Guy J-p Schumann

List of Publications by Year
in descending order

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117	7,447	56860	57558
papers	citations	44 h-index	83 g-index

143	143	143	6668
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Towards an automated SAR-based flood monitoring system: Lessons learned from two case studies. Physics and Chemistry of the Earth, 2011, 36, 241-252.	3.1	365
2	A subgrid channel model for simulating river hydraulics and floodplain inundation over large and data sparse areas. Water Resources Research, 2012, 48, .	4.2	354
3	Conformational Equilibrium of Bis(trifluoromethanesulfonyl) Imide Anion of a Room-Temperature Ionic Liquid:Â Raman Spectroscopic Study and DFT Calculations. Journal of Physical Chemistry B, 2006, 110, 8179-8183.	2.7	338
4	A Change Detection Approach to Flood Mapping in Urban Areas Using TerraSAR-X. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 2417-2430.	6.4	335
5	Progress in integration of remote sensingâ€“derived flood extent and stage data and hydraulic models. Reviews of Geophysics, 2009, 47, .	23.3	280
6	Flood Detection in Urban Areas Using TerraSAR-X. IEEE Transactions on Geoscience and Remote Sensing, 2010, 48, 882-894.	6.4	230
7	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.	1.2	220
8	Flood-plain mapping: a critical discussion of deterministic and probabilistic approaches. Hydrological Sciences Journal, 2010, 55, 364-376.	2.7	220
9	Comparison of remotely sensed water stages from LiDAR, topographic contours and SRTM. ISPRS Journal of Photogrammetry and Remote Sensing, 2008, 63, 283-296.	11.2	180
10	A simple global river bankfull width and depth database. Water Resources Research, 2013, 49, 7164-7168.	4.2	177
11	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	175
12	Combined Modeling of US Fluvial, Pluvial, and Coastal Flood Hazard Under Current and Future Climates. Water Resources Research, 2021, 57, e2020WR028673.	4.2	171
13	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.	6.4	170
14	High-Resolution 3-D Flood Information From Radar Imagery for Flood Hazard Management. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 1715-1725.	6.4	158
15	A first large-scale flood inundation forecasting model. Water Resources Research, 2013, 49, 6248-6257.	4.2	155
16	A technique for the calibration of hydraulic models using uncertain satellite observations of flood extent. Journal of Hydrology, 2009, 367, 276-282.	5.6	147
17	Microwave remote sensing of flood inundation. Physics and Chemistry of the Earth, 2015, 83-84, 84-95.	3.1	144
18	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.	11.1	131

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19	Deriving distributed roughness values from satellite radar data for flood inundation modelling. Journal of Hydrology, 2007, 344, 96-111.	5.6	127
20	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.	6.4	122
21	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.	3.4	118
22	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.	6.4	110
23	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	110
24	SRTM vegetation removal and hydrodynamic modeling accuracy. Water Resources Research, 2013, 49, 5276-5289.	4.2	109
25	Assisting Flood Disaster Response with Earth Observation Data and Products: A Critical Assessment. Remote Sensing, 2018, 10, 1230.	4.1	106
26	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	105
27	Global Relationships Between River Width, Slope, Catchment Area, Meander Wavelength, Sinuosity, and Discharge. Geophysical Research Letters, 2019, 46, 3252-3262.	4.0	102
28	A global network for operational flood risk reduction. Environmental Science and Policy, 2018, 84, 149-158.	5.0	97
29	Towards global flood mapping onboard low cost satellites with machine learning. Scientific Reports, 2021, 11, 7249.	3.4	94
30	Near realâ€time flood wave approximation on large rivers from space: Application to the River Po, Italy. Water Resources Research, 2010, 46, .	4.2	92
31	Hydraulic characterization of the middle reach of the Congo River. Water Resources Research, 2013, 49, 5059-5070.	4.2	89
32	Flood Mapping Based on Synthetic Aperture Radar: An Assessment of Established Approaches. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 722-739.	6.4	85
33	Fight floods on a global scale. Nature, 2014, 507, 169-169.	36.2	82
34	Problems with binary pattern measures for flood model evaluation. Hydrological Processes, 2014, 28, 4928-4937.	2.6	79
35	Floodplain channel morphology and networks of the middle Amazon River. Water Resources Research, 2012, 48, .	4.2	78
36	The Need for a High-Accuracy, Open-Access Global DEM. Frontiers in Earth Science, 2018, 6, .	1.8	78

