

# Jose Antonio Ruiz-Arias

## List of Publications by Year in descending order

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Version: 2024-02-01

56  
papers

3,352  
citations

126858

33  
h-index

155592

55  
g-index

59  
all docs

59  
docs citations

59  
times ranked

3063  
citing authors

#	ARTICLE	IF	CITATIONS
1	Comparison of numerical weather prediction solar irradiance forecasts in the US, Canada and Europe. <i>Solar Energy</i> , 2013, 94, 305-326.	2.9	282
2	Evaluation of the WRF model solar irradiance forecasts in Andalusia (southern Spain). <i>Solar Energy</i> , 2012, 86, 2200-2217.	2.9	209
3	Extensive worldwide validation and climate sensitivity analysis of direct irradiance predictions from 1-min global irradiance. <i>Solar Energy</i> , 2016, 128, 1-30.	2.9	203
4	WRF-Solar: Description and Clear-Sky Assessment of an Augmented NWP Model for Solar Power Prediction. <i>Bulletin of the American Meteorological Society</i> , 2016, 97, 1249-1264.	1.7	177
5	Preliminary survey on site-adaptation techniques for satellite-derived and reanalysis solar radiation datasets. <i>Solar Energy</i> , 2016, 132, 25-37.	2.9	136
6	An artificial neural network ensemble model for estimating global solar radiation from Meteosat satellite images. <i>Energy</i> , 2013, 61, 636-645.	4.5	125
7	A comparative study of ordinary and residual kriging techniques for mapping global solar radiation over southern Spain. <i>Agricultural and Forest Meteorology</i> , 2009, 149, 1343-1357.	1.9	118
8	Proposal of a regressive model for the hourly diffuse solar radiation under all sky conditions. <i>Energy Conversion and Management</i> , 2010, 51, 881-893.	4.4	117
9	Combining wind farms with concentrating solar plants to provide stable renewable power. <i>Renewable Energy</i> , 2015, 76, 539-550.	4.3	98
10	Analysis of the spectral variations on the performance of high concentrator photovoltaic modules operating under different real climate conditions. <i>Solar Energy Materials and Solar Cells</i> , 2014, 127, 179-187.	3.0	95
11	A comparative analysis of DEM-based models to estimate the solar radiation in mountainous terrain. <i>International Journal of Geographical Information Science</i> , 2009, 23, 1049-1076.	2.2	92
12	Assessment of the Level-3 MODIS daily aerosol optical depth in the context of surface solar radiation and numerical weather modeling. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 675-692.	1.9	87
13	Analysis of WRF Model Wind Estimate Sensitivity to Physics Parameterization Choice and Terrain Representation in Andalusia (Southern Spain). <i>Journal of Applied Meteorology and Climatology</i> , 2013, 52, 1592-1609.	0.6	84
14	Generation of synthetic daily global solar radiation data based on ERA-Interim reanalysis and artificial neural networks. <i>Energy</i> , 2011, 36, 5356-5365.	4.5	82
15	Levelised cost of electricity in high concentrated photovoltaic grid connected systems: Spatial analysis of Spain. <i>Applied Energy</i> , 2015, 151, 49-59.	5.1	82
16	Worldwide inter-comparison of clear-sky solar radiation models: Consensus-based review of direct and global irradiance components simulated at the earth surface. <i>Solar Energy</i> , 2018, 168, 10-29.	2.9	82
17	Validation of direct normal irradiance predictions under arid conditions: A review of radiative models and their turbidity-dependent performance. <i>Renewable and Sustainable Energy Reviews</i> , 2015, 45, 379-396.	8.2	77
18	Analysis of Spatiotemporal Balancing between Wind and Solar Energy Resources in the Southern Iberian Peninsula. <i>Journal of Applied Meteorology and Climatology</i> , 2012, 51, 2005-2024.	0.6	76

