

Robert Frouin

List of Publications by Year in descending order

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102
papers

4,750
citations

94381

37
h-index

102432

66
g-index

105
all docs

105
docs citations

105
times ranked

5144
citing authors

#	ARTICLE	IF	CITATIONS
1	Biospheric Primary Production During an ENSO Transition. <i>Science</i> , 2001, 291, 2594-2597.	6.0	523
2	An Ocean-Colour Time Series for Use in Climate Studies: The Experience of the Ocean-Colour Climate Change Initiative (OC-CCI). <i>Sensors</i> , 2019, 19, 4285.	2.1	239
3	A review of satellite methods to derive surface shortwave irradiance. <i>Remote Sensing of Environment</i> , 1995, 51, 108-124.	4.6	228
4	Estimating Photosynthetically Active Radiation (PAR) at the earth's surface from satellite observations. <i>Remote Sensing of Environment</i> , 1995, 51, 98-107.	4.6	221
5	Spectral reflectance of sea foam in the visible and near-infrared: In situ measurements and remote sensing implications. <i>Journal of Geophysical Research</i> , 1996, 101, 14361-14371.	3.3	211
6	NASA's surface biology and geology designated observable: A perspective on surface imaging algorithms. <i>Remote Sensing of Environment</i> , 2021, 257, 112349.	4.6	148
7	A simple analytical formula to compute clear sky total and photosynthetically available solar irradiance at the ocean surface. <i>Journal of Geophysical Research</i> , 1989, 94, 9731-9742.	3.3	145
8	Satellite sensor requirements for monitoring essential biodiversity variables of coastal ecosystems. <i>Ecological Applications</i> , 2018, 28, 749-760.	1.8	116
9	Maritime component in aerosol optical models derived from Aerosol Robotic Network data. <i>Journal of Geophysical Research</i> , 2003, 108, AAC 14-1.	3.3	115
10	Response of the equatorial Pacific to chlorophyll pigment in a mixed layer isopycnal ocean general circulation model. <i>Geophysical Research Letters</i> , 2001, 28, 2021-2024.	1.5	108
11	Toward aerosol optical depth retrievals over land from GOES visible radiances: determining surface reflectance. <i>International Journal of Remote Sensing</i> , 2005, 26, 4097-4116.	1.3	105
12	Maritime aerosol optical thickness measured by handheld sun photometers. <i>Remote Sensing of Environment</i> , 2004, 93, 87-106.	4.6	104
13	Relation between photosynthetically available radiation and total insolation at the ocean surface under clear skies ¹ . <i>Limnology and Oceanography</i> , 1987, 32, 1370-1377.	1.6	97
14	Estimating photosynthetically available radiation at the ocean surface from ADEOS-II global imager data. <i>Journal of Oceanography</i> , 2007, 63, 493-503.	0.7	93
15	Reduction of skylight reflection effects in the above-water measurement of diffuse marine reflectance. <i>Applied Optics</i> , 1999, 38, 3844.	2.1	86
16	Seasonal and inter-annual variability of particulate organic matter in the global ocean. <i>Geophysical Research Letters</i> , 2002, 29, 49-1-49-4.	1.5	85
17	Water Column Correction for Coral Reef Studies by Remote Sensing. <i>Sensors</i> , 2014, 14, 16881-16931.	2.1	79
18	A Study of Global Aerosol Optical Climatology with Two-Channel AVHRR Remote Sensing. <i>Journal of Climate</i> , 2000, 13, 2011-2027.	1.2	77

