Guy J Schumann

List of Publications by Year
in descending order

91	6,752	57758	64796
papers	citations	44 h-index	79 g-index

130	130	130	4802
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An Overview of Flood Concepts, Challenges, and Future Directions. Journal of Hydrologic Engineering - ASCE, 2022, 27, .	1.9	36
2	Surface Water Dynamics from Space: A Round Robin Intercomparison of Using Optical and SAR High-Resolution Satellite Observations for Regional Surface Water Detection. Remote Sensing, 2022, 14, 2410.	4.0	14
3	Combined Modeling of US Fluvial, Pluvial, and Coastal Flood Hazard Under Current and Future Climates. Water Resources Research, 2021, 57, e2020WR028673.	4.2	137
4	DFOâ€"Flood Observatory. , 2021, , 147-164.		9
5	The Full Potential of EO for Flood Applications: Managing Expectations. , 2021, , 305-320.		2
6	On the Impacts of Observation Location, Timing, and Frequency on Flood Extent Assimilation Performance. Water Resources Research, 2021, 57, e2020WR028238.	4.2	15
7	A Mutual Informationâ€Based Likelihood Function for Particle Filter Flood Extent Assimilation. Water Resources Research, 2021, 57, e2020WR027859.	4.2	15
8	Towards global flood mapping onboard low cost satellites with machine learning. Scientific Reports, 2021, 11, 7249.	3.3	76
9	Generating Flood Hazard Maps Based on an Innovative Spatial Interpolation Methodology for Precipitation. Atmosphere, 2021, 12, 1336.	2.3	3
10	Bare Earth DEM Generation for Large Floodplains Using Image Classification in High-Resolution Single-Pass InSAR. Frontiers in Earth Science, 2020, 8, .	1.8	6
11	Comparing earth observation and inundation models to map flood hazards. Environmental Research Letters, 2020, 15, 124032.	5.2	21
12	Grand Challenges in Microwave Remote Sensing. Frontiers in Remote Sensing, 2020, 1, .	3.5	2
13	Applying Remote Sensing to Support Flood Risk Assessment and Relief Agencies: A Global to Local Approach. , 2020, , .		3
14	Flood Mapping Based on Synthetic Aperture Radar: An Assessment of Established Approaches. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 722-739.	6.3	78
15	The Utility of SMAP Soil Moisture and Freeze-Thaw Datasets as Precursors to Spring-Melt Flood Conditions: A Case Study in the Red River of the North Basin. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2019, 12, 2848-2861.	4.9	12
16	The need for scientific rigour and accountability in flood mapping to better support disaster response. Hydrological Processes, 2019, 33, 3138-3142.	2.6	12
17	Will the Surface Water and Ocean Topography (SWOT) Satellite Mission Observe Floods?. Geophysical Research Letters, 2019, 46, 10435-10445.	4.0	28
18	Challenges, Opportunities, and Pitfalls for Global Coupled Hydrologicâ€Hydraulic Modeling of Floods. Water Resources Research, 2019, 55, 5277-5300.	4.2	52

#	Article	IF	Citations
19	Rapid Mapping of Small-Scale River-Floodplain Environments Using UAV SfM Supports Classical Theory. Remote Sensing, 2019, 11, 982.	4.0	30
20	Preface: Remote Sensing for Flood Mapping and Monitoring of Flood Dynamics. Remote Sensing, 2019, 11, 943.	4.0	41
21	Global Relationships Between River Width, Slope, Catchment Area, Meander Wavelength, Sinuosity, and Discharge. Geophysical Research Letters, 2019, 46, 3252-3262.	4.0	91
22	A global network for operational flood risk reduction. Environmental Science and Policy, 2018, 84, 149-158.	4.9	89
23	The Need for a High-Accuracy, Open-Access Global DEM. Frontiers in Earth Science, 2018, 6, .	1.8	73
24	Assisting Flood Disaster Response with Earth Observation Data and Products: A Critical Assessment. Remote Sensing, 2018, 10, 1230.	4.0	94
25	Flow Duration Curve from Satellite: Potential of a Lifetime SWOT Mission. Remote Sensing, 2018, 10, 1107.	4.0	11
26	Impact of the timing of a SAR image acquisition on the calibration of a flood inundation model. Advances in Water Resources, 2017, 100, 126-138.	3.8	27
27	Can Atmospheric Reanalysis Data Sets Be Used to Reproduce Flooding Over Large Scales?. Geophysical Research Letters, 2017, 44, 10,369.	4.0	16
28	Engaging the User Community for Advancing Societal Applications of the Surface Water Ocean Topography Mission. Bulletin of the American Meteorological Society, 2017, 98, ES285-ES290.	3.3	9
29	Automated River Reach Definition Strategies: Applications for the Surface Water and Ocean Topography Mission. Water Resources Research, 2017, 53, 8164-8186.	4.2	46
30	A Method to Assess Localized Impact of Better Floodplain Topography on Flood Risk Prediction. Advances in Meteorology, 2016, 2016, 1-8.	1.6	4
31	High-Accuracy Elevation Data at Large Scales from Airborne Single-Pass SAR Interferometry. Frontiers in Earth Science, 2016, 3, .	1.8	14
32	An intercomparison of remote sensing river discharge estimation algorithms from measurements of river height, width, and slope. Water Resources Research, 2016, 52, 4527-4549.	4.2	163
33	A Global Capacity Building Vision for Societal Applications of Earth Observing Systems and Data: Key Questions and Recommendations. Bulletin of the American Meteorological Society, 2016, 97, 1295-1299.	3.3	7
34	Exploiting the proliferation of current and future satellite observations of rivers. Hydrological Processes, 2016, 30, 2891-2896.	2.6	42
35	Role of Earth Observation Data in Disaster Response and Recovery: From Science to Capacity Building. Springer Remote Sensing/photogrammetry, 2016, , 119-146.	0.4	9
36	Rethinking flood hazard at the global scale. Geophysical Research Letters, 2016, 43, 10,249.	4.0	41

