Georg Heygster

List of Publications by Year
in descending order

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78 papers	2,285 citations	201674 27 h-index	233421 45 g-index
80 all docs	80 docs citations	80 times ranked	2827 citing authors

#	Article	IF	Citations
1	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
2	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
3	Satellite Observations for Detecting and Forecasting Sea-Ice Conditions: A Summary of Advances Made in the SPICES Project by the EUâ€™s Horizon 2020 Programme. Remote Sensing, 2020, 12, 1214.	4.0	16
4	Improved water vapour retrieval from AMSU-B and MHS in the Arctic. Atmospheric Measurement Techniques, 2020, 13, 3697-3715.	3.1	8
5	Improved cloud detection over sea ice and snow during Arctic summer using MERIS data. Atmospheric Measurement Techniques, 2020, 13, 6459-6472.	3.1	7
6	Monitoring Beach Topography and Nearshore Bathymetry Using Spaceborne Remote Sensing: A Review. Remote Sensing, 2019, 11, 2212.	4.0	88
7	Estimating the snow depth, the snowâ€“ice interface temperature, and the effective temperature of Arctic sea ice using Advanced Microwave Scanning RadiometerÂ2 and ice mass balance buoy data. Cryosphere, 2019, 13, 1283-1296.	3.9	33
8	Version 2 of the EUMETSAT OSI SAF and ESA CCI sea-ice concentration climate data records. Cryosphere, 2019, 13, 49-78.	3.9	209
9	Combined SMAPâ€“SMOS thin sea ice thickness retrieval. Cryosphere, 2019, 13, 675-691.	3.9	26
10	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
11	A new tracking algorithm for sea ice age distribution estimation. Cryosphere, 2018, 12, 2073-2085.	3.9	21
12	Reflective properties of melt ponds on sea ice. Cryosphere, 2018, 12, 1921-1937.	3.9	26
13	The color of melt ponds on Arctic sea ice. Cryosphere, 2018, 12, 1331-1345.	3.9	20
14	Erroneous sea-ice concentration retrieval in the East Antarctic. Annals of Glaciology, 2018, 59, 201-212.	1.4	2
15	Towards a Merged Total Water Vapour Retrieval from AMSU-B and AMSR-E Data in the Arctic Region. , 2018, , .		1
16	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
17	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
18	Retrieval of total water vapour in the Arctic using microwave humidity sounders. Atmospheric Measurement Techniques, 2018, 11, 2067-2084.	3.1	8

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19	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
20	Comparison of different methods to retrieve optical-equivalent snow grain size in central Antarctica. Cryosphere, 2017, 11, 2727-2741.	3.9	21
21	Reflective properties of white sea ice and snow. Cryosphere, 2016, 10, 2541-2557.	3.9	36
22	Improving Multiyear Sea Ice Concentration Estimates with Sea Ice Drift. Remote Sensing, 2016, 8, 397.	4.0	34
23	Retrieval of sea ice thickness during melt season from in situ, airborne and satellite imagery. , 2016, , .		6
24	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
25	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
26	Cloud filtering with MERIS and AATSR for melt pond detection on Arctic sea ice. , 2016, , .		0
27	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
28	Improving Multiyear Ice Concentration Estimates With Reanalysis Air Temperatures. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 2602-2614.	6.3	27
29	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
30	Shearlet-based edge detection: flame fronts and tidal flats. , 2015, , .		6
31	Worldwide variations in artificial skyglow. Scientific Reports, 2015, 5, 8409.	3.3	133
32	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
33	Natural oil Seep Location Estimation in SAR images using direct and contextual information. , 2014, , .		8
34	Response of passive microwave sea ice concentration algorithms to thin ice. , 2014, , .		21
35	Intertidal Topographic Maps and Morphological Changes in the German Wadden Sea between 1996â€“1999 and 2006â€“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
36	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

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37	An automatic detection system for natural oil seep origin estimation in SAR images. , 2013, , .		8
38	Monitoring antarctic ice sheet melting periods with SSM/119H Ghz data and time series analysis. , 2012, , .		1
39	Clouds discrimination and surface classification for the sea ice albedo retrieval from MODIS data. , 2012, , .		2
40	Area of a polynya at Amery Ice Shelf derived from AMSR-E 89 GHz sea ice concentrations and MODIS images. , 2011, , .		0
41	Discrete dipole approximation simulations on GPUs using OpenCLâ€"Application on cloud ice particles. Journal of Computational Science, 2011, 2, 262-271.	2.9	9
42	Retrieving Ice Concentration From SMOS. IEEE Geoscience and Remote Sensing Letters, 2011, 8, 283-287.	3.1	3
43	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
44	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
45	Sea-ice minimum is not a one-off. Nature, 2011, 478, 188-188.	27.8	0
46	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
47	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
48	Passive Polarimetric Microwave Signatures Observed Over Antarctica. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 1059-1075.	6.3	24
49	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
50	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
51	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
52	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
53	Surface Emissivity of Arctic Sea Ice at AMSU Window Frequencies. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 2298-2306.	6.3	33
54	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

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55	Exploring Arctic Transpolar Drift During Dramatic Sea Ice Retreat. Eos, 2008, 89, 21-22.	0.1	94
56	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
57	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
58	Polarimetric microwave emission from snow surfaces: 4th Stokes component analysis. , 2007, , .		1
59	Geolocation of AMSR-E data. , 2007, , .		0
60	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
61	Observations of Land Surface Passive Polarimetry With the WindSat Instrument. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 2019-2028.	6.3	15
62	Intercomparison of passive microwave sea ice concentration retrievals over the highâ€concentration Arctic sea ice. Journal of Geophysical Research, 2007, 112, .	3.3	135
63	Effect of cirrus clouds on the diurnal cycle of tropical deep convective clouds. Journal of Geophysical Research, 2006, 111, .	3.3	33
64	Azimuthal variations in polarimetric microwave measurements observed over Dome C, Antarctica. , 2006, , .		4
65	Surface emission. , 2006, , 225-426.		3
66	Detection of tropical deep convective clouds from AMSU-B water vapor channels measurements. Journal of Geophysical Research, 2005, 110, .	3.3	134
67	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
68	Retrieval of microwave surface emissivities at TMI frequencies in Shouxian. Advances in Atmospheric Sciences, 2003, 20, 253-259.	4.3	2
69	Improving sea ice type discrimination by the simultaneous use of SSM/I and scatterometer data. Polar Research, 2003, 22, 35-42.	1.6	81
70	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
71	Improving sea ice type discrimination by the simultaneous use of SSM/I and scatterometer data. Polar Research, 2003, 22, 35-42.	1.6	12
72	IOMASA-Integrated Observing and Modelling of the Arctic Surface and Atmosphere. Elsevier Oceanography Series, 2003, 69, 272-278.	0.1	1

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73	Remote sensing of Antarctic clouds with infrared and passive microwave sensors. Meteorologische Zeitschrift, 2002, 11, 21-36.	1.0	1
74	Atmospheric water vapor over Antarctica derived from Special Sensor Microwave/Temperature 2 data. Journal of Geophysical Research, 2001, 106, 10187-10203.	3.3	47
75	A combined radiative transfer model for sea ice, open ocean, and atmosphere. Radio Science, 1998, 33, 303-316.	1.6	33
76	On The Use Of Synthetic Holograms For High Resolution Scanning Acoustic Microscopy. Proceedings of SPIE, 1989, , .	0.8	0
77	Rank filters in digital image processing. Computer Graphics and Image Processing, 1982, 19, 148-164.	0.8	44
78	Sea Ice Observations. , 0, , .		0