

Quanhua Liu

List of Publications by Year in descending order

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127
papers

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8195
citing authors

#	ARTICLE	IF	CITATIONS
1	ATMS Radiance Data Products™ Calibration and Evaluation. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-11.	6.3	2
2	An Evaluation of NOAA-20 ATMS Instrument Pre-Launch and On-Orbit Performance Characterization. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-13.	6.3	1
3	In-Depth Evaluation of MiRS Total Precipitable Water From NOAA-20 ATMS Using Multiple Reference Data Sets. Earth and Space Science, 2022, 9, .	2.6	5
4	Deriving Surface Reflectance From Visible/Near Infrared and Ultraviolet Satellite Observations Through the Community Radiative Transfer Model. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2022, 15, 2004-2011.	4.9	1
5	Improvement of MiRS Sea Surface Temperature Retrievals Using a Machine Learning Approach. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2022, 15, 1857-1868.	4.9	4
6	The Aerosol Module in the Community Radiative Transfer Model (v2.2 and v2.3): accounting for aerosol transmittance effects on the radiance observation operator. Geoscientific Model Development, 2022, 15, 1317-1329.	3.6	2
7	COSMIC-2 soundings impacts on a RO-based NOAA microwave satellite data quality monitoring system. Terrestrial, Atmospheric and Oceanic Sciences, 2022, 33, 1.	0.6	3
8	An Adaptive Calibration Window for Noise Reduction of Satellite Microwave Radiometers. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-16.	6.3	1
9	2-D Lunar Microwave Radiance Observations From the NOAA-20 ATMS. IEEE Geoscience and Remote Sensing Letters, 2021, 18, 2021-2024.	3.1	6
10	Preliminary Development and Testing of an EPS-SG Microwave Sounder Proxy Data Generator Using the NOAA Microwave Integrated Retrieval System. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 3151-3161.	4.9	4
11	The Impact of Aerosols on Satellite Radiance Data Assimilation Using NCEP Global Data Assimilation System. Atmosphere, 2021, 12, 432.	2.3	7
12	A New 32-Day Average-Difference Method for Calculating Inter-Sensor Calibration Radiometric Biases between SNPP and NOAA-20 Instruments within ICVS Framework. Remote Sensing, 2021, 13, 3079.	4.0	2
13	Experimental OMPS Radiance Assimilation through One-Dimensional Variational Analysis for Total Column Ozone in the Atmosphere. Remote Sensing, 2021, 13, 3418.	4.0	2
14	How Can Microwave Observations at 23.8 GHz Help in Acquiring Water Vapor in the Atmosphere over Land?. Remote Sensing, 2021, 13, 489.	4.0	6
15	Applying Deep Learning to Clear-Sky Radiance Simulation for VIIRS with Community Radiative Transfer Model—Part 1: Develop AI-Based Clear-Sky Mask. Remote Sensing, 2021, 13, 222.	4.0	6
16	Preliminary Report on Deep Learning-based Daytime Clear-Sky Radiance for VIIRS. , 2021, , .		0
17	The NOAA Microwave Integrated Retrieval System (MiRS): Validation of Precipitation From Multiple Polar-Orbiting Satellites. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 3019-3031.	4.9	12
18	Applying Deep Learning to Clear-Sky Radiance Simulation for VIIRS with Community Radiative Transfer Model—Part 2: Model Architecture and Assessment. Remote Sensing, 2020, 12, 3825.	4.0	9

