Andreas GÃ¼ntner

List of Publications by Year
in descending order

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106	5,393	57758	88630
papers	citations	44 h-index	70 g-index

142	142	142	5115
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Substantial glacier mass loss in the Tien Shan over the past 50 years. Nature Geoscience, 2015, 8, 716-722.	12.9	332
2	GRACE observations of changes in continental water storage. Global and Planetary Change, 2006, 50, 112-126.	3.5	204
3	Time variations of land water storage from an inversion of 2 years of GRACE geoids. Earth and Planetary Science Letters, 2005, 235, 283-301.	4.4	183
4	A global analysis of temporal and spatial variations in continental water storage. Water Resources Research, 2007, 43, .	4.2	158
5	Attribution of streamflow trends in snow and glacier meltâ€dominated catchments of the <scp>T</scp>arim <scp>R</scp>iver, Central <scp>A</scp>sia. Water Resources Research, 2015, 51, 4727-4750.	4.2	146
6	What Can be Expected from the GRACE-FO Laser Ranging Interferometer for Earth Science Applications?. Surveys in Geophysics, 2016, 37, 453-470.	4.6	139
7	Improvement of Global Hydrological Models Using GRACE Data. Surveys in Geophysics, 2008, 29, 375-397.	4.6	138
8	Time variations of the regional evapotranspiration rate from Gravity Recovery and Climate Experiment (GRACE) satellite gravimetry. Water Resources Research, 2006, 42, .	4.2	133
9	Recent hydrological behavior of the East African great lakes region inferred from GRACE, satellite altimetry and rainfall observations. Comptes Rendus - Geoscience, 2010, 342, 223-233.	1.2	126
10	Integration of GRACE mass variations into a global hydrological model. Earth and Planetary Science Letters, 2009, 277, 166-173.	4.4	108
11	Modeling spatial patterns of saturated areas: An evaluation of different terrain indices. Water Resources Research, 2004, 40, .	4.2	107
12	Cascade-based disaggregation of continuous rainfall time series: the influence of climate. Hydrology and Earth System Sciences, 2001, 5, 145-164.	4.9	101
13	Modelling Freshwater Resources at the Global Scale: Challenges and Prospects. Surveys in Geophysics, 2016, 37, 195-221.	4.6	100
14	Representation of landscape variability and lateral redistribution processes for large-scale hydrological modelling in semi-arid areas. Journal of Hydrology, 2004, 297, 136-161.	5.4	99
15	Loss of reservoir volume by sediment deposition and its impact on water availability in semiarid Brazil. Hydrological Sciences Journal, 2006, 51, 157-170.	2.6	99
16	Evaluation of GRACE filter tools from a hydrological perspective. Geophysical Journal International, 2009, 179, 1499-1515.	2.4	99
17	Long-term groundwater storage change in Victoria, Australia from satellite gravity and in situ observations. Global and Planetary Change, 2016, 139, 56-65.	3.5	95
18	Terrestrial water budget of the Eurasian panâ€Arctic from GRACE satellite measurements during 2003â€“2009. Journal of Geophysical Research, 2010, 115, .	3.3	94

