Transfer Models With Clouds. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 6142-6157.	3.3	28
26	The Multiple Aperture SAR Interferometry (MAI) Technique for the Detection of Large Ground Displacement Dynamics: An Overview. <i>Remote Sensing</i> , 2020, 12, 1189.	4.0	27
27	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
28	Validation of H <sub>2</sub> O continuum absorption models in the wave number range 1800–600 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
29	Change Detection Techniques with Synthetic Aperture Radar Images: Experiments with Random Forests and Sentinel-1 Observations. <i>Remote Sensing</i> , 2022, 14, 3323.	4.0	24
30	Dimensionality-reduction approach to the thermal radiative transfer equation inverse problem. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	4.0	22
31	Consistency of dimensional distributions and refractive indices of desert dust measured over Lampedusa with IASI radiances. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 599-615.	3.1	21
32	Infrared atmospheric sounder interferometer radiometric noise assessment from spectral residuals. <i>Applied Optics</i> , 2015, 54, 5924.	2.1	20
33	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
34	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
35	PCA determination of the radiometric noise of high spectral resolution infrared observations from spectral residuals: Application to IASI. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2018, 206, 8-21.	2.3	19
36	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

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37	Demonstration of random projections applied to the retrieval problem of geophysical parameters from hyper-spectral infrared observations. <i>Applied Optics</i> , 2016, 55, 6576.	2.1	17
38	CO2 spectroscopy and forward/inverse radiative transfer modelling in the thermal band using IASI spectra. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2019, 222-223, 65-83.	2.3	17
39	Assessment of IASI capability for retrieving carbonyl sulphide (OCS). <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017, 201, 197-208.	2.3	16
40	Homomorphism between cloudy and clear spectral radiance in the 800-900-cm <sup>-1</sup> atmospheric window region. <i>Applied Optics</i> , 2002, 41, 965.	2.1	15
41	Mean spherical model for strongly coupled dusty plasmas. <i>Physics of Plasmas</i> , 2000, 7, 3198-3203.	1.9	13
42	Assessment of the accuracy of scaling methods for radiance simulations at far and mid infrared wavelengths. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021, 271, 107739.	2.3	13
43	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
44	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
45	Comparison of IASI water vapour products over complex terrain with COPS campaign data. <i>Meteorologische Zeitschrift</i> , 2013, 22, 471-487.	1.0	11
46	Retrieving N <sub>2</sub> O from nadir-viewing infrared spectrometers. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2004, 56, 249-261.	1.6	10
47	Combined IASI-NG and MWS Observations for the Retrieval of Cloud Liquid and Ice Water Path: A Deep Learning Artificial Intelligence Approach. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2022, 15, 3313-3322.	4.9	9
48	IMG evidence of chlorofluorocarbon absorption in the atmospheric window region 800-900 cm <sup>-1</sup> . <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2002, 72, 623-635.	2.3	8
49	IMG retrieval and comparison with TOMS/ADEOS columnar ozone: an analysis based on tropical soundings. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2005, 95, 331-348.	2.3	8
50	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
51	Optimal Interpolation for Infrared Products from Hyperspectral Satellite Imagers and Sounders. <i>Sensors</i> , 2020, 20, 2352.	3.8	8
52	An effective water vapor self-broadening scheme for look-up-table-based radiative transfer. , 2003, 4882, 52.		7
53	Characterization of the Observational Covariance Matrix of Hyper-Spectral Infrared Satellite Sensors Directly from Measured Earth Views. <i>Sensors</i> , 2020, 20, 1492.	3.8	7
54	Exploiting quartz spectral signature for the detection of cloud-affected satellite infrared observations over African desert areas. <i>Applied Optics</i> , 2004, 43, 2305.	2.1	6

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55	SEVIRI Hyper-Fast Forward Model with Application to Emissivity Retrieval. Sensors, 2019, 19, 1532.	3.8	6
56	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
57	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
58	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
59	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
60	Emissivity-based vegetation indices to monitor deforestation and forest degradation in the Congo basin rainforest. , 2020, , .		4
61	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
62	Simultaneous physical retrieval of Martian geophysical parameters using Thermal Emission Spectrometer spectra: the I <sup>2</sup> -MARS algorithm. Applied Optics, 2015, 54, 2334.	1.8	3
63	The Italian phase of the EAQUATE measurement campaign. , 2005, , .		2
64	Application of the I <sup>2</sup> -IASI radiative transfer model to IASI. , 2009, , .		2
65	Potential of the MTC-IRS mission to resolve small scale variability of atmospheric humidity. , 2009, , .		2
66	Search for Martian methane with TES data: development of a dedicated radiative transfer code: first results. Proceedings of SPIE, 2013, , .	0.8	2
67	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
68	Cloud liquid and ice water content estimation from satellite: a regression approach based on neural networks. , 2021, , .		2
69	Emissivity Based Indices for Drought and Forest Fire. , 2021, , .		2
70	Four years of IASI CO2, CH4, N2O retrievals: validation with in situ observations from the Mauna Loa station. , 2018, , .		2
71	SEVIRI Cloud mask by Cumulative Discriminant Analysis. Journal of Physics: Conference Series, 2015, 633, 012056.	0.4	1
72	Operational Monitoring of Trace Gases over the Mediterranean Sea. Advances in Meteorology, 2015, 2015, 1-9.	1.6	1

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73	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
74	All-sky radiative transfer calculations for IASI and IASI-NG: The If-IASI-as code. AIP Conference Proceedings, 2017, , .	0.4	1
75	Assessment of air quality with TROPOMI during COVID-19 pandemic: NO2 over the Po valley. , 2021, , .		1
76	An optimal interpolation scheme for surface and atmospheric parameters: applications to SEVIRI and IASI. , 2019, , .		1
77	Capability of High Spectral Resolution Observations in the Infrared to Detect Water Vapor Structures. , 2007, , .		1
78	Cloud detection from IASI hyperspectral data: a statistical approach based on neural networks. , 2020, , .		1
79	<title>Simultaneous temperature and water vapor profile from IASI radiances</title>. , 2001, , .		0
80	<title>Fully quadratic convergent inversion scheme for IASI</title>. , 2001, , .		0
81	Infrared atmospheric sounding interferometer performance for temperature and water vapor retrieval. , 2002, 4539, 94.		0
82	Aerosol optical properties variation on different mountain sites in Italy. Proceedings of SPIE, 2007, , .	0.8	0
83	Impact of new water vapor continuum coefficients in the far infrared on atmospheric fluxes and cooling rates. , 2009, , .		0
84	Evaluation of a dimensionâ€reductionâ€based statistical technique for Temperature, Water Vapour and Ozone retrievals from IASI radiances. , 2009, , .		0
85	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
86	Cloud Detection, Temperature and Water Vapor Retrieval from Hyperspectral Infrared Sounder Observations. , 2005, , .		0
87	Dimensionality reduction through random projections for application to the retrieval of atmospheric parameters from hyperspectral satellite sensors. , 2018, , .		0
88	Assessment of cumulative discriminant analysis for cloud detection in the ESA PROBA-V Round Robin exercise. , 2019, , .		0
89	An application to Mediterranean Sea of the SEVIRI level 2 processor for surface parameters. , 2019, , .		0