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19	Gap Filling of Advanced Technology Microwave Sounder Data as Applied to Hurricane Warm Core Animations. <i>Earth and Space Science</i> , 2020, 7, e2019EA000961.	2.6	5
20	NOAA Operational Microwave Sounding Radiometer Data Quality Monitoring and Anomaly Assessment Using COSMIC GNSS Radio-Occultation Soundings. <i>Remote Sensing</i> , 2020, 12, 828.	4.0	13
21	Multiple Hydrometeors All-Sky Microwave Radiance Assimilation in FV3GFS. <i>Monthly Weather Review</i> , 2020, 148, 2971-2995.	1.4	11
22	A Deep Learning Trained Clear-Sky Mask Algorithm for VIIRS Radiometric Bias Assessment. <i>Remote Sensing</i> , 2020, 12, 78.	4.0	7
23	Pre-Launch Performance of the Advanced Technology Microwave Sounder (ATMS) on the Joint Polar Satellite System-2 Satellite (JPSS-2). , 2020, , .		2
24	Precipitation Estimation from the Microwave Integrated Retrieval System (MiRS). <i>Advances in Global Change Research</i> , 2020, , 153-168.	1.6	5
25	Analytic expressions of the Transmission, Reflection, and source function for the community radiative transfer model. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2019, 226, 115-126.	2.3	10
26	The NOAA Microwave Integrated Retrieval System Multiple Satellite Rain Rate Retrieval and Monitoring. , 2019, , .		0
27	Validation of Atmospheric Profile Retrievals From the SNPP NOAA-Unique Combined Atmospheric Processing System. Part 1: Temperature and Moisture. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2018, 56, 180-190.	6.3	53
28	Validation of Atmospheric Profile Retrievals from the SNPP NOAA-Unique Combined Atmospheric Processing System. Part 2: Ozone. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2018, 56, 598-607.	6.3	21
29	NOAA Microwave Integrated Retrieval System (MiRS) Cloud Liquid Water Retrieval and Assessment. , 2018, , .		3
30	Developing Vicarious Calibration for Microwave Sounding Instruments Using Lunar Radiation. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2018, 56, 6723-6733.	6.3	16
31	Toward the Operational Weather Forecasting Application of Atmospheric Stability Products Derived From NUCAPS CrIS/ATMS Soundings. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2018, 56, 4522-4545.	6.3	20
32	Single-scattering properties of ice particles in the microwave regime: Temperature effect on the ice refractive index with implications in remote sensing. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2017, 190, 26-37.	2.3	23
33	GPM Products From the Microwave-Integrated Retrieval System. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2017, 10, 2565-2574.	4.9	11
34	A Methodology to Adjust ATMS Observations for Limb Effect and Its Applications. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 11,347.	3.3	18
35	Estimation of Near-Real-Time Outgoing Longwave Radiation from Cross-Track Infrared Sounder (CrIS) Radiance Measurements. <i>Journal of Atmospheric and Oceanic Technology</i> , 2017, 34, 643-655.	1.3	5
36	The Application of PCRTM Physical Retrieval Methodology for IASI Cloudy Scene Analysis. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2017, 55, 5042-5056.	6.3	16

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37	Using averaging kernels to study the vertical resolution of nuaps temperature and water vapor. , 2017, , .		2
38	Monitoring of VIIRS ocean clear-sky brightness temperatures against CRTM simulation in ICVS for TEB/M bands. , 2017, , .		4
39	Use of temperature and humidity profiles derived from satellite retrievals for the derivation of atmospheric stability indices. , 2016, , .		0
40	The MIRS GPM precipitation retrieval. , 2016, , .		1
41	Implementation and evaluation of Optimal Spectral Sampling method in CRTM. , 2016, , .		0
42	Community Radiative Transfer Model for Air Quality Studies. , 2016, , 67-115.		3
43	Comparison of Atmospheric Methane Retrievals From AIRS and IASI. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 3297-3303.	4.9	8
44	Angular Effect of Undetected Clouds in Infrared Window Radiance Observations: Aircraft Experimental Analyses. Journals of the Atmospheric Sciences, 2016, 73, 1987-2010.	1.7	4
45	Improvements on the ice cloud modeling capabilities of the Community Radiative Transfer Model. Journal of Geophysical Research D: Atmospheres, 2016, 121, 13,577.	3.3	23
46	Satellite Sounder Observations of Contrasting Tropospheric Moisture Transport Regimes: Saharan Air Layers, Hadley Cells, and Atmospheric Rivers. Journal of Hydrometeorology, 2016, 17, 2997-3006.	1.9	13
47	Retrievals of trace gases from hyperspectral sounders. , 2016, , .		1
48	First Suomi NPP Cal/Val Campaign: Intercomparison of Satellite and Aircraft Sounding Retrievals. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 4037-4046.	4.9	5
49	Comparison of atmospheric methane observations from AIRS and IASI. , 2015, , .		0
50	Using SeaWiFS Measurements to Evaluate Radiometric Stability of Pseudo-Invariant Calibration Sites at Top of Atmosphere. IEEE Geoscience and Remote Sensing Letters, 2015, 12, 125-129.	3.1	7
51	Removing Solar Radiative Effect from the VIIRS M12 Band at 3.7 μ m for Daytime Sea Surface Temperature Retrievals. Journal of Atmospheric and Oceanic Technology, 2014, 31, 2522-2529.	1.3	3
52	Assessment and validation of the community radiative transfer model for ice cloud conditions. , 2014, , .		1
53	Effects of spectral resolution and signal-to-noise ratio of hyperspectral sensors on retrieving atmospheric parameters. Optics Letters, 2014, 39, 60.	3.3	8
54	Post calibration of channel 1 of NOAA-14 AVHRR: Implications on aerosol optical depth retrieval. , 2014, , .		0

