Thorsten Markus

List of Publications by Year
in descending order

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60 papers	4,703 citations	94433 37 h-index	128289 60 g-index
60 all docs	60 docs citations	60 times ranked	3836 citing authors

#	Article	IF	Citations
1	The Ice, Cloud, and land Elevation Satellite-2 (ICESat-2): Science requirements, concept, and implementation. Remote Sensing of Environment, 2017, 190, 260-273.	11.0	600
2	Changes in Arctic melt season and implications for sea ice loss. Geophysical Research Letters, 2014, 41, 1216-1225.	4.0	531
3	An enhancement of the NASA Team sea ice algorithm. IEEE Transactions on Geoscience and Remote Sensing, 2000, 38, 1387-1398.	6.3	342
4	The Ice, Cloud, and Land Elevation Satellite â€“ 2 mission: A global geolocated photon product derived from the Advanced Topographic Laser Altimeter System. Remote Sensing of Environment, 2019, 233, 111325.	11.0	294
5	Sea ice concentration, ice temperature, and snow depth using AMSR-E data. IEEE Transactions on Geoscience and Remote Sensing, 2003, 41, 243-252.	6.3	279
6	Pervasive ice sheet mass loss reflects competing ocean and atmosphere processes. Science, 2020, 368, 1239-1242.	12.6	261
7	Satellite observations of Antarctic sea ice thickness and volume. Journal of Geophysical Research, 2012, 117, .	3.3	154
8	Solar partitioning in a changing Arctic sea-ice cover. Annals of Glaciology, 2011, 52, 192-196.	1.4	116
9	Estimation of Thin Ice Thickness and Detection of Fast Ice from SSM/I Data in the Antarctic Ocean. Journal of Atmospheric and Oceanic Technology, 2007, 24, 1757-1772.	1.3	101
10	An ultra-wideband, microwave radar for measuring snow thickness on sea ice and mapping near-surface internal layers in polar firn. Journal of Glaciology, 2013, 59, 244-254.	2.2	100
11	The Multiple Altimeter Beam Experimental Lidar (MABEL): An Airborne Simulator for the ICESat-2 Mission. Journal of Atmospheric and Oceanic Technology, 2013, 30, 345-352.	1.3	80
12	Arcticâ€scale assessment of satellite passive microwaveâ€derived snow depth on sea ice using Operation IceBridge airborne data. Journal of Geophysical Research: Oceans, 2013, 118, 2892-2905.	2.6	73
13	Intercomparison of Precipitation Estimates over the Arctic Ocean and Its Peripheral Seas from Reanalyses. Journal of Climate, 2018, 31, 8441-8462.	3.2	72
14	Arctic sea-ice melt in 2008 and the role of solar heating. Annals of Glaciology, 2011, 52, 355-359.	1.4	71
15	Observations of recent Arctic sea ice volume loss and its impact on ocean-atmosphere energy exchange and ice production. Journal of Geophysical Research, 2011, 116, .	3.3	63
16	Microwave Signatures of Snow on Sea Ice: Observations. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 3081-3090.	6.3	61
17	Snow Depth and Ice Thickness Measurements From the Beaufort and Chukchi Seas Collected During the AMSR-Ice03 Campaign. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 3009-3020.	6.3	58
18	Assessment of EOS Aqua AMSR-E Arctic Sea Ice Concentrations Using Landsat-7 and Airborne Microwave Imagery. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 3057-3069.	6.3	57

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19	Recent changes in the Arctic melt Season. Annals of Glaciology, 2006, 44, 367-374.	1.4	56
20	Comparison of ICESat Data With Airborne Laser Altimeter Measurements Over Arctic Sea Ice. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 1913-1924.	6.3	56
21	Comparison of aerial video and Landsat 7 data over ponded sea ice. Remote Sensing of Environment, 2003, 86, 458-469.	11.0	52
22	Winter Arctic Sea Ice Thickness From ICESatâ€2 Freeboards. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015764.	2.6	52
23	Assessment of the AMSR-E Sea Ice-Concentration Product at the Ice Edge Using RADARSAT-1 and MODIS Imagery. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 3070-3080.	6.3	51
24	Surface Height and Sea Ice Freeboard of the Arctic Ocean From ICESatâ€2: Characteristics and Early Results. Journal of Geophysical Research: Oceans, 2019, 124, 6942-6959.	2.6	51
25	Impact of Surface Roughness on AMSR-E Sea Ice Products. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 3103-3117.	6.3	50
26	Moisture flux changes and trends for the entire Arctic in 2003-2011 derived from EOS Aqua data. Journal of Geophysical Research: Oceans, 2013, 118, 5829-5843.	2.6	48
27	Ultrawideband Radar Measurements of Thickness of Snow Over Sea Ice. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 2715-2724.	6.3	47
28	Recent changes in panâ€Arctic melt onset from satellite passive microwave measurements. Geophysical Research Letters, 2013, 40, 522-528.	4.0	47
29	Estimation of sea ice thickness distributions through the combination of snow depth and satellite laser altimetry data. Journal of Geophysical Research, 2009, 114, .	3.3	45
30	Skillful spring forecasts of September Arctic sea ice extent using passive microwave sea ice observations. Earth's Future, 2017, 5, 254-263.	6.3	45
31	The NASA Eulerian Snow on Sea Ice Model (NESOSIM) v1.0: initial model development and analysis. Geoscientific Model Development, 2018, 11, 4577-4602.	3.6	45
32	Evaluation of late summer passive microwave Arctic sea ice retrievals. IEEE Transactions on Geoscience and Remote Sensing, 2002, 40, 348-356.	6.3	42
33	Freeboard, snow depth and sea-ice roughness in East Antarctica from in situ and multiple satellite data. Annals of Glaciology, 2011, 52, 242-248.	1.4	42
34	Potential basin-scale estimates of Arctic snow depth with sea ice freeboards from CryoSat-2 and ICESat-2: An exploratory analysis. Advances in Space Research, 2018, 62, 1243-1250.	2.6	41
35	Dynamic Approaches for Snow Depth Retrieval From Spaceborne Microwave Brightness Temperature. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 1955-1967.	6.3	40
36	ICESatâ€2 Surface Height and Sea Ice Freeboard Assessed With ATM Lidar Acquisitions From Operation IceBridge. Geophysical Research Letters, 2019, 46, 11228-11236.	4.0	38