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19	Artificial neural networks for modeling the transfer function between marine reflectance and phytoplankton pigment concentration. <i>Journal of Geophysical Research</i> , 2000, 105, 3483-3495.	3.3	76
20	Estimating the altitude of aerosol plumes over the ocean from reflectance ratio measurements in the O2 A-band. <i>Remote Sensing of Environment</i> , 2009, 113, 1899-1911.	4.6	75
21	Calibration of NOAA-7 AVHRR, GOES-5, and GOES-6 VISSR/VAS solar channels. <i>Remote Sensing of Environment</i> , 1987, 22, 73-101.	4.6	67
22	Chlorophyll modulation of sea surface temperature in the Arabian Sea in a mixed-layer isopycnal general circulation model. <i>Geophysical Research Letters</i> , 2000, 27, 747-750.	1.5	62
23	A Review of Protocols for Fiducial Reference Measurements of WaterLeaving Radiance for Validation of Satellite Remote-Sensing Data over Water. <i>Remote Sensing</i> , 2019, 11, 2198.	1.8	61
24	Upscale integration of normalized difference vegetation index: the problem of spatial heterogeneity. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 1992, 30, 326-338.	2.7	57
25	Inherent optical properties and satellite retrieval of chlorophyll concentration in the lagoon and open ocean waters of New Caledonia. <i>Marine Pollution Bulletin</i> , 2010, 61, 503-518.	2.3	57
26	A compilation of global bio-optical in situ data for ocean-colour satellite applications. <i>Earth System Science Data</i> , 2016, 8, 235-252.	3.7	56
27	Potential Feedbacks Between Pacific Ocean Ecosystems and Interdecadal Climate Variations. <i>Bulletin of the American Meteorological Society</i> , 2003, 84, 617-634.	1.7	55
28	Applying artificial neural network methodology to ocean color remote sensing. <i>Ecological Modelling</i> , 1999, 120, 237-246.	1.2	53
29	Water vapor retrieval over ocean using near-infrared radiometry. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	52
30	A Technique for Global Monitoring of Net Solar Irradiance at the Ocean Surface. Part I: Model. <i>Journal of Applied Meteorology and Climatology</i> , 1992, 31, 1056-1066.	1.7	50
31	Coverage opportunities for global ocean color in a multimission era. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 1998, 36, 1620-1627.	2.7	50
32	Satellite Determination of the Mesoscale Variability of the Sea Surface Temperature. <i>Journal of Physical Oceanography</i> , 1981, 11, 864-870.	0.7	46
33	Methodology for estimating burned area from AVHRR reflectance data. <i>Remote Sensing of Environment</i> , 1995, 54, 273-289.	4.6	46
34	SIMBAD: a field radiometer for satellite ocean-color validation. <i>Applied Optics</i> , 2004, 43, 4055.	2.1	46
35	Atmospheric response to solar radiation absorbed by phytoplankton. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	44
36	A time series of photosynthetically available radiation at the ocean surface from SeaWiFS and MODIS data. <i>Proceedings of SPIE</i> , 2012, , .	0.8	43

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37	A compilation of global bio-optical in situ data for ocean-colour satellite applications “ version two. Earth System Science Data, 2019, 11, 1037-1068.	3.7	43
38	Environmental snapshots from ACE-Asia. Journal of Geophysical Research, 2004, 109, .	3.3	42
39	Large Diurnal Heating of the Sea Surface Observed by the HCMR Experiment. Journal of Physical Oceanography, 1984, 14, 177-184.	0.7	38
40	Influence of oceanic whitecaps on the Global Radiation Budget. Geophysical Research Letters, 2001, 28, 1523-1526.	1.5	38
41	A Review of Protocols for Fiducial Reference Measurements of Downwelling Irradiance for the Validation of Satellite Remote Sensing Data over Water. Remote Sensing, 2019, 11, 1742.	1.8	37
42	Net primary productivity estimates and environmental variables in the Arctic Ocean: An assessment of coupled physical-biogeochemical models. Journal of Geophysical Research: Oceans, 2016, 121, 8635-8669.	1.0	34
43	Satellite-Derived Surface Radiation Budget over the African Continent. Part II: Climatologies of the Various Components. Journal of Climate, 2001, 14, 60-76.	1.2	33
44	Evaluation of satellite-based algorithms to estimate photosynthetically available radiation (PAR) reaching the ocean surface at high northern latitudes. Remote Sensing of Environment, 2016, 184, 199-211.	4.6	31
45	Water-leaving contribution to polarized radiation field over ocean. Optics Express, 2017, 25, A689.	1.7	30
46	Satellite Radiation Products for Ocean Biology and Biogeochemistry: Needs, State-of-the-Art, Gaps, Development Priorities, and Opportunities. Frontiers in Marine Science, 2018, 5, .	1.2	30
47	Estimating photosynthetically available radiation at the ocean surface from GOCI data. Ocean Science Journal, 2012, 47, 313-321.	0.6	29
48	Airborne lidar measurements of aerosol spatial distribution and optical properties over the Atlantic Ocean during a European pollution outbreak of ACE-2. Tellus, Series B: Chemical and Physical Meteorology, 2000, 52, 662-677.	0.8	27
49	Regional evaluation of an advanced very high resolution radiometer (AVHRR) two-channel aerosol retrieval algorithm. Journal of Geophysical Research, 2004, 109, .	3.3	26
50	Evaluation of SeaWiFS chlorophyll _a in the Black and Mediterranean Seas. International Journal of Remote Sensing, 2005, 26, 2045-2060.	1.3	26
51	Bayesian methodology for inverting satellite ocean-color data. Remote Sensing of Environment, 2015, 159, 332-360.	4.6	26
52	Influence of phytoplankton on the global radiation budget. Journal of Geophysical Research, 2002, 107, ACL 5-1.	3.3	25
53	Global Monitoring of Net Solar Irradiance at the Ocean Surface: Climatological Variability and the 1982-1983 El Niño. Journal of Climate, 1991, 4, 639-650.	1.2	23
54	Spectral reflectance of oceanic whitecaps in the visible and near infrared: Aircraft measurements over open ocean. Geophysical Research Letters, 2001, 28, 4445-4448.	1.5	23