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19	Multi-criterial validation of TOPMODEL in a mountainous catchment. Hydrological Processes, 1999, 13, 1603-1620.	2.6	93
20	Calibration analysis for water storage variability of the global hydrological model WGHM. Hydrology and Earth System Sciences, 2010, 14, 59-78.	4.9	90
21	Quantifying the Central European Droughts in 2018 and 2019 With GRACE Followâ€On. Geophysical Research Letters, 2020, 47, e2020GL087285.	4.0	89
22	Emerging methods for noninvasive sensing of soil moisture dynamics from field to catchment scale: a review. Wiley Interdisciplinary Reviews: Water, 2015, 2, 635-647.	6.5	86
23	Hydrological Impact of a High-Density Reservoir Network in Semiarid Northeastern Brazil. Journal of Hydrologic Engineering - ASCE, 2012, 17, 109-117.	1.9	80
24	Variations of surface water extent and water storage in large river basins: A comparison of different global data sources. Geophysical Research Letters, 2008, 35, .	4.0	79
25	Science and User Needs for Observing Global Mass Transport to Understand Global Change and to Benefit Society. Surveys in Geophysics, 2015, 36, 743-772.	4.6	79
26	Periodic components of water storage changes from GRACE and global hydrology models. Journal of Geophysical Research, 2008, 113, .	3.3	77
27	The value of satelliteâ€derived snow cover images for calibrating a hydrological model in snowâ€dominated catchments in Central Asia. Water Resources Research, 2014, 50, 2002-2021.	4.2	77
28	Simulating the influence of water storage changes on the superconducting gravimeter of the Geodetic Observatory Wettzell, Germany. Geophysics, 2008, 73, WA95-WA104.	2.6	74
29	Satellite-based estimates of groundwater storage variations in large drainage basins with extensive floodplains. Remote Sensing of Environment, 2011, 115, 1588-1594.	11.0	71
30	Simple water balance modelling of surface reservoir systems in a large data-scarce semiarid region / ModÃ©lisation simple du bilan hydrologique de systÃ¨mes de rÃ©servoirs de surface dans une grande rÃ©gion semi-aride pauvre en donnÃ©es. Hydrological Sciences Journal, 2004, 49, .	2.6	69
31	Evaluation of areal precipitation estimates based on downscaled reanalysis and station data by hydrological modelling. Hydrology and Earth System Sciences, 2013, 17, 2415-2434.	4.9	68
32	Spatiotemporal variations of soil surface roughness from in-situ laser scanning. Catena, 2009, 79, 128-139.	5.0	64
33	Droughts and Floods in the La Plata Basin in Soil Moisture Data and GRACE. Remote Sensing, 2015, 7, 7324-7349.	4.0	63
34	Integrated modelling of climate, water, soil, agricultural and socio-economic processes: A general introduction of the methodology and some exemplary results from the semi-arid north-east of Brazil. Journal of Hydrology, 2006, 328, 417-431.	5.4	61
35	Modelling spatio-temporal patterns of sediment yield and connectivity in a semi-arid catchment with the WASA-SED model. Hydrological Sciences Journal, 2010, 55, 636-648.	2.6	59
36	Use of cosmic-ray neutron sensors for soil moisture monitoring in forests. Hydrology and Earth System Sciences, 2016, 20, 1269-1288.	4.9	58

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37	Daily GRACE gravity field solutions track major flood events in the Gangesâ€“Brahmaputra Delta. Hydrology and Earth System Sciences, 2018, 22, 2867-2880.	4.9	55
38	Measuring the effect of local water storage changes on in situ gravity observations: Case study of the Geodetic Observatory Wettzell, Germany. Water Resources Research, 2010, 46, .	4.2	52
39	The spatio-temporal variability of groundwater storage in the Amazon River Basin. Advances in Water Resources, 2019, 124, 41-52.	3.8	52
40	Long-term soil moisture dynamics derived from GNSS interferometric reflectometry: a case study for Sutherland, South Africa. GPS Solutions, 2016, 20, 641-654.	4.3	49
41	Reducing local hydrology from high-precision gravity measurements: a lysimeter-based approach. Geophysical Journal International, 2010, 183, 178-187.	2.4	48
42	Surface freshwater storage and variability in the Amazon basin from multiâ€satellite observations, 1993â€“2007. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,951.	3.3	47
43	Direct measurement of subsurface mass change using the variable baseline gravity gradient method. Geophysical Research Letters, 2014, 41, 2827-2834.	4.0	47
44	Thriving and declining: climate variability shaping life-history and population persistence of Mesodesma donacium in the Humboldt Upwelling System. Marine Ecology - Progress Series, 2009, 385, 151-163.	1.9	47
45	Sedimentation in the floodplains of the Mekong Delta, Vietnam Part II: deposition and erosion. Hydrological Processes, 2014, 28, 3145-3160.	2.6	46
46	Total water storage dynamics in response to climate variability and extremes: Inference from longâ€term terrestrial gravity measurement. Journal of Geophysical Research, 2012, 117, .	3.3	44
47	A dense network of cosmic-ray neutron sensors for soil moisture observation in a highly instrumented pre-Alpine headwater catchment in Germany. Earth System Science Data, 2020, 12, 2289-2309.	9.9	44
48	Validation of terrestrial water storage variations as simulated by different global numerical models with GRACE satellite observations. Hydrology and Earth System Sciences, 2017, 21, 821-837.	4.9	43
49	Interannual variations of the terrestrial water storage in the Lower Ob' Basin from a multisatellite approach. Hydrology and Earth System Sciences, 2010, 14, 2443-2453.	4.9	40
50	Storage-discharge relationships at different catchment scales based on local high-precision gravimetry. Hydrological Processes, 2014, 28, 1465-1475.	2.6	39
51	Detection of large-scale groundwater storage variability over the karstic regions in Southwest China. Journal of Hydrology, 2019, 569, 409-422.	5.4	39
52	Water Scarcity Under Scenarios for Global Climate Change and Regional Development in Semiarid Northeastern Brazil. Water International, 2004, 29, 209-220.	1.0	37
53	Process-based modelling of erosion, sediment transport and reservoir siltation in mesoscale semi-arid catchments. Journal of Soils and Sediments, 2014, 14, 2001-2018.	3.0	37
54	Landscape-scale water balance monitoring with an iGrav superconducting gravimeter in a field enclosure. Hydrology and Earth System Sciences, 2017, 21, 3167-3182.	4.9	36

