Georg Heygster

List of Publications by Year
in descending order

78	2,285	201674	233421
papers	citations	27	45
		h-index	g-index

80	80	80	2827
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Version 2 of the EUMETSAT OSI SAF and ESA CCI sea-ice concentration climate data records. Cryosphere, 2019, 13, 49-78.	3.9	209
2	Intercomparison of passive microwave sea ice concentration retrievals over the highâ€concentration Arctic sea ice. Journal of Geophysical Research, 2007, 112, .	3.3	135
3	Detection of tropical deep convective clouds from AMSU-B water vapor channels measurements. Journal of Geophysical Research, 2005, 110, .	3.3	134
4	Worldwide variations in artificial skyglow. Scientific Reports, 2015, 5, 8409.	3.3	133
5	Exploring Arctic Transpolar Drift During Dramatic Sea Ice Retreat. Eos, 2008, 89, 21-22.	0.1	94
6	Monitoring Beach Topography and Nearshore Bathymetry Using Spaceborne Remote Sensing: A Review. Remote Sensing, 2019, 11, 2212.	4.0	88
7	Expected Performances of the Copernicus Imaging Microwave Radiometer (CIMR) for an Allâ€Weather and High Spatial Resolution Estimation of Ocean and Sea Ice Parameters. Journal of Geophysical Research: Oceans, 2018, 123, 7564-7580.	2.6	87
8	Improving sea ice type discrimination by the simultaneous use of SSM/I and scatterometer data. Polar Research, 2003, 22, 35-42.	1.6	81
9	Snow Depth Retrieval on Arctic Sea Ice From Passive Microwave Radiometersâ€"Improvements and Extensions to Multiyear Ice Using Lower Frequencies. Journal of Geophysical Research: Oceans, 2018, 123, 7120-7138.	2.6	81
10	Topographic Mapping of the German Tidal Flats Analyzing SAR Images With the Waterline Method. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 1019-1030.	6.3	77
11	SMOS sea ice product: Operational application and validation in the Barents Sea marginal ice zone. Remote Sensing of Environment, 2016, 180, 264-273.	11.0	68
12	Atmospheric water vapor over Antarctica derived from Special Sensor Microwave/Temperature 2 data. Journal of Geophysical Research, 2001, 106, 10187-10203.	3.3	47
13	Polynya Signature Simulation Method polynya area in comparison to AMSR-E 89GHz sea-ice concentrations in the Ross Sea and off the AdÃ©lie Coast, Antarctica, for 2002â€"05: first results. Annals of Glaciology, 2007, 46, 409-418.	1.4	46
14	Rank filters in digital image processing. Computer Graphics and Image Processing, 1982, 19, 148-164.	0.8	44
15	Improved Retrieval of Total Water Vapor Over Polar Regions From AMSU-B Microwave Radiometer Data. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 2307-2322.	6.3	44
16	Interannual to Diurnal Variations in Tropical and Subtropical Deep Convective Clouds and Convective Overshooting from Seven Years of AMSU-B Measurements. Journal of Climate, 2008, 21, 4168-4189.	3.2	43
17	Surface Emissivity of the Arctic Sea Ice at AMSR-E Frequencies. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 4115-4124.	6.3	41
18	Scattering database in the millimeter and submillimeter wave range of 100â€"1000 GHz for nonspherical ice particles. Journal of Geophysical Research, 2009, 114, .	3.3	41

