Lucien Wald

List of Publications by Year
in descending order

142 papers	7,898 citations	101543 36 h-index	54911 84 g-index
168 all docs	168 docs citations	168 times ranked	5027 citing authors

#	Article	IF	Citations
1	A Critical Comparison Among Pansharpening Algorithms. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 2565-2586.	6.3	943
2	Comparison of Pansharpening Algorithms: Outcome of the 2006 GRS-S Data-Fusion Contest. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 3012-3021.	6.3	692
3	Synthesis of Multispectral Images to High Spatial Resolution: A Critical Review of Fusion Methods Based on Remote Sensing Physics. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 1301-1312.	6.3	518
4	A method for the determination of the global solar radiation from meteorological satellite data. Solar Energy, 1986, 37, 31-39.	6.1	465
5	On the clear sky model of the ESRA â€" European Solar Radiation Atlas â€" with respect to the heliosat method. Solar Energy, 2000, 68, 33-48.	6.1	413
6	The method Heliosat-2 for deriving shortwave solar radiation from satellite images. Solar Energy, 2004, 77, 159-169.	6.1	401
7	Some terms of reference in data fusion. IEEE Transactions on Geoscience and Remote Sensing, 1999, 37, 1190-1193.	6.3	388
8	Image fusionâ€"the ARSIS concept and some successful implementation schemes. ISPRS Journal of Photogrammetry and Remote Sensing, 2003, 58, 4-18.	11.1	299
9	McClear: a new model estimating downwelling solar radiation at ground level in clear-sky conditions. Atmospheric Measurement Techniques, 2013, 6, 2403-2418.	3.1	272
10	Rethinking satellite-based solar irradiance modellingThe SOLIS clear-sky module. Remote Sensing of Environment, 2004, 91, 160-174.	11.0	194
11	A web service for controlling the quality of measurements of global solar irradiation. Solar Energy, 2002, 73, 475-480.	6.1	151
12	Direct normal irradiance related definitions and applications: The circumsolar issue. Solar Energy, 2014, 110, 561-577.	6.1	150
13	Fast radiative transfer parameterisation for assessing the surface solar irradiance: The Heliosatâ€‘4 method. Meteorologische Zeitschrift, 2017, 26, 33-57.	1.0	141
14	The HelioClim Project: Surface Solar Irradiance Data for Climate Applications. Remote Sensing, 2011, 3, 343-361.	4.0	130
15	Comparison between meteorological re-analyses from ERA-Interim and MERRA and measurements of daily solar irradiation at surface. Renewable Energy, 2015, 75, 135-143.	8.9	126
16	Association of UV radiation with multiple sclerosis prevalence and sex ratio in France. Neurology, 2011, 76, 425-431.	1.1	115
17	The wavelet transform for the analysis of remotely sensed images. International Journal of Remote Sensing, 1993, 14, 615-619.	2.9	99
18	The SG2 algorithm for a fast and accurate computation of the position of the Sun for multi-decadal time period. Solar Energy, 2012, 86, 3072-3083.	6.1	95

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19	Patterns of Ultraviolet Radiation Exposure and Skin Cancer Risk: the E3N-SunExp Study. Journal of Epidemiology, 2018, 28, 27-33.	2.4	95
20	Using reduced data sets ISCCP-B2 from the Meteosat satellites to assess surface solar irradiance. Solar Energy, 2007, 81, 240-253.	6.1	83
21	Using remotely sensed solar radiation data for reference evapotranspiration estimation at a daily time step. Agricultural and Forest Meteorology, 2008, 148, 619-630.	4.8	75
22	Solar radiation climate in Africa. Solar Energy, 2004, 76, 733-744.	6.1	73
23	Lowâ€frequency waves in the Ligurian Sea during December 1977. Journal of Geophysical Research, 1982, 87, 595-600.	3.3	71
24	Description of an operational tool for determining global solar radiation at ground using geostationary satellite images. Solar Energy, 1989, 42, 201-207.	6.1	62
25	Converting a successful research project into a sustainable service: The case of the SoDa Web service. Environmental Modelling and Software, 2006, 21, 1555-1561.	4.5	62
26	Liu 'Smoothing filter-based intensity modulation: A spectral preserve image fusion technique for improving spatial details'. International Journal of Remote Sensing, 2002, 23, 593-597.	2.9	60
27	Estimating Incident Solar Radiation at the Surface from Images of the Earth Transmitted by Geostationary Satellites: the Heliosat Project. International Journal of Solar Energy, 1987, 5, 261-278.	0.2	53
28	Using geographical information system and satellite imagery within a numerical simulation of regional urban growth. International Journal of Geographical Information Science, 1990, 4, 445-456.	4.8	52
29	Observing air quality over the city of Nantes by means of Landsat thermal infrared data. International Journal of Remote Sensing, 1999, 20, 947-959.	2.9	52
30	The European Solar Radiation Atlas: a valuable digital tool. Solar Energy, 2001, 71, 81-83.	6.1	50
31	Improving the McClear model estimating the downwelling solar radiation at ground level in cloud-free conditionsÂâ€“ McClearâ€v3. Meteorologische Zeitschrift, 2019, 28, 147-163.	1.0	47
32	Satellite Determination of the Mesoscale Variability of the Sea Surface Temperature. Journal of Physical Oceanography, 1981, 11, 864-870.	1.7	46
33	Using iterated rational filter banks within the ARSIS concept for producing 10m Landsat multispectral images. International Journal of Remote Sensing, 1998, 19, 2331-2343.	2.9	46
34	Validation of the Surface Downwelling Solar Irradiance Estimates of the HelioClim-3 Database in Egypt. Remote Sensing, 2015, 7, 9269-9291.	4.0	44
35	Assessment of the method used to construct clearness index maps for the new European Solar Radiation Atlas (ESRA). Solar Energy, 1997, 61, 389-397.	6.1	41
36	Simulating Meteosat-7 broadband radiances using two visible channels of Meteosat-8. Solar Energy, 2006, 80, 361-367.	6.1	41