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37	Timely Low Resolution SAR Imagery To Support Floodplain Modelling: a Case Study Review. Surveys in Geophysics, 2011, 32, 255-269.	4.8	76
38	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.	5.0	61
39	Challenges, Opportunities, and Pitfalls for Global Coupled Hydrologicâ€Hydraulic Modeling of Floods. Water Resources Research, 2019, 55, 5277-5300.	4.2	58
40	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
41	Geodetic corrections to Amazon River water level gauges using ICESat altimetry. Water Resources Research, 2012, 48, .	4.2	54
42	Automated River Reach Definition Strategies: Applications for the Surface Water and Ocean Topography Mission. Water Resources Research, 2017, 53, 8164-8186.	4.2	49
43	An Overview of Flood Concepts, Challenges, and Future Directions. Journal of Hydrologic Engineering - ASCE, 2022, 27, .	2.2	49
44	Rethinking flood hazard at the global scale. Geophysical Research Letters, 2016, 43, 10,249.	4.0	45
45	Exploiting the proliferation of current and future satellite observations of rivers. Hydrological Processes, 2016, 30, 2891-2896.	2.6	43
46	Preface: Remote Sensing for Flood Mapping and Monitoring of Flood Dynamics. Remote Sensing, 2019, 11, 943.	4.1	43
47	Observing Global Surface Water Flood Dynamics. Surveys in Geophysics, 2014, 35, 839-852.	4.8	41
48	Unlocking the full potential of Earth observation during the 2015 Texas flood disaster. Water Resources Research, 2016, 52, 3288-3293.	4.2	35
49	Downscaling coarse grid hydrodynamic model simulations over large domains. Journal of Hydrology, 2014, 508, 289-298.	5.6	34
50	The direct use of radar satellites for event-specific flood risk mapping. Remote Sensing Letters, 2010, 1, 75-84.	1.4	32
51	Selecting the appropriate hydraulic model structure using low-resolution satellite imagery. Advances in Water Resources, 2011, 34, 38-46.	3.8	32
52	Will the Surface Water and Ocean Topography (SWOT) Satellite Mission Observe Floods?. Geophysical Research Letters, 2019, 46, 10435-10445.	4.0	32
53	Rapid Mapping of Small-Scale River-Floodplain Environments Using UAV SfM Supports Classical Theory. Remote Sensing, 2019, 11, 982.	4.1	32
54	ROCâ€based calibration of flood inundation models. Hydrological Processes, 2014, 28, 5495-5502.	2.6	31

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55	Conditioning Water Stages From Satellite Imagery on Uncertain Data Points. IEEE Geoscience and Remote Sensing Letters, 2008, 5, 810-813.	3.1	29
56	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.	3.1	29
57	Understanding the variability of an extreme storm tide along a coastline. Estuarine, Coastal and Shelf Science, 2013, 123, 19-25.	2.1	29
58	Sea surface salinity variability in response to the Congo river discharge. Continental Shelf Research, 2015, 99, 35-45.	1.9	28
59	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	28
60	Preface: Remote Sensing in Flood Monitoring and Management. Remote Sensing, 2015, 7, 17013-17015.	4.1	26
61	Hardiness, psychosocial factors and shift work tolerance among nurses â€“ a 2â€year followâ€up study. Journal of Advanced Nursing, 2016, 72, 1800-1812.	3.7	26
62	The influence of substrate surface conditioning and biofilm age on the composition of Enterococcus faecalis biofilms. International Endodontic Journal, 2020, 53, 53-61.	5.0	26
63	Capillary electrochromatography of amino acids with a protein-bonded porous-layer open-tubular column. Journal of Separation Science, 2006, 29, 277-281.	2.9	23
64	Comparing earth observation and inundation models to map flood hazards. Environmental Research Letters, 2020, 15, 124032.	5.3	22
65	Assessment of soil moisture fields from imperfect climate models with uncertain satellite observations. Hydrology and Earth System Sciences, 2009, 13, 1545-1553.	5.0	21
66	Estimating uncertainty associated with water stages from a single SAR image. Advances in Water Resources, 2008, 31, 1038-1047.	3.8	20
67	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.	4.1	18
68	Evaluating uncertain flood inundation predictions with uncertain remotely sensed water stages. International Journal of River Basin Management, 2008, 6, 187-199.	2.5	17
69	The Use of Radar Imagery in Riverine Flood Inundation Studies. , 2012, , 115-140.		17
70	Can Atmospheric Reanalysis Data Sets Be Used to Reproduce Flooding Over Large Scales?. Geophysical Research Letters, 2017, 44, 10,369.	4.0	16
71	Flood Mapping Using Synthetic Aperture Radar Sensors From Local to Global Scales. Geophysical Monograph Series, 2018, , 55-77.	0.0	16
72	A Mutual Informationâ€Based Likelihood Function for Particle Filter Flood Extent Assimilation. Water Resources Research, 2021, 57, e2020WR027859.	4.2	16