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55	The benefits of gravimeter observations for modelling water storage changes at the field scale. Hydrology and Earth System Sciences, 2010, 14, 1715-1730.	4.9	35
56	Spatial and temporal variations of actual soil water repellency and their influence on surface runoff. Hydrological Processes, 2008, 22, 1976-1984.	2.6	34
57	On the Use of Satellite Remote Sensing to Detect Floods and Droughts at Large Scales. Surveys in Geophysics, 2020, 41, 1461-1487.	4.6	33
58	Modelling sediment export, retention and reservoir sedimentation in drylands with the WASA-SED model. Geoscientific Model Development, 2010, 3, 275-291.	3.6	31
59	Connectivity of sediment transport in a semiarid environment: a synthesis for the Upper Jaguaribe Basin, Brazil. Journal of Soils and Sediments, 2014, 14, 1938-1948.	3.0	31
60	Sedimentation in the floodplains of the Mekong Delta, Vietnam. Part I: suspended sediment dynamics. Hydrological Processes, 2014, 28, 3132-3144.	2.6	31
61	Projected Changes in Compound Flood Hazard From Riverine and Coastal Floods in Northwestern Europe. Earth's Future, 2020, 8, e2020EF001752.	6.3	31
62	Closing the Water Cycle from Observations across Scales: Where Do We Stand?. Bulletin of the American Meteorological Society, 2021, 102, E1897-E1935.	3.3	31
63	Automated catenaâ€based discretization of landscapes for the derivation of hydrological modelling units. International Journal of Geographical Information Science, 2008, 22, 111-132.	4.8	30
64	Interdisciplinary Geoâ€ecological Research across Time Scales in the Northeast German Lowland Observatory (TERENOâ€NE). Vadose Zone Journal, 2018, 17, 1-25.	2.2	29
65	Integrated modelling of water availability and water use in the semi-arid Northeast of Brazil. Physics and Chemistry of the Earth, 2000, 25, 227-232.	0.3	28
66	Supporting large-scale hydrogeological monitoring and modelling by time-variable gravity data. Hydrogeology Journal, 2007, 15, 167-170.	2.1	28
67	European Gravity Service for Improved Emergency Management (EGSIEM)â€"from concept to implementation. Geophysical Journal International, 2019, 218, 1572-1590.	2.4	27
68	Monitoring Snow Depth by GNSS Reflectometry in Built-up Areas: A Case Study for Wettzell, Germany. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2016, 9, 4809-4816.	4.9	26
69	Modelling of global mass effects in hydrology, atmosphere and oceans on surface gravity. Computers and Geosciences, 2016, 93, 12-20.	4.2	25
70	Reducing gravity data for the influence of water storage variations beneath observatory buildings. Geophysics, 2019, 84, EN15-EN31.	2.6	22
71	Estimation of soil loss by water erosion in the Chinese Loess Plateau using Universal Soil Loss Equation and GRACE. Geophysical Journal International, 2013, 193, 1283-1290.	2.4	20
72	Hydrological and sedimentological processes of flood layer formation in Lake Mondsee. Depositional Record, 2015, 1, 18-37.	1.7	19