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37	Improving HelioClim-3 estimates of surface solar irradiance using the McClear clear-sky model and recent advances in atmosphere composition. Atmospheric Measurement Techniques, 2014, 7, 3927-3933.	3.1	41
38	Assessing surface solar irradiance and its long-term variations in the northern Africa desert climate using Meteosat images. International Journal of Remote Sensing, 2010, 31, 261-280.	2.9	39
39	Using ERA-Interim reanalysis for creating datasets ofÂenergy-relevant climate variables. Earth System Science Data, 2017, 9, 471-495.	9.9	37
40	A method for the mapping of the apparent ground brightness using visible images from geostationary satellites. International Journal of Remote Sensing, 1989, 10, 1207-1225.	2.9	36
41	Linke turbidity factors for several sites in Africa. Solar Energy, 2003, 75, 111-119.	6.1	36
42	Chronotype and environmental light exposure in a student population. Chronobiology International, 2018, 35, 1365-1374.	2.0	36
43	Benefit of the future SPOT-5 and of data fusion to urban roads mapping. International Journal of Remote Sensing, 1998, 19, 1519-1532.	2.9	32
44	A Method to Better Account for Modulation Transfer Functions in ARSIS-Based Pansharpening Methods. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 800-808.	6.3	32
45	Decoupling the effects of clear atmosphere and clouds to simplify calculations of the broadband solar irradiance at ground level. Geoscientific Model Development, 2014, 7, 1661-1669.	3.6	32
46	Downwelling surface solar irradiance in the tropical Atlantic Ocean: a comparison of re-analyses and satellite-derived data sets to PIRATA measurements. Ocean Science, 2018, 14, 1021-1056.	3.4	30
47	The HelioClim-1 Database of Daily Solar Radiation at Earth Surface: An Example of the Benefits of GEOSS Data-CORE. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 1745-1753.	4.9	28
48	Validating surface downwelling solar irradiances estimated by the McClear model under cloud-free skies in the United Arab Emirates. Solar Energy, 2015, 114, 17-31.	6.1	27
49	Validation of HelioClim-3 Version 4, HelioClim-3 Version 5 and MACC-RAD Using 14 BSRN Stations. Energy Procedia, 2016, 91, 1059-1069.	1.8	27
50	Validation of three satellite-derived databases of surface solar radiation using measurements performed at 42 stations in Brazil. Advances in Science and Research, 0, 13, 81-86.	1.0	26
51	Sea surface winds from sun glitter observations. Journal of Geophysical Research, 1983, 88, 2547-2555.	3.3	25
52	A critical comparison of pansharpening algorithms. , 2014, , .		25
53	Comparison of several satellite-derived databases of surface solar radiation against ground measurement in Morocco. Advances in Science and Research, 0, 15, 21-29.	1.0	25
54	The Operational Calibration of Images Taken in the Visible Channel of the Meteosat Series of Satellites. Journal of Atmospheric and Oceanic Technology, 2002, 19, 1285-1293.	1.3	23