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55	Retrieval of chlorophyll-a concentration via linear combination of ADEOS-II Global Imager data. <i>Journal of Oceanography</i> , 2006, 62, 331-337.	0.7	23
56	Seasonal forcing of summer dissolved inorganic carbon and chlorophyll <i>a</i> on the western shelf of the Antarctic Peninsula. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	23
57	Ocean-color radiometry across the Southern Atlantic and Southeastern Pacific: Accuracy and remote sensing implications. <i>Remote Sensing of Environment</i> , 2014, 149, 13-32.	4.6	23
58	Validation of ADEOS-II GLI ocean color products using in-situ observations. <i>Journal of Oceanography</i> , 2006, 62, 373-393.	0.7	22
59	Vicarious calibration of the POLDER ocean color spectral bands using in situ measurements. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 1999, 37, 1567-1574.	2.7	21
60	Influence of submicron absorptive aerosol on Sea-viewing Wide Field-of-view Sensor (SeaWiFS)-derived marine reflectance during Aerosol Characterization Experiment (ACE)-Asia. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	20
61	Early phase analysis of OCTS radiance data for aerosol remote sensing. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 1999, 37, 1575-1585.	2.7	18
62	Satellite-Derived Surface Radiation Budget over the African Continent. Part I: Estimation of Downward Solar Irradiance and Albedo. <i>Journal of Climate</i> , 2001, 14, 45-58.	1.2	18
63	Bio-Optical Characterization and Ocean Colour Inversion in the Eastern Lagoon of New Caledonia, South Tropical Pacific. <i>Remote Sensing</i> , 2018, 10, 1043.	1.8	18
64	Diazotrophic <i>Trichodesmium</i> spp. impact on UV ^{vis} radiance and pigment composition in the western tropical South Pacific. <i>Biogeosciences</i> , 2018, 15, 5249-5269.	1.3	17
65	Global Shortwave Energy Budget at the Earth's Surface from ERBE Observations. <i>Journal of Climate</i> , 1994, 7, 309-324.	1.2	16
66	Radiometric calibration of GOES-7 VISSR solar channels during the GOES pathfinder benchmark period. <i>Remote Sensing of Environment</i> , 1995, 52, 95-115.	4.6	15
67	A Statistical Algorithm for Estimating Chlorophyll Concentration in the New Caledonian Lagoon. <i>Remote Sensing</i> , 2016, 8, 45.	1.8	11
68	Bio-optical characteristics along the Straits of Magallanes. <i>Continental Shelf Research</i> , 2016, 119, 56-67.	0.9	11
69	A general ocean color atmospheric correction scheme based on principal components analysis: Part I. Performance on Case 1 and Case 2 waters. , 2007, 6680, 9.		9
70	Estimating photosynthetically available radiation at the ocean surface for primary production (3P) $T_j ETQq0 0 0 rgBT / (Overlock 10 Tf 50$	0.8	9
71	Remote sensing of <i>Trichodesmium</i> spp. mats in the western tropical South Pacific. <i>Biogeosciences</i> , 2018, 15, 5203-5219.	1.3	9
72	A New Algorithm to Estimate Diffuse Attenuation Coefficient from Secchi Disk Depth. <i>Journal of Marine Science and Engineering</i> , 2020, 8, 558.	1.2	9