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55	Performance of the Ozone Mapping and Profiler Suite (OMPS) products. Journal of Geophysical Research D: Atmospheres, 2014, 119, 6181-6195.	3.3	116
56	Evaluation of the VIIRS and MODIS LST products in an arid area of Northwest China. Remote Sensing of Environment, 2014, 142, 111-121.	11.0	192
57	Community Radiative Transfer Model (CRTM) applications in supporting the Suomi National Polar-orbiting Partnership (SNPP) mission validation and verification. Remote Sensing of Environment, 2014, 140, 744-754.	11.0	48
58	Post calibration of channels 1 and 2 of long-term AVHRR data record based on SeaWiFS data and pseudo-invariant targets. Remote Sensing of Environment, 2014, 150, 104-119.	11.0	15
59	Electric car with solar and wind energy may change the environment and economy: A tool for utilizing the renewable energy resource. Earth's Future, 2014, 2, 7-13.	6.3	3
60	Evaluation of the Sensor Data Record from the nadir instruments of the Ozone Mapping Profiler Suite (OMPS). Journal of Geophysical Research D: Atmospheres, 2014, 119, 6170-6180.	3.3	17
61	Assessment of Suomi National Polar-Orbiting Partnership VIIRS Emissive Band Calibration and Inter-Sensor Comparisons. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2013, 6, 1737-1748.	4.9	5
62	Using Advanced Matrix Operator (AMOM) in Community Radiative Transfer Model. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2013, 6, 1211-1218.	4.9	12
63	Comparison Between GOES-East and -West for Land Surface Temperature Retrieval From a Dual-Window Algorithm. IEEE Geoscience and Remote Sensing Letters, 2013, 10, 578-582.	3.1	4
64	Striping in the Suomi NPP VIIRS Thermal Bands through Anisotropic Surface Reflection. Journal of Atmospheric and Oceanic Technology, 2013, 30, 2478-2487.	1.3	13
65	Sensor-based clear and cloud radiance calculations in the community radiative transfer model. Applied Optics, 2013, 52, 4981.	1.8	11
66	Suomi NPP VIIRS sensor data record verification, validation, and long-term performance monitoring. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,664.	3.3	252
67	Planck-Weighted Transmittance and Correction of Solar Reflection for Broadband Infrared Satellite Channels. Journal of Atmospheric and Oceanic Technology, 2012, 29, 382-396.	1.3	9
68	SUOMI NPP VIIRS emissive band radiance calibration and analysis. , 2012, , .		0
69	Community radiative transfer model for radiance assimilation and applications. , 2012, , .		14
70	Improvements to radiometric consistency between AVHRR, MODIS, and VIIRS in SST bands using MICROS online near-real time system. , 2012, , .		0
71	Suomi NPP VIIRS on-orbit performance, data quality, and new applications. Proceedings of SPIE, 2012, , .	0.8	3
72	Calibration of low gain radiance at VIIRS emissive band (M13) and VIIRS image about moon temperature. , 2012, , .		1