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55	On the applicability of the Heliosat-2 method to assess surface solar irradiance in the Intertropical Convergence Zone, French Guiana. International Journal of Remote Sensing, 2013, 34, 3012-3027.	2.9	22
56	A database of multi-year (2004â€“2010) quality-assured surface solar hourly irradiation measurements for the Egyptian territory. Earth System Science Data, 2016, 8, 105-113.	9.9	22
57	Analysis of the influences of uncertainties in input variables on the outcomes of the Heliosat-2 method. Solar Energy, 2009, 83, 1731-1741.	6.1	21
58	Creating a proof-of-concept climate service to assess future renewable energy mixes in Europe: An overview of the C3S ECEM project. Advances in Science and Research, 0, 15, 191-205.	1.0	21
59	An approach for the estimation of the aggregated photovoltaic power generated in several European countries from meteorological data. Advances in Science and Research, 0, 15, 51-62.	1.0	21
60	Adding virtual measuring stations to a network for urban air pollution mapping. Environment International, 2008, 34, 599-605.	10.0	18
61	Optimizing the Heliosat-II Method for Surface Solar Irradiation Estimation with GOES Images. Canadian Journal of Remote Sensing, 2015, 41, 86-100.	2.4	18
62	Association of UV radiation with Parkinson disease incidence: A nationwide French ecologic study. Environmental Research, 2017, 154, 50-56.	7.5	18
63	Advancing climate services for the European renewable energy sector through capacity building and user engagement. Climate Services, 2019, 16, 100139.	2.5	18
64	Object oriented assessment of damage due to natural disaster using very high resolution images. , 2007, , .		17
65	An automatic method for the calibration of time-series of Meteosat images. International Journal of Remote Sensing, 2000, 21, 1025-1045.	2.9	16
66	Estimating the photosynthetically active radiation under clear skies by means of a new approach. Advances in Science and Research, 2015, 12, 5-10.	1.0	16
67	Spatiotemporal indicators of solar energy potential in the Guiana Shield using GOES images. Renewable Energy, 2017, 111, 11-25.	8.9	15
68	Validation of the McClear clear-sky model in desert conditions with three stations in Israel. Advances in Science and Research, 0, 13, 21-26.	1.0	15
69	Upwelling in the Gulf of Lions. Coastal and Estuarine Sciences, 1981, , 160-166.	0.3	14
70	A fast and simple model to estimate the contribution of the circumsolar irradiance to measured broadband beam irradiance under cloud-free conditions in desert environment. Solar Energy, 2018, 163, 497-509.	6.1	14
71	Remote sensing of the sea-state using the 0.8-1.1 Î¼m spectral band. International Journal of Remote Sensing, 1983, 4, 433-446.	2.9	13
72	OSIrIS: a physically based simulation tool to improve training in thermal infrared remote sensing over urban areas at high spatial resolution. Remote Sensing of Environment, 2006, 104, 238-246.	11.0	13

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73	How close to detailed spectral calculations is the k-distribution method and correlated-k approximation of Kato etâ€‰al. (1999) in each spectral interval?. Meteorologische Zeitschrift, 2014, 23, 547-556.	1.0	13
74	Validation of the new HelioClim-3 version 4 real-time and short-term forecast service using 14 BSRN stations. Advances in Science and Research, 0, 13, 129-136.	1.0	13
75	Do modelled or satellite-based estimates of surface solar irradiance accurately describe its temporal variability?. Advances in Science and Research, 0, 14, 35-48.	1.0	13
76	Monitoring the decrease of lake Chad from space. Geocarto International, 1990, 5, 31-36.	3.5	12
77	Joint analysis of temperature and ocean colour satellite images for mesoscale activities in the Gulf of Biscay. International Journal of Remote Sensing, 1999, 20, 1329-1341.	2.9	12
78	Twelve monthly maps of ground Albedo parameters derived from MODIS data sets. , 2014, , .		12
79	Evaluating meso-scale change in performance of several databases of hourly surface irradiation in South-eastern Arabic Pensinsula. Advances in Science and Research, 0, 14, 7-15.	1.0	12
80	A Conceptual Approach To The Fusion Of Earth Observation Data. Surveys in Geophysics, 2000, 21, 177-186.	4.6	10
81	A new method for estimating UV fluxes at ground level in cloud-free conditions. Atmospheric Measurement Techniques, 2017, 10, 4965-4978.	3.1	10
82	Monitoring aerosols over Europe: an assessment of the potential benefit of assimilating the VIS04 measurements from the future MTG/FCI geostationary imager. Atmospheric Measurement Techniques, 2019, 12, 1251-1275.	3.1	10
83	Verifying the spatial consistency of the CAMS Radiation Service and HelioClim-3 satellite-derived databases of solar radiation using a dense network of measuring stations: the case of The Netherlands. Advances in Science and Research, 0, 16, 103-111.	1.0	10
84	Performance of CAMS Radiation Service and HelioClim-3 databases of solar radiation at surface: evaluating the spatial variation in Germany. Advances in Science and Research, 0, 17, 143-152.	1.0	10
85	A geographical information system for some Mediterranean benthic communities. International Journal of Geographical Information Science, 1990, 4, 79-86.	4.8	9
86	Benefit of GEOSS Interoperability in Assessment of Environmental Impacts Illustrated by the Case of Photovoltaic Systems. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2012, 5, 1722-1728.	4.9	9
87	Technical Note: A novel parameterization of the transmissivity due to ozone absorption in the <i>k</i>-distribution method and correlated-<i>k</i> approximation of Kato et al. (1999) over the UV band. Atmospheric Chemistry and Physics, 2015, 15, 7449-7456.	4.9	9
88	A MTF-Based Distance for the Assessment of Geometrical Quality of Fused Products. , 2006, , .		8
89	Solar irradiance in clear atmosphere: study of parameterisations of change with altitude. Advances in Science and Research, 2011, 6, 199-203.	1.0	8
90	Can AERONET data be used to accurately model the monochromatic beam and circumsolar irradiances under cloud-free conditions in desert environment?. Atmospheric Measurement Techniques, 2015, 8, 5099-5112.	3.1	8