#	Article	IF	Citations
37	Unlocking the full potential of Earth observation during the 2015 Texas flood disaster. Water Resources Research, 2016, 52, 3288-3293.	4.2	34
38	Preface: Remote Sensing in Flood Monitoring and Management. Remote Sensing, 2015, 7, 17013-17015.	4.0	26
39	A review of lowâ€cost spaceâ€borne data for flood modelling: topography, flood extent and water level. Hydrological Processes, 2015, 29, 3368-3387.	2.6	107
40	Microwave remote sensing of flood inundation. Physics and Chemistry of the Earth, 2015, 83-84, 84-95.	2.9	134
41	Sea surface salinity variability in response to the Congo river discharge. Continental Shelf Research, 2015, 99, 35-45.	1.8	24
42	Measuring and Mapping Flood Processes. , 2015, , 35-64.		6
43	Fight floods on a global scale. Nature, 2014, 507, 169-169.	27.8	79
44	ROCâ€based calibration of flood inundation models. Hydrological Processes, 2014, 28, 5495-5502.	2.6	31
45	Observing Global Surface Water Flood Dynamics. Surveys in Geophysics, 2014, 35, 839-852.	4.6	40
46	Estimating the impact of satellite observations on the predictability of large-scale hydraulic models. Advances in Water Resources, 2014, 73, 44-54.	3.8	56
47	Megaflood analysis through channel networks of the Athabasca Valles, Mars based on multi-resolution stereo DTMs and 2D hydrodynamic modeling. Planetary and Space Science, 2014, 99, 55-69.	1.7	6
48	Downscaling coarse grid hydrodynamic model simulations over large domains. Journal of Hydrology, 2014, 508, 289-298.	5.4	34
49	Problems with binary pattern measures for flood model evaluation. Hydrological Processes, 2014, 28, 4928-4937.	2.6	74
50	SRTM vegetation removal and hydrodynamic modeling accuracy. Water Resources Research, 2013, 49, 5276-5289.	4.2	105
51	A Change Detection Approach to Flood Mapping in Urban Areas Using TerraSAR-X. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 2417-2430.	6.3	320
52	A first large-scale flood inundation forecasting model. Water Resources Research, 2013, 49, 6248-6257.	4.2	150
53	Understanding the variability of an extreme storm tide along a coastline. Estuarine, Coastal and Shelf Science, 2013, 123, 19-25.	2.1	29
54	HP - Special Issue on Flood Risk and Uncertainty. Hydrological Processes, 2013, 27, 1291-1291.	2.6	4