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73	CrIS SDR calibration and validation status and NOAA-STAR related activities. Proceedings of SPIE, 2012, , .	0.8	4
74	NPP VIIRS emissive band radiance calibration. , 2012, , .		2
75	On the environmental information for solar and wind energy facilities. Science China Earth Sciences, 2012, 55, 796-801.	5.2	3
76	Evaluating a satellite-derived global infrared land surface emissivity data set for use in radiative transfer modeling. Journal of Geophysical Research, 2011, 116, .	3.3	26
77	Three-dimensional variational assimilation of MODIS aerosol optical depth: Implementation and application to a dust storm over East Asia. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	170
78	An Improved Fast Microwave Water Emissivity Model. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 1238-1250.	6.3	113
79	MiRS: An All-Weather 1DVAR Satellite Data Assimilation and Retrieval System. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 3249-3272.	6.3	188
80	Validation of the community radiative transfer model. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 1050-1064.	2.3	87
81	Community Radiative Transfer Model for Stratospheric Sounding Unit. Journal of Atmospheric and Oceanic Technology, 2011, 28, 767-778.	1.3	12
82	Simulations of microwave brightness temperatures at AMSU-B frequencies over a 3D convective cloud system. International Journal of Remote Sensing, 2010, 31, 1781-1800.	2.9	3
83	The NCEP Climate Forecast System Reanalysis. Bulletin of the American Meteorological Society, 2010, 91, 1015-1058.	3.3	4,166
84	A three-dimensional variation (3D-var) retrieval of temperature and water vapor profiles. , 2010, , .		1
85	Solar and wind energy resources and prediction. Journal of Renewable and Sustainable Energy, 2009, 1, .	2.0	25
86	Solar Radiation as Large-Scale Resource for Energy-Short World. Energy and Environment, 2009, 20, 319-329.	4.6	16
87	Effect of Out-of-Band Response in NOAA-16 AVHRR Channel 3b on Top-of-Atmosphere Radiances Calculated with the Community Radiative Transfer Model. Journal of Atmospheric and Oceanic Technology, 2009, 26, 1968-1972.	1.3	9
88	Radiative cooling effect of Hurricane Florence in 2006 and precipitation of Typhoon Matsa in 2005. Atmospheric Science Letters, 2009, 10, 122-126.	1.9	0
89	Estimates of radiation over clouds and dust aerosols: Optimized number of terms in phase function expansion. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 1190-1198.	2.3	26
90	Deriving infrared land surface emissivity from the Special Sensor Microwave Imager/Sounder. International Journal of Remote Sensing, 2009, 30, 2021-2031.	2.9	1

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91	Scattering database in the millimeter and submillimeter wave range of 100â€”1000 GHz for nonspherical ice particles. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	41
92	Recent Stratospheric Temperature Observed from Satellite Measurements. <i>Scientific Online Letters on the Atmosphere</i> , 2009, 5, 53-56.	1.4	12
93	Microwave scattering properties of sand particles: Application to the simulation of microwave radiances over sandstorms. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2008, 109, 684-702.	2.3	13
94	Conversion issues between microwave radiance and brightness temperature. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2008, 109, 1943-1950.	2.3	4
95	Validation of the Community Radiative Transfer Model by using CloudSat data. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	84
96	A study of AMSUâ€™s measurement of brightness temperatures over the ocean. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	13
97	Microwave and Infrared Radiances Assimilation for Weather Forecasting. , 2008, , .		0
98	Impact Study of AMSR-E Radiances in the NCEP Global Data Assimilation System. <i>Monthly Weather Review</i> , 2008, 136, 541-559.	1.4	33
99	Community Radiative Transfer Model for Scattering Transfer and Applications. , 2008, , .		4
100	Uses of NOAA-16 and -18 Satellite Measurements for Verifying the Limb-Correction Algorithm. <i>Journal of Applied Meteorology and Climatology</i> , 2007, 46, 544-548.	1.5	7
101	Passive Microwave Remote Sensing of Extreme Weather Events Using NOAA-18 AMSUA and MHS. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2007, 45, 2228-2246.	6.3	43
102	A fast radiative transfer model for SSMIS upper atmosphere sounding channels. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	92
103	Calculating Antarctic stratospheric temperature from Special Sensor Microwave Imager and Sounder. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	3
104	Detecting the warm core of a hurricane from the Special Sensor Microwave Imager Sounder. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	12
105	Combined Henyey-Greenstein and Rayleigh phase function. <i>Applied Optics</i> , 2006, 45, 7475.	2.1	30
106	Radiance assimilation in studying Hurricane Katrina. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	10
107	Advanced Doublingâ€™Adding Method for Radiative Transfer in Planetary Atmospheres. <i>Journals of the Atmospheric Sciences</i> , 2006, 63, 3459-3465.	1.7	144
108	A Polarized Delta-Four-Stream Approximation for Infrared and Microwave Radiative Transfer: Part I. <i>Journals of the Atmospheric Sciences</i> , 2005, 62, 2542-2554.	1.7	17