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91	A New Clear-Sky Method for Assessing Photosynthetically Active Radiation at the Surface Level. Atmosphere, 2019, 10, 219.	2.3	8
92	Which variables are essential for renewable energies?. International Journal of Digital Earth, 2020, 13, 253-261.	3.9	8
93	Analysis of Changes in Quality Assessment with Scale. , 2006, , .		7
94	Damage Assessment on Buildings using Multisensor Multimodal Very High Resolution Images and Ancillary Data. , 2008, , .		7
95	Estimation of the Circumsolar Ratio in a Turbid Atmosphere. Energy Procedia, 2014, 57, 1169-1178.	1.8	7
96	Nevi, Ambient Ultraviolet Radiation, and Thyroid Cancer Risk. Epidemiology, 2017, 28, 694-702.	2.7	7
97	On the effective solar zenith and azimuth angles to use with measurements of hourly irradiation. Advances in Science and Research, 0, 13, 1-6.	1.0	7
98	Mapping the ground albedo of western africa and its time evolution during 1984 using meteosat visible data. Remote Sensing of Environment, 1989, 27, 221-232.	11.0	6
99	<title>Data fusion of remotely sensed images using wavelet transform: the ARSIS solution</title>. , 1997, , .		6
100	Yearly changes in surface solar radiation in New Caledonia. Advances in Science and Research, 2015, 12, 1-4.	1.0	6
101	Assessment of Several Empirical Relationships for Deriving Daily Means of UV-A Irradiance from Meteosat-Based Estimates of the Total Irradiance. Remote Sensing, 2016, 8, 537.	4.0	6
102	On the intrinsic timescales of temporal variability in measurementsÂofÂthe surface solar radiation. Nonlinear Processes in Geophysics, 2018, 25, 19-37.	1.3	6
103	On the temporal variability of the surface solar radiation by means of spectral representations. Advances in Science and Research, 0, 13, 121-127.	1.0	6
104	Estimating spatial and temporal variations in solar radiation within Bordeaux winegrowing region using remotely sensed data. Oeno One, 2016, 42, 15.	1.4	6
105	Fusion of images and raster-maps of different spatial resolutions by encrustation: An improved approach. Computers, Environment and Urban Systems, 1995, 19, 77-87.	7.1	5
106	Quantitative Assessment Of Building Damage In Urban Area Using Very High Resolution Images. , 2007, , .		5
107	Characterizing Temporal Variability in Measurements of Surface Solar Radiation and its Dependence on Climate. Energy Procedia, 2016, 97, 164-171.	1.8	5
108	Improving direct normal irradiance retrieval in cloud-free, but high aerosol load conditions by using aerosol optical depth. Meteorologische Zeitschrift, 2017, 26, 475-483.	1.0	5