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73	Remote sensing of phytoplankton chlorophyll-a concentration by use of ridge function fields. Applied Optics, 2006, 45, 784.	2.1	8
74	An attempt to remotely sense from space the surface heat budget over the Indian Ocean during the 1979 Monsoon. Geophysical Research Letters, 1988, 15, 1121-1124.	1.5	7
75	Fields of non-linear regression models for atmospheric correction of satellite ocean-color imagery. Remote Sensing of Environment, 2007, 111, 450-465.	4.6	7
76	Ocean color response to an episode of heavy rainfall in the lagoon of New Caledonia. , 2009, , .		7
77	On the Adequacy of Representing Water Reflectance by Semi-Analytical Models in Ocean Color Remote Sensing. Remote Sensing, 2019, 11, 2820.	1.8	7
78	Impact of Contrasted Weather Conditions on CDOM Absorption/Fluorescence and Biogeochemistry in the Eastern Lagoon of New Caledonia. Frontiers in Earth Science, 2020, 8, .	0.8	7
79	Automatic Detection of Optical Signatures within and around Floating Tonga-Fiji Pumice Rafts Using MODIS, VIIRS, and OLCI Satellite Sensors. Remote Sensing, 2021, 13, 501.	1.8	7
80	On the Misclassification of Dust as Cloud at an AERONET Site in the Sonoran Desert. Journal of Atmospheric and Oceanic Technology, 2022, 39, 181-191.	0.5	7
81	Fields of nonlinear regression models for inversion of satellite data. Geophysical Research Letters, 2004, 31, .	1.5	6
82	Evaluation of ADEOS-II GLI ocean color atmospheric correction using SIMBADA handheld radiometer data. Journal of Oceanography, 2007, 63, 533-543.	0.7	6
83	Spectral absorption by marine chromophoric dissolved organic matter: Laboratory determination and piecewise regression modeling. Marine Chemistry, 2017, 194, 10-21.	0.9	6
84	Bio-Optical Characteristics of the Northern Gulf of California during June 2008. International Journal of Oceanography, 2014, 2014, 1-13.	0.2	6
85	Evaluation of Semi-Analytical Algorithms to Retrieve Particulate and Dissolved Absorption Coefficients in Gulf of California Optically Complex Waters. Remote Sensing, 2018, 10, 1443.	1.8	5
86	System vicarious calibration of GCOM-C/SGLI visible and near-infrared channels. Journal of Oceanography, 2022, 78, 245-261.	0.7	5
87	Spatial distribution patterns of coral reefs in the Abrolhos region (Brazil, South Atlantic ocean). Continental Shelf Research, 2022, 246, 104808.	0.9	5
88	Evaluation of the NASA OBPG MERIS ocean surface PAR product in clear sky conditions. Optics Express, 2020, 28, 33157.	1.7	4
89	Seasonal and Interannual Variability of Satellite-Derived Photosynthetically Available Radiation Over the Tropical Oceans. Journal of Geophysical Research: Oceans, 2019, 124, 3073-3088.	1.0	3
90	Chlorophyll modulation of mixed layer thermodynamics in a mixed-layer isopycnal General Circulation Model " An example from Arabian Sea and equatorial Pacific. Journal of Earth System Science, 2002, 111, 339-349.	0.6	2

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91	Atmospheric Correction of Satellite Optical Imagery over the Río de la Plata Highly Turbid Waters Using a SWIR-Based Principal Component Decomposition Technique. Remote Sensing, 2021, 13, 1050.	1.8	2
92	Two-Step Algorithm for Sea Surface Temperature Determination. , 2021, , .		2
93	The NASA EPIC/DSCOVR Ocean PAR Product. Frontiers in Remote Sensing, 2022, 3, .	1.3	2
94	SWIR-based atmospheric correction for Satellite Ocean Color using Principal Component Analysis decomposition over the la Plata River highly turbid waters. , 2016, , .		1
95	Self-organized mapping of aerosol mixtures at aernet coastal and island sites. , 0, , .		0
96	Water vapor retrieval over ocean using POLDER near-IR channels. , 0, , .		0
97	Progressive atmospheric correction of satellite ocean-color imagery. , 2006, , .		0
98	Constrained linear inversion of satellite ocean-color data. Proceedings of SPIE, 2007, 6680, 33.	0.8	0
99	Consistency of Ridge Function Fields for Varying Nonparametric Regression. Communications in Statistics - Theory and Methods, 2009, 38, 1272-1283.	0.6	0
100	Sun Glint Mitigation for the SABIA-Mar Mission. , 2019, , .		0
101	Estimating GOCI daily PAR and validation. , 2018, , .		0
102	Measurements of a Dusty Density Current in the Western Sonoran Desert. Journal of Geophysical Research D: Atmospheres, 0, , .	1.2	0