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109	One-dimensional variational retrieval algorithm of temperature, water vapor, and cloud water profiles from advanced microwave sounding unit (AMSU). IEEE Transactions on Geoscience and Remote Sensing, 2005, 43, 1087-1095.	6.3	56
110	Vicarious calibration of the third and fourth Stokes parameters of Windsat measurements. Applied Optics, 2005, 44, 7403.	2.1	3
111	Variational retrieval of sea surface wind vectors using a polarimetric approach. Advances in Space Research, 2004, 33, 1143-1147.	2.6	1
112	Retrieval of sea surface wind vectors from simulated satellite microwave polarimetric measurements. Radio Science, 2003, 38, n/a-n/a.	1.6	24
113	Assimilation of satellite cloudy radiances: forward and adjoint radiative transfer modeling. , 2003, , .		0
114	Satellite Data Assimilation in Numerical Weather Prediction Models. Part I: Forward Radiative Transfer and Jacobian Modeling in Cloudy Atmospheres. Journals of the Atmospheric Sciences, 2003, 60, 2633-2646.	1.7	66
115	A Microwave Polarimetric Two-Stream Radiative Transfer Model. Journals of the Atmospheric Sciences, 2002, 59, 2396-2402.	1.7	28
116	Polarized MODTRAN 3.7 applied to characterization of ocean color in the presence of aerosols. , 2002, 4481, 228.		1
117	An improved look-up table technique for geophysical parameters from SSM/I. International Journal of Remote Sensing, 2000, 21, 1571-1582.	2.9	1
118	Retrieval of Antarctic sea-ice pressure ridge frequencies from ERS SAR imagery by means of in situ laser profiling and usage of a neural network. International Journal of Remote Sensing, 1999, 20, 3111-3123.	2.9	27
119	Polarization anomaly of the microwave brightness temperature from ice. Applied Optics, 1998, 37, 2228.	2.1	2
120	Monte Carlo simulations of the microwave emissivity of the sea surface. Journal of Geophysical Research, 1998, 103, 24983-24989.	3.3	9
121	<title>Retrieval algorithms for special sensor microwave/imager (SSM/I)</title>. , 1998, , .		2
122	Estimating Longwave Net Radiation at Sea Surface from the Special Sensor Microwave/Imager (SSM/I). Journal of Applied Meteorology and Climatology, 1997, 36, 919-930.	1.7	23
123	Radiative transfer model: matrix operator method. Applied Optics, 1996, 35, 4229.	2.1	32
124	Three-dimensional radiative transfer effects of clouds in the microwave spectral range. Journal of Geophysical Research, 1996, 101, 4289-4298.	3.3	48
125	Effect of Cloud Types on the Earth Radiation Budget Calculated with the ISCCP Cl Dataset: Methodology and Initial Results. Journal of Climate, 1995, 8, 829-843.	3.2	37
126	Outgoing longwave radiation and its diurnal variation at regional scales derived from Meteosat. Journal of Geophysical Research, 1988, 93, 11192-11204.	3.3	49

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127	Study of calibration of windsat polarimetric sensor. , 0, , .		0