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109	A database of 10 min average measurements of solar radiation and meteorological variables in Ostrava, Czech Republic. Earth System Science Data, 2018, 10, 837-846.	9.9	5
110	Corrigendum to "Decoupling the effects of clear atmosphere and clouds to simplify calculations of the broadband solar irradiance at ground level" published in Geosci. Model Dev., 7, 1661â€“1669, 2014. Geoscientific Model Development, 2014, 7, 2409-2409.	3.6	4
111	Interoperable Exchange of Surface Solar Irradiance Observations: A Challenge. Energy Procedia, 2015, 76, 113-120.	1.8	4
112	A Climatological Database of the Linke Turbidity Factor. , 2000, , 432-434.		4
113	Satellite-based estimation of surface solar irradiance. SPIE Newsroom, 0, , .	0.1	4
114	High Spatial Resolution Solar Atlas in Provence-Alpes-CÃ´te d'Azur. , 2011, , .		4
115	Solar Atlas for the Southern and Eastern Mediterranean. , 2011, , .		4
116	Technical note A low-cost high-quality system for the acquisition and digital processing of images of WEFAX type provided by meteorological geostationary satellites. International Journal of Remote Sensing, 1992, 13, 911-916.	2.9	3
117	The ARSIS concept in image fusion: an answer to users needs. , 2003, , .		3
118	Study of the MLB parameterisation for change in surface solar irradiance with sun zenith angle in clear sky. Advances in Science and Research, 2011, 6, 233-236.	1.0	3
119	Assessment of five different methods for the estimation of surface photosynthetically active radiation from satellite imagery at three sites â€“ application to the monitoring of indoor soft fruit crops in southern UK. Advances in Science and Research, 0, 16, 229-240.	1.0	3
120	Specifications and conceptual architecture of a thermal infrared simulator of landscapes. , 2001, , .		2
121	Different implementations of the ARSIS concept to fulfill users needs. , 2003, , .		2
122	Increasing the spatial resolution of gridded data by fusion with other data sets. , 2003, , .		2
123	Monthly means of daily solar irradiation over Egypt estimated from satellite database and various empirical formulae. International Journal of Remote Sensing, 2013, 34, 8182-8198.	2.9	2
124	Data Fusion in Remote Sensing of Urban and Suburban Areas. Remote Sensing and Digital Image Processing, 2010, , 193-218.	0.7	2
125	The Helioclim Project. , 2000, , 427-431.		2
126	Improving the solar resource estimation in the United Arab Emirates using aerosol and irradiance measurements. , 2016, , .		2

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127	Use of a simulator for the study of the sensitivity of the signal sensed by the MERIS spectrometer. , 0, , .		1
128	Aerosols detection for urban air pollution monitoring. , 2006, , .		1
129	Data Fusion Contest: Fusion of Panchromatic and Multispectral Images. , 2006, , .		1
130	Towards Designing an Integrated Earth Observation System for the Provision of Solar Energy Resource and Assessment. , 2006, , .		1
131	Using Copernicus Atmosphere Monitoring Service (CAMS) Products to Assess Illuminances at Ground Level under Cloudless Conditions. Atmosphere, 2021, 12, 643.	2.3	1
132	A Large Scale Monitoring of the Hydrocarbons Pollution from the Landsat Satellite. , 1984, , 347-358.		1
133	The Performances of the Helioclim Databases in Mozambique. , 2011, , .		1
134	UV-France. Measurement of Individual and Population Exposure to Ultraviolet Radiation Based on Data from Meteorological Satellites. Epidemiology, 2006, 17, S306.	2.7	1
135	Comments on the â€œSpatial Variability of Coastal Surface Water Temperature during Upwelling". Journal of Physical Oceanography, 1980, 10, 1303-1303.	1.7	0
136	Atmospheric lee waves in the Aegean Sea and their possible influence on the sea surface. Boundary-Layer Meteorology, 1984, 28, 309-315.	2.3	0
137	<title>S.P.I.Rou.: a landscape synthesis tool in the infrared spectral band</title>. , 1997, 3085, 226.		0
138	A simulator of images in the infrared spectral band for training users. , 1998, , .		0
139	Analysis of the Long-term Evolution of the Solar Resource in China and Its Main Contributors. Energy Procedia, 2016, 91, 1041-1052.	1.8	0
140	Individual sun exposure can be assessed using meteorologic satellite measurements. Epidemiology, 2006, 17, S245.	2.7	0
141	Monthly solar radiation in the tropical Atlantic Ocean: Can its spatial variations be captured by the current configuration of the PIRATA moorings?. Advances in Science and Research, 0, 15, 127-136.	1.0	0
142	Assessment of Six Different Methods for the Estimation of Surface Ultra-Violet Fluxes at One Location in Uruguay. , 2019, , .		0