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73	High-Accuracy Elevation Data at Large Scales from Airborne Single-Pass SAR Interferometry. Frontiers in Earth Science, 2016, 3, .	1.8	15
74	Global Flood Hazard Mapping, Modeling, and Forecasting. Geophysical Monograph Series, 2018, , 239-244.	0.0	15
75	On the Impacts of Observation Location, Timing, and Frequency on Flood Extent Assimilation Performance. Water Resources Research, 2021, 57, e2020WR028238.	4.2	15
76	Flood Modeling and Prediction Using Earth Observation Data. Surveys in Geophysics, 2023, 44, 1553-1578.	4.8	15
77	Institutionen als Kognitionsproblem - Bemerkungen zu einer neurosensorischen Vermutung. Ordo, 2000, 51, 119-126.	0.1	14
78	Flow Duration Curve from Satellite: Potential of a Lifetime SWOT Mission. Remote Sensing, 2018, 10, 1107.	4.1	13
79	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	13
80	The need for scientific rigour and accountability in flood mapping to better support disaster response. Hydrological Processes, 2019, 33, 3138-3142.	2.6	13
81	Data Utilization in Flood Inundation Modelling. , 2010, , 209-233.		11
82	Global Flood Risk Modeling and Projections of Climate Change Impacts. Geophysical Monograph Series, 2018, , 185-203.	0.0	11
83	Flood Risk Mapping From Orbital Remote Sensing. Geophysical Monograph Series, 2018, , 43-54.	0.0	11
84	Estimating Change in Flooding for the 21st Century Under a Conservative RCP Forcing. Geophysical Monograph Series, 2018, , 157-167.	0.0	10
85	DFOâ€"Flood Observatory. , 2021, , 147-164.		10
86	Measuring and Mapping Flood Processes. , 2015, , 35-64.		9
87	Role of Earth Observation Data in Disaster Response and Recovery: From Science to Capacity Building. Springer Remote Sensing/photogrammetry, 2016, , 119-146.	0.0	9
88	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.	5.5	9
89	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.	5.5	8
90	The Need for Mapping, Modeling, and Predicting Flood Hazard and Risk at the Global Scale. Geophysical Monograph Series, 2018, , 1-15.	0.0	7

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91	Rainfall Information for Global Flood Modeling. Geophysical Monograph Series, 2018, , 17-42.	0.0	7
92	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
93	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
94	Observing Global Surface Water Flood Dynamics. Space Sciences Series of ISSI, 2013, , 839-852.	0.0	6
95	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	6
96	Data Assimilation and River Hydrodynamic Modeling Over Large Scales. Geophysical Monograph Series, 2018, , 229-237.	0.0	5
97	Global Flood Monitoring Using Satellite Precipitation and Hydrological Modeling. Geophysical Monograph Series, 2018, , 87-113.	0.0	5
98	A near real-time algorithm for flood detection in urban and rural areas using high resolution Synthetic Aperture Radar images. , 2011, , .		4
99	A Method to Assess Localized Impact of Better Floodplain Topography on Flood Risk Prediction. Advances in Meteorology, 2016, 2016, 1-8.	1.7	4
100	Generating Flood Hazard Maps Based on an Innovative Spatial Interpolation Methodology for Precipitation. Atmosphere, 2021, 12, 1336.	2.3	4
101	Grand Challenges in Microwave Remote Sensing. Frontiers in Remote Sensing, 2020, 1, .	3.5	4
102	A multi-sensor approach for increased measurements of floods and their societal impacts from space. Communications Earth & Environment, 2023, 4, .	6.7	4
103	Modeling and Mapping of Global Flood Hazard Layers. Geophysical Monograph Series, 2018, , 131-155.	0.0	3
104	Applying Remote Sensing to Support Flood Risk Assessment and Relief Agencies: A Global to Local Approach. , 2020, , .		3
105	Simulating Changes in Hydrological Extremesâ€"Future Scenarios for Morocco. Water (Switzerland), 2023, 15, 2722.	2.8	3
106	Recent advances in mapping and modelling flood processes in lowland areas. Physics and Chemistry of the Earth, 2011, 36, 221-222.	3.1	2
107	The Full Potential of EO for Flood Applications: Managing Expectations. , 2021, , 305-320.		2
108	Global Flood Partnership. Geophysical Monograph Series, 2021, , 307-322.	0.0	2

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109	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.	2.5	2
110	Reviewing Applications of Remote Sensing Techniques to Hydrologic Research in Subâ€Saharan Africa, with a Special Focus on the Congo Basin. Geophysical Monograph Series, 2022, , 295-321.	0.0	2
111	Reproducibility and replicability of flood models. Hydrological Processes, 2022, 36, .	2.6	2
112	From Precipitation to Damage. Geophysical Monograph Series, 2018, , 169-183.	0.0	1
113	Flood Hazard Mapping in Dataâ€Scarce Areas. Geophysical Monograph Series, 2018, , 79-86.	0.0	0
114	Integrating Earth Observation Data of Floods with Largeâ€Scale Hydrodynamic Models. Geophysical Monograph Series, 2021, , 123-135.	0.0	0
115	Examen des applications des techniques de tÃ©lÃ©dÃ©tection Ã la recherche hydrologique en Afrique subsaharienne, avec un accent particulier sur le bassin du Congo. Geophysical Monograph Series, 2022, , 303-332.	0.0	0
116	Automated Surface Runoff Estimation with the Spectral Unmixing of Remotely Sensed Multispectral Imagery. Remote Sensing, 2024, 16, 136.	4.1	0
117	Assessing a Model-of-Models Approach for Global Flood Forecasting and Alerting. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2024, 17, 9641-9650.	4.9	0