#	Article	IF	Citations
19	Reflective properties of white sea ice and snow. Cryosphere, 2016, 10, 2541-2557.	3.9	36
20	Improving Multiyear Sea Ice Concentration Estimates with Sea Ice Drift. Remote Sensing, 2016, 8, 397.	4.0	34
21	A combined radiative transfer model for sea ice, open ocean, and atmosphere. Radio Science, 1998, 33, 303-316.	1.6	33
22	Effect of cirrus clouds on the diurnal cycle of tropical deep convective clouds. Journal of Geophysical Research, 2006, 111, .	3.3	33
23	Surface Emissivity of Arctic Sea Ice at AMSU Window Frequencies. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 2298-2306.	6.3	33
24	Estimating the snow depth, the snow–ice interface temperature, and the effective temperature of Arctic sea ice using Advanced Microwave Scanning Radiometer 2 and ice mass balance buoy data. Cryosphere, 2019, 13, 1283-1296.	3.9	33
25	Comparison of the ASI Ice Concentration Algorithm With Landsat-7 ETM+ and SAR Imagery. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 3008-3015.	6.3	31
26	Snow grain size retrieval SGSP from optical satellite data: Validation with ground measurements and detection of snow fall events. Remote Sensing of Environment, 2013, 128, 11-20.	11.0	31
27	Improving Multiyear Ice Concentration Estimates With Reanalysis Air Temperatures. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 2602-2614.	6.3	27
28	Reflective properties of melt ponds on sea ice. Cryosphere, 2018, 12, 1921-1937.	3.9	26
29	Combined SMAP–SMOS thin sea ice thickness retrieval. Cryosphere, 2019, 13, 675-691.	3.9	26
30	Sensitivity of microwave brightness temperatures to hydrometeors in a tropical deep convective cloud system at 89-190 GHz. Radio Science, 2005, 40, n/a-n/a.	1.6	25
31	Passive Polarimetric Microwave Signatures Observed Over Antarctica. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 1059-1075.	6.3	24
32	Intertidal Topographic Maps and Morphological Changes in the German Wadden Sea between 1996–1999 and 2006–2009 from the Waterline Method and SAR Images. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 3210-3224.	4.9	24
33	Atmospheric Correction of Sea Ice Concentration Retrieval for 89 GHz AMSR-E Observations. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2018, 11, 1442-1457.	4.9	24
34	Response of passive microwave sea ice concentration algorithms to thin ice. , 2014, , .		21
35	A new tracking algorithm for sea ice age distribution estimation. Cryosphere, 2018, 12, 2073-2085.	3.9	21
36	Comparison of different methods to retrieve optical-equivalent snow grain size in central Antarctica. Cryosphere, 2017, 11, 2727-2741.	3.9	21

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37	Living on the edge of a shrinking habitat: the ivory gull, *Pagophila eburnea* , an endangered sea-ice specialist. Biology Letters, 2016, 12, 20160277.	2.3	20
38	The color of melt ponds on Arctic sea ice. Cryosphere, 2018, 12, 1331-1345.	3.9	20
39	Step-by-Step Validation of Antarctic ASI AMSR-E Sea-Ice Concentrations by MODIS and an Aerial Image. IEEE Transactions on Geoscience and Remote Sensing, 2020, , 1-12.	6.3	19
40	Experiences With an Optimal Estimation Algorithm for Surface and Atmospheric Parameter Retrieval From Passive Microwave Data in the Arctic. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2017, 10, 3934-3947.	4.9	18
41	Sea Ice and Atmospheric Parameter Retrieval From Satellite Microwave Radiometers: Synergy of AMSR2 and SMOS Compared With the CIMR Candidate Mission. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015749.	2.6	16
42	Satellite Observations for Detecting and Forecasting Sea-Ice Conditions: A Summary of Advances Made in the SPICES Project by the EU's Horizon 2020 Programme. Remote Sensing, 2020, 12, 1214.	4.0	16
43	Observations of Land Surface Passive Polarimetry With the WindSat Instrument. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 2019-2028.	6.3	15
44	Antarctic Sea-Ice Classification Based on Conditional Random Fields From RADARSAT-2 Dual-Polarization Satellite Images. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 2451-2467.	4.9	15
45	Improving sea ice type discrimination by the simultaneous use of SSM/I and scatterometer data. Polar Research, 2003, 22, 35-42.	1.6	12
46	Sea Ice Emissivity Modeling at L-Band and Application to 2007 Pol-Ice Campaign Field Data. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 612-627.	6.3	12
47	Discrete dipole approximation simulations on GPUs using OpenCL—Application on cloud ice particles. Journal of Computational Science, 2011, 2, 262-271.	2.9	9
48	An automatic detection system for natural oil seep origin estimation in SAR images. , 2013, , .		8
49	Natural oil Seep Location Estimation in SAR images using direct and contextual information. , 2014, , .		8
50	Retrieval of total water vapour in the Arctic using microwave humidity sounders. Atmospheric Measurement Techniques, 2018, 11, 2067-2084.	3.1	8
51	Improved water vapour retrieval from AMSU-B and MHS in the Arctic. Atmospheric Measurement Techniques, 2020, 13, 3697-3715.	3.1	8
52	Validation of total water vapor retrieval with an airborne millimeter wave radiometer over Arctic sea ice. Radio Science, 2003, 38, n/a-n/a.	1.6	7
53	Improved cloud detection over sea ice and snow during Arctic summer using MERIS data. Atmospheric Measurement Techniques, 2020, 13, 6459-6472.	3.1	7
54	Intense Tropical Thunderstorms Detected by the Special Sensor Microwave Imager/Sounder. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 996-1005.	6.3	6