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73	Tackling mass redistribution phenomena by time-dependent GRACE- and terrestrial gravity observations. Journal of Geodynamics, 2012, 59-60, 82-91.	1.6	17
74	Increased water storage of Lake Qinghai during 2004â€“2012 from GRACE data, hydrological models, radar altimetry and in situ measurements. Geophysical Journal International, 2018, 212, 679-693.	2.4	15
75	A comparison of GRACE-derived temporal gravity variations with observations of six European superconducting gravimeters. Geophysical Journal International, 2012, 191, 545-556.	2.4	14
76	Fifteen Years (1993â€“2007) of Surface Freshwater Storage Variability in the Ganges-Brahmaputra River Basin Using Multi-Satellite Observations. Water (Switzerland), 2017, 9, 245.	2.7	14
77	Resolving Geophysical Signals by Terrestrial Gravimetry: A Time Domain Assessment of the Correctionâ€Induced Uncertainty. Journal of Geophysical Research: Solid Earth, 2019, 124, 2153-2165.	3.4	13
78	Mass variation observing system by high low inter-satellite links (MOBILE) â€“ a new concept for sustained observation of mass transport from space. Journal of Geodetic Science, 2019, 9, 48-58.	1.0	12
79	What Can be Expected from the GRACE-FO Laser Ranging Interferometer for Earth Science Applications?. Space Sciences Series of ISSI, 2016, , 263-280.	0.0	12
80	Towards disentangling heterogeneous soil moisture patterns in cosmic-ray neutron sensor footprints. Hydrology and Earth System Sciences, 2021, 25, 6547-6566.	4.9	12
81	Water Budget Analysis within the Surrounding of Prominent Lakes and Reservoirs from Multi-Sensor Earth Observation Data and Hydrological Models: Case Studies of the Aral Sea and Lake Mead. Remote Sensing, 2016, 8, 953.	4.0	11
82	Time series of superconducting gravimeters and water storage variations from the global hydrology model WGHM. Journal of Geodynamics, 2009, 48, 166-171.	1.6	10
83	A Buoy for Continuous Monitoring of Suspended Sediment Dynamics. Sensors, 2013, 13, 13779-13801.	3.8	10
84	Performance of three iGrav superconducting gravity meters before and after transport to remote monitoring sites. Geophysical Journal International, 2020, 223, 959-972.	2.4	10
85	Forecasting terrestrial water storage for drought management in Ethiopia. Hydrological Sciences Journal, 2020, 65, 2210-2223.	2.6	9
86	Soil moisture observation in a forested headwater catchment: combining a dense cosmic-ray neutron sensor network with roving and hydrogravimetry at the TERENO site WÃ¼stebach. Earth System Science Data, 2022, 14, 2501-2519.	9.9	9
87	Comparison of Daily GRACE Gravity Field and Numerical Water Storage Models for De-aliasing of Satellite Gravimetry Observations. Surveys in Geophysics, 2014, 35, 1251-1266.	4.6	8
88	Delayed subsidence of the Dead Sea shore due to hydro-meteorological changes. Scientific Reports, 2021, 11, 13518.	3.3	8
89	GRACE Time-Variable Gravity Accuracy Assessment. , 2007, , 237-243.		8
90	The importance of vegetation in understanding terrestrial water storage variations. Hydrology and Earth System Sciences, 2022, 26, 1089-1109.	4.9	8

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91	Estimating the specific yield of the Pampeano aquifer, Argentina, using superconducting gravimeter data. Hydrogeology Journal, 2020, 28, 2303-2313.	2.1	7
92	Hydrometeorological and gravity signals at the Argentine-German Geodetic Observatory (AGGO) in La Plata. Earth System Science Data, 2019, 11, 1501-1513.	9.9	7
93	Comparative analysis of throughfall observations in six different forest stands: Influence of seasons, rainfallâ€•and stand characteristics. Hydrological Processes, 2022, 36, .	2.6	6
94	Forecast of seasonal water availability in Central Asia with near-real time GRACE water storage anomalies. Environmental Research Communications, 2019, 1, 031006.	2.3	5
95	Modelling Freshwater Resources at the Global Scale: Challenges and Prospects. Space Sciences Series of ISSI, 2016, , 5-31.	0.0	4
96	ENSO impact on simulated South American hydro-climatology. Advances in Geosciences, 0, 6, 227-236.	12.0	4
97	Water and sediment fluxes in Mediterranean mountainous regions: comprehensive dataset for hydro-sedimentological analyses and modelling in a mesoscale catchment (River IsÃ¡bena, NE Spain). Earth System Science Data, 2018, 10, 1063-1075.	9.9	4
98	Time Variation In Hydrology and Gravity. Earth, Moon and Planets, 2004, 94, 41-55.	0.6	3
99	Fieldâ€Scale Subsurface Flow Processes Inferred From Continuous Gravity Monitoring During a Sprinkling Experiment. Water Resources Research, 2021, 57, e2021WR030044.	4.2	3
100	Environmental and anthropogenic gravity contributions at the Ãžeistareykir geothermal field, North Iceland. Geothermal Energy, 2021, 9, .	1.9	3
101	RelaciÃ³n de la variaciÃ³n del almacenamiento de agua local y el gravÃmetro superconductor en el Observatorio GeodÃ©sico TIGO, ConcepciÃ³n, Chile. Obras Y Proyectos, 2012, , 71-78.	0.2	2
102	Continental Water Storage Variations from GRACE Time-Variable Gravity Data. Advanced Technologies in Earth Sciences, 2010, , 369-375.	0.9	1
103	Die Surfer im Erdschwerefeld. Physik in Unserer Zeit, 2013, 44, 286-292.	0.0	0
104	Editorial: Innovative Methods for Non-invasive Monitoring of Hydrological Processes From Field to Catchment Scale. Frontiers in Water, 2021, 3, .	2.3	0
105	Calibration of a Global Hydrological Modelglobal hydrological model with GRACE Data. Advanced Technologies in Earth Sciences, 2010, , 417-426.	0.9	0
106	Signals of Mass Redistribution at the South African Gravimeter Site SAGOS. International Association of Geodesy Symposia, 2012, , 305-313.	0.4	0