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37	Microwave Signatures of Snow on Sea Ice: Modeling. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 3091-3102.	6.3	37
38	Profiling Sea Ice with a Multiple Altimeter Beam Experimental Lidar (MABEL). Journal of Atmospheric and Oceanic Technology, 2014, 31, 1151-1168.	1.3	37
39	Regional-scale sea-ice and snow thickness distributions from in situ and satellite measurements over East Antarctica during SIPEX 2007. Deep-Sea Research Part II: Topical Studies in Oceanography, 2011, 58, 1125-1136.	1.4	36
40	The potential of using Landsat 7 ETM+ for the classification of sea-ice surface conditions during summer. Annals of Glaciology, 2002, 34, 415-419.	1.4	34
41	Detecting and measuring new snow accumulation on ice sheets by satellite remote sensing. Remote Sensing of Environment, 2005, 98, 388-402.	11.0	34
42	Arise (Antarctic Remote Ice Sensing Experiment) in the East 2003: validation of Satellite-derived Sea-ice data products. Annals of Glaciology, 2006, 44, 288-296.	1.4	33
43	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
44	MABEL photon-counting laser altimetry data in Alaska for ICESat-2 simulations and development. Cryosphere, 2016, 10, 1707-1719.	3.9	29
45	Applications for ICESat-2 Data: From NASA's Early Adopter Program. IEEE Geoscience and Remote Sensing Magazine, 2016, 4, 24-37.	9.6	28
46	Testing the ice-water discrimination and freeboard retrieval algorithms for the ICESat-2 mission. Remote Sensing of Environment, 2016, 183, 13-25.	11.0	28
47	Improved determination of the sea ice edge with SSM/I data for small-scale analyses. IEEE Transactions on Geoscience and Remote Sensing, 1998, 36, 1795-1808.	6.3	27
48	A Comparison of Snow Depth on Sea Ice Retrievals Using Airborne Altimeters and an AMSR-E Simulator. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 3027-3040.	6.3	27
49	Assessment of AMSR-E Antarctic Winter Sea-Ice Concentrations Using Aqua MODIS. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 3331-3339.	6.3	25
50	Comparison of NASA Team2 and AES-york ice concentration algorithms against operational ice charts from the Canadian ice service. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 2164-2175.	6.3	23
51	NASA Team 2 Sea Ice Concentration Algorithm Retrieval Uncertainty. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 7336-7352.	6.3	20
52	ERS SAR characterization of coastal polynyas in the Arctic and comparison with SSM/I and numerical model investigations. Remote Sensing of Environment, 2002, 80, 321-335.	11.0	19
53	Spatial Variability of Barrow-Area Shore-Fast Sea Ice and Its Relationships to Passive Microwave Emissivity. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 3021-3031.	6.3	14
54	March 2003 EOS Aqua AMSR-E Arctic Sea Ice Field Campaign. IEEE Transactions on Geoscience and Remote Sensing, 2006, 44, 3003-3008.	6.3	13

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55	Interannual and regional variability of Southern Ocean snow on sea ice. Annals of Glaciology, 2006, 44, 53-57.	1.4	13
56	Estimation of sea-ice thickness and volume in the Sea of Okhotsk based on ICESat data. Annals of Glaciology, 2018, 59, 101-111.	1.4	12
57	Antarctic ice shelf thickness change from multimission lidar mapping. Cryosphere, 2019, 13, 1801-1817.	3.9	8
58	Characterizing the System Impulse Response Function From Photon-Counting LiDAR Data. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 6542-6551.	6.3	7
59	Lasers, penguins, and polar bears: Novel outreach and education approaches for NASA's ICESat-2 mission. Acta Astronautica, 2018, 148, 396-402.	3.2	5
60	Detection of coastal polynyas with passive microwave data. Annals of Glaciology, 1993, 17, 351-355.	1.4	2