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55	Comparison of CloudSat cloud liquid water paths in arctic summer using ground-based microwave radiometer. Journal of Ocean University of China, 2010, 9, 333-342.	1.2	6
56	Analysis of WindSat Third and Fourth Stokes Components Over Arctic Sea Ice. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 1627-1636.	6.3	6
57	Shearlet-based edge detection: flame fronts and tidal flats. , 2015, , .		6
58	Retrieval of sea ice thickness during melt season from in situ, airborne and satellite imagery. , 2016, , .		6
59	Arctic Multiyear Ice Concentration Retrieval from SSM/I Data Using the NASA Team Algorithm with Dynamic Tie Points. Springer Earth System Sciences, 2015, , 99-108.	0.2	5
60	Azimuthal variations in polarimetric microwave measurements observed over Dome C, Antarctica. , 2006, , .		4
61	POLAR PROGRAM: Integrated Observation and Modeling of the arctic Sea Ice and Atmosphere. Bulletin of the American Meteorological Society, 2009, 90, 293-297.	3.3	4
62	Detectability of Polar Mesocyclones and Polar Lows in Data From Space-Borne Microwave Humidity Sounders. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 326-335.	4.9	4
63	Retrieving Ice Concentration From SMOS. IEEE Geoscience and Remote Sensing Letters, 2011, 8, 283-287.	3.1	3
64	Surface emission. , 2006, , 225-426.		3
65	Retrieval of microwave surface emissivities at TMI frequencies in Shouxian. Advances in Atmospheric Sciences, 2003, 20, 253-259.	4.3	2
66	Clouds discrimination and surface classification for the sea ice albedo retrieval from MODIS data. , 2012, , .		2
67	Erroneous sea-ice concentration retrieval in the East Antarctic. Annals of Glaciology, 2018, 59, 201-212.	1.4	2
68	IOMASA-Integrated Observing and Modelling of the Arctic Surface and Atmosphere. Elsevier Oceanography Series, 2003, 69, 272-278.	0.1	1
69	Polarimetric microwave emission from snow surfaces: 4<sup>th</sup> Stokes component analysis. , 2007, , .		1
70	Monitoring antarctic ice sheet melting periods with SSM/I19H Ghz data and time series analysis. , 2012, , .		1
71	Towards a Merged Total Water Vapour Retrieval from AMSU-B and AMSR-E Data in the Arctic Region. , 2018, , .		1
72	Remote sensing of Antarctic clouds with infrared and passive microwave sensors. Meteorologische Zeitschrift, 2002, 11, 21-36.	1.0	1

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73	On The Use Of Synthetic Holograms For High Resolution Scanning Acoustic Microscopy. Proceedings of SPIE, 1989, , .	0.8	0
74	Geolocation of AMSR-E data. , 2007, , .		0
75	Area of a polynya at Amery Ice Shelf derived from AMSR-E 89 GHz sea ice concentrations and MODIS images. , 2011, , .		0
76	Sea-ice minimum is not a one-off. Nature, 2011, 478, 188-188.	27.8	0
77	Cloud filtering with MERIS and AATSR for melt pond detection on Arctic sea ice. , 2016, , .		0
78	Sea Ice Observations. , 0, , .		0