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19	Spatial disaggregation of satellite-derived irradiance using a high-resolution digital elevation model. <i>Solar Energy</i> , 2010, 84, 1644-1657.	2.9	62
20	Surface clear-sky shortwave radiative closure intercomparisons in the Weather Research and Forecasting model. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 9901-9913.	1.2	62
21	A simple parameterization of the short-wave aerosol optical properties for surface direct and diffuse irradiances assessment in a numerical weather model. <i>Geoscientific Model Development</i> , 2014, 7, 1159-1174.	1.3	62
22	Improving the separation of direct and diffuse solar radiation components using machine learning by gradient boosting. <i>Solar Energy</i> , 2017, 150, 558-569.	2.9	60
23	On the use of the digital elevation model to estimate the solar radiation in areas of complex topography. <i>Meteorological Applications</i> , 2006, 13, 279.	0.9	59
24	Short-term solar radiation forecasting by advecting and diffusing MSG cloud index. <i>Solar Energy</i> , 2017, 155, 1092-1103.	2.9	59
25	Assessment of the renewable energies potential for intensive electricity production in the province of Ja�n, southern Spain. <i>Renewable and Sustainable Energy Reviews</i> , 2012, 16, 2994-3001.	8.2	57
26	Optimal combination of gridded and ground-observed solar radiation data for regional solar resource assessment. <i>Solar Energy</i> , 2015, 112, 411-424.	2.9	57
27	Worldwide analysis of spectral factors for seven photovoltaic technologies. <i>Solar Energy</i> , 2017, 142, 194-203.	2.9	57
28	A methodology for evaluating the spatial variability of wind energy resources: Application to assess the potential contribution of wind energy to baseload power. <i>Renewable Energy</i> , 2014, 69, 147-156.	4.3	56
29	Influence of land-use misrepresentation on the accuracy of WRF wind estimates: Evaluation of GLCC and CORINE land-use maps in southern Spain. <i>Atmospheric Research</i> , 2015, 157, 17-28.	1.8	46
30	Exploring the mean-variance portfolio optimization approach for planning wind repowering actions in Spain. <i>Renewable Energy</i> , 2017, 106, 335-342.	4.3	45
31	A High-Resolution Topographic Correction Method for Clear-Sky Solar Irradiance Derived with a Numerical Weather Prediction Model. <i>Journal of Applied Meteorology and Climatology</i> , 2011, 50, 2460-2472.	0.6	42
32	Assessing the Surface Solar Radiation Budget in the WRF Model: A Spatiotemporal Analysis of the Bias and Its Causes. <i>Monthly Weather Review</i> , 2016, 144, 703-711.	0.5	41
33	An advanced ANN-based method to estimate hourly solar radiation from multi-spectral MSG imagery. <i>Solar Energy</i> , 2015, 115, 494-504.	2.9	36
34	A topographic geostatistical approach for mapping monthly mean values of daily global solar radiation: A case study in southern Spain. <i>Agricultural and Forest Meteorology</i> , 2011, 151, 1812-1822.	1.9	30
35	Model for estimating the energy yield of a high concentrator photovoltaic system. <i>Energy</i> , 2015, 87, 77-85.	4.5	28
36	Worldwide impact of aerosols' time scale on the predicted long-term concentrating solar power potential. <i>Scientific Reports</i> , 2016, 6, 30546.	1.6	28

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37	A multi-model benchmarking of direct and global clear-sky solar irradiance predictions at arid sites using a reference physical radiative transfer model. <i>Solar Energy</i> , 2018, 171, 447-465.	2.9	25
38	Do spaceborne aerosol observations limit the accuracy of modeled surface solar irradiance?. <i>Geophysical Research Letters</i> , 2015, 42, 605-612.	1.5	23
39	Evaluation of DNI forecast based on the WRF mesoscale atmospheric model for CPV applications. <i>AIP Conference Proceedings</i> , 2012, , .	0.3	20
40	A geostatistical approach for producing daily Level-3 MODIS aerosol optical depth analyses. <i>Atmospheric Environment</i> , 2013, 79, 395-405.	1.9	19
41	Bias induced by the AOD representation time scale in long-term solar radiation calculations. Part 1: Sensitivity of the AOD distribution to the representation time scale. <i>Solar Energy</i> , 2016, 137, 608-620.	2.9	17
42	Macroscopic cloud properties in the WRF NWP model: An assessment using sky camera and ceilometer data. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 10,297.	1.2	16
43	Do current wind farms in Spain take maximum advantage of spatiotemporal balancing of the wind resource?. <i>Renewable Energy</i> , 2016, 96, 574-582.	4.3	16
44	Exploring the meteorological potential for planning a high performance European electricity super-grid: optimal power capacity distribution among countries. <i>Environmental Research Letters</i> , 2017, 12, 114030.	2.2	15
45	Bias induced by the AOD representation time scale in long-term solar radiation calculations. Part 2: Impact on long-term solar irradiance predictions. <i>Solar Energy</i> , 2016, 135, 625-632.	2.9	13
46	Direct normal irradiance modeling: Evaluating the impact on accuracy of worldwide gridded aerosol databases. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	13
47	Dissecting surface clear sky irradiance bias in numerical weather prediction: Application and corrections to the New Goddard Shortwave Scheme. <i>Solar Energy</i> , 2016, 132, 103-113.	2.9	9
48	Solar Resource for High-Concentrator Photovoltaic Applications. <i>Green Energy and Technology</i> , 2015, , 261-302.	0.4	8
49	Analysis of the Spatiotemporal Characteristics of High Concentrator Photovoltaics Energy Yield and Performance Ratio. <i>IEEE Journal of Photovoltaics</i> , 2017, 7, 359-366.	1.5	8
50	Performance of Separation Models to Predict Direct Irradiance at High Frequency: Validation over Arid Areas. , 2015, , .		8
51	Worldwide multi-model intercomparison of clear-sky solar irradiance predictions. <i>AIP Conference Proceedings</i> , 2017, , .	0.3	4
52	Aerosol transmittance for clear-sky solar irradiance models: Review and validation of an accurate universal parameterization. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 145, 111061.	8.2	4
53	Bias in modeled solar radiation by non-resolved intra-daily AOD variability. <i>Solar Energy</i> , 2020, 205, 221-229.	2.9	3
54	Spectral integration of clear-sky atmospheric transmittance: Review and worldwide performance. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 161, 112302.	8.2	3

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55	Geographical Distribution of Factors Accelerating Performance Degradation of PV Modules. , 2018, , .		2
56	Solar resource modeling for CSP: Current status of aerosol-related errors in South-Eastern Asia. AIP Conference Proceedings, 2020, , .	0.3	1