#	Article	IF	Citations
55	A simple global river bankfull width and depth database. Water Resources Research, 2013, 49, 7164-7168.	4.2	168
56	A storm surge inundation model of the northern Bay of Bengal using publicly available data. Quarterly Journal of the Royal Meteorological Society, 2013, 139, 358-369.	2.7	100
57	Hydraulic characterization of the middle reach of the Congo River. Water Resources Research, 2013, 49, 5059-5070.	4.2	86
58	Observing Global Surface Water Flood Dynamics. Space Sciences Series of ISSI, 2013, , 839-852.	0.0	6
59	Near Real-Time Flood Detection in Urban and Rural Areas Using High-Resolution Synthetic Aperture Radar Images. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 3041-3052.	6.3	165
60	Automatic near real-time selection of flood water levels from high resolution Synthetic Aperture Radar images for assimilation into hydraulic models: A case study. Remote Sensing of Environment, 2012, 124, 705-716.	11.0	91
61	Geodetic corrections to Amazon River water level gauges using ICESat altimetry. Water Resources Research, 2012, 48, .	4.2	51
62	Floodplain channel morphology and networks of the middle Amazon River. Water Resources Research, 2012, 48, .	4.2	76
63	A subgrid channel model for simulating river hydraulics and floodplain inundation over large and data sparse areas. Water Resources Research, 2012, 48, .	4.2	339
64	A near real-time algorithm for flood detection in urban and rural areas using high resolution Synthetic Aperture Radar images. , 2011, , .		4
65	Towards an automated SAR-based flood monitoring system: Lessons learned from two case studies. Physics and Chemistry of the Earth, 2011, 36, 241-252.	2.9	356
66	Tracking water level changes of the Amazon Basin with space-borne remote sensing and integration with large scale hydrodynamic modelling: A review. Physics and Chemistry of the Earth, 2011, 36, 223-231.	2.9	29
67	Selecting the appropriate hydraulic model structure using low-resolution satellite imagery. Advances in Water Resources, 2011, 34, 38-46.	3.8	32
68	Evaluating a new LISFLOODâ€FP formulation with data from the summer 2007 floods in Tewkesbury, UK. Journal of Flood Risk Management, 2011, 4, 88-95.	3.3	116
69	Timely Low Resolution SAR Imagery To Support Floodplain Modelling: a Case Study Review. Surveys in Geophysics, 2011, 32, 255-269.	4.6	76
70	The accuracy of sequential aerial photography and SAR data for observing urban flood dynamics, a case study of the UK summer 2007 floods. Remote Sensing of Environment, 2011, 115, 2536-2546.	11.0	125
71	Flood Detection in Urban Areas Using TerraSAR-X. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 882-894.	6.3	225
72	The direct use of radar satellites for event-specific flood risk mapping. Remote Sensing Letters, 2010, 1, 75-84.	1.4	31

#	Article	IF	Citations
73	Near realâ€time flood wave approximation on large rivers from space: Application to the River Po, Italy. Water Resources Research, 2010, 46, .	4.2	90
74	Flood-plain mapping: a critical discussion of deterministic and probabilistic approaches. Hydrological Sciences Journal, 2010, 55, 364-376.	2.6	213
75	Calibration and sequential updating of a coupled hydrologic-hydraulic model using remote sensing-derived water stages. Hydrology and Earth System Sciences, 2009, 13, 367-380.	4.9	61
76	Assessment of soil moisture fields from imperfect climate models with uncertain satellite observations. Hydrology and Earth System Sciences, 2009, 13, 1545-1553.	4.9	21
77	A technique for the calibration of hydraulic models using uncertain satellite observations of flood extent. Journal of Hydrology, 2009, 367, 276-282.	5.4	142
78	Water Level Estimation and Reduction of Hydraulic Model Calibration Uncertainties Using Satellite SAR Images of Floods. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 431-441.	6.3	108
79	Near real time satellite imagery to support and verify timely flood modelling. Hydrological Processes, 2009, 23, 799-803.	2.6	69
80	A data assimilation approach to discharge estimation from space. Hydrological Processes, 2009, 23, 3641-3649.	2.6	132
81	The Utility of Spaceborne Radar to Render Flood Inundation Maps Based on Multialgorithm Ensembles. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 2801-2807.	6.3	120
82	Progress in integration of remote sensingâ€“derived flood extent and stage data and hydraulic models. Reviews of Geophysics, 2009, 47, .	23.0	272
83	Estimating uncertainty associated with water stages from a single SAR image. Advances in Water Resources, 2008, 31, 1038-1047.	3.8	20
84	Comparison of remotely sensed water stages from LiDAR, topographic contours and SRTM. ISPRS Journal of Photogrammetry and Remote Sensing, 2008, 63, 283-296.	11.1	176
85	Conditioning Water Stages From Satellite Imagery on Uncertain Data Points. IEEE Geoscience and Remote Sensing Letters, 2008, 5, 810-813.	3.1	29
86	Evaluating uncertain flood inundation predictions with uncertain remotely sensed water stages. International Journal of River Basin Management, 2008, 6, 187-199.	2.7	17
87	Integration of SAR-derived river inundation areas, high-precision topographic data and a river flow model toward near real-time flood management. International Journal of Applied Earth Observation and Geoinformation, 2007, 9, 247-263.	2.8	218
88	High-Resolution 3-D Flood Information From Radar Imagery for Flood Hazard Management. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 1715-1725.	6.3	155
89	Deriving distributed roughness values from satellite radar data for flood inundation modelling. Journal of Hydrology, 2007, 344, 96-111.	5.4	125
90	Application of a degree-day snow depth model to a Swiss glacierised catchment to improve neural network discharge forecasts. Hydrology Research, 2005, 36, 99-111.	2.7	2

#	Article	IF	Citations
91	DisasterAWARE â€“ A GLOBAL ALERTING PLATFORM FOR FLOOD EVENTS. ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 0, VI-3/W1-2020, 107-113.	0.0	5