Matt Rodell

List of Publications by Citations

Source: https://exaly.com/author-pdf/7231934/matt-rodell-publications-by-citations.pdf
Version: 2024-04-27

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.
The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

150 papers	19,052 citations	63 h-index	138 g-index
167 ext. papers	21,955 ext. citations	6.1 avg, IF	6.85 L-index

#	Paper	IF	Citations
150	The Global Land Data Assimilation System. *Bulletin of the American Meteorological Society*, **2004**, 85, 381-394	6.2	2869
149	Satellite-based estimates of groundwater depletion in India. *Nature*, **2009**, 460, 999-1002	50.4	1672
148	Ground water and climate change. *Nature Climate Change*, **2013**, 3, 322-329	21.4	1116
147	Emerging trends in global freshwater availability. *Nature*, **2018**, 557, 651-659	50.4	634
146	Satellites measure recent rates of groundwater depletion in California's Central Valley. *Geophysical Research Letters*, **2011**, 38,	4.9	570
145	Variability in surface moisture content along a hillslope transect: Rattlesnake Hill, Texas. *Journal of Hydrology*, **1998**, 210, 259-281	6	464
144	Groundwater depletion in the Middle East from GRACE with implications for transboundary water management in the Tigris-Euphrates-Western Iran region. *Water Resources Research*, **2013**, 49, 904-914	5.4	457
143	Quantifying renewable groundwater stress with GRACE. *Water Resources Research*, **2015**, 51, 5217-5238	5.4	424
142	Estimating groundwater storage changes in the Mississippi River basin (USA) using GRACE. *Hydrogeology Journal*, **2007**, 15, 159-166	3.1	412
141	Impact of water withdrawals from groundwater and surface water on continental water storage variations. *Journal of Geodynamics*, **2012**, 59-60, 143-156	2.2	384
140	Analysis of terrestrial water storage changes from GRACE and GLDAS. *Water Resources Research*, **2008**, 44,	5.4	351
139	Basin scale estimates of evapotranspiration using GRACE and other observations. *Geophysical Research Letters*, **2004**, 31,	4.9	333
138	Ground-based investigation of soil moisture variability within remote sensing footprints During the Southern Great Plains 1997 (SGP97) Hydrology Experiment. *Water Resources Research*, **1999**, 35, 1839-1851	5.4	310
137	Assimilation of GRACE Terrestrial Water Storage Data into a Land Surface Model: Results for the Mississippi River Basin. *Journal of Hydrometeorology*, **2008**, 9, 535-548	3.7	301
136	Environmental science. Water in the balance. *Science*, **2013**, 340, 1300-1	33.3	273
135	Global intercomparison of 12 land surface heat flux estimates. *Journal of Geophysical Research*, **2011**, 116,		271
134	Evaluation of global observations-based evapotranspiration datasets and IPCC AR4 simulations. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	267

133	Contributions of GRACE to understanding climate change. *Nature Climate Change*, **2019**, 5, 358-369	21.4	260
132	A GRACE-based water storage deficit approach for hydrological drought characterization. *Geophysical Research Letters*, **2014**, 41, 1537-1545	4.9	251
131	Drought indicators based on model-assimilated Gravity Recovery and Climate Experiment (GRACE) terrestrial water storage observations. *Water Resources Research*, **2012**, 48,	5.4	243
130	Field observations of soil moisture variability across scales. *Water Resources Research*, **2008**, 44,	5.4	242
129	The Future of Earth Observation in Hydrology. *Hydrology and Earth System Sciences*, **2017**, 21, 3879-3914	5.5	235
128	Groundwater depletion during drought threatens future water security of the Colorado River Basin. *Geophysical Research Letters*, **2014**, 41, 5904-5911	4.9	226
127	Implications of projected climate change for groundwater recharge in the western United States. *Journal of Hydrology*, **2016**, 534, 124-138	6	215
126	Remote sensing of groundwater storage changes in Illinois using the Gravity Recovery and Climate Experiment (GRACE). *Water Resources Research*, **2006**, 42,	5.4	215
125	Detectability of variations in continental water storage from satellite observations of the time dependent gravity field. *Water Resources Research*, **1999**, 35, 2705-2723	5.4	187
124	Simulating the Effects of Irrigation over the United States in a Land Surface Model Based on Satellite-Derived Agricultural Data. *Journal of Hydrometeorology*, **2010**, 11, 171-184	3.7	186
123	An analysis of terrestrial water storage variations in Illinois with implications for the Gravity Recovery and Climate Experiment (GRACE). *Water Resources Research*, **2001**, 37, 1327-1339	5.4	184
122	The potential for satellite-based monitoring of groundwater storage changes using GRACE: the High Plains aquifer, Central US. *Journal of Hydrology*, **2002**, 263, 245-256	6	180
121	Updating a Land Surface Model with MODIS-Derived Snow Cover. *Journal of Hydrometeorology*, **2004**, 5, 1064-1075	3.7	178
120	The Observed State of the Water Cycle in the Early Twenty-First Century. *Journal of Climate*, **2015**, 28, 8289-8318	4.4	162
119	Realistic Initialization of Land Surface States: Impacts on Subseasonal Forecast Skill. *Journal of Hydrometeorology*, **2004**, 5, 1049-1063	3.7	161
118	Analysis of Multiple Precipitation Products and Preliminary Assessment of Their Impact on Global Land Data Assimilation System Land Surface States. *Journal of Hydrometeorology*, **2005**, 6, 573-598	3.7	152
117	Comparison of seasonal terrestrial water storage variations from GRACE with groundwater-level measurements from the High Plains Aquifer (USA). *Geophysical Research Letters*, **2007**, 34,	4.9	136
116	State of the Climate in 2013. *Bulletin of the American Meteorological Society*, **2014**, 95, S1-S279	6.1	128

115	Assimilation of GRACE terrestrial water storage into a land surface model: Evaluation and potential value for drought monitoring in western and central Europe. *Journal of Hydrology*, **2012**, 446-447, 103-115	6	126
114	The Observed State of the Energy Budget in the Early Twenty-First Century. *Journal of Climate*, **2015**, 28, 8319-8346	4.4	125
113	Uncertainty in global groundwater storage estimates in a Total Groundwater Stress framework. *Water Resources Research*, **2015**, 51, 5198-5216	5.4	124
112	Low degree spherical harmonic influences on Gravity Recovery and Climate Experiment (GRACE) water storage estimates. *Geophysical Research Letters*, **2005**, 32, n/a-n/a	4.9	121
111	Total basin discharge for the Amazon and Mississippi River basins from GRACE and a land-atmosphere water balance. *Geophysical Research Letters*, **2005**, 32,	4.9	121
110	State of the Climate in 2016. *Bulletin of the American Meteorological Society*, **2017**, 98, Si-S280	6.1	112
109	Hydrological evaluation of the Noah-MP land surface model for the Mississippi River Basin. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 23-38	4.4	105
108	State of the Climate in 2011. *Bulletin of the American Meteorological Society*, **2012**, 93, S1-S282	6.1	103
107	Global GRACE Data Assimilation for Groundwater and Drought Monitoring: Advances and Challenges. *Water Resources Research*, **2019**, 55, 7564-7586	5.4	102
106	Assimilation of Gridded GRACE Terrestrial Water Storage Estimates in the North American Land Data Assimilation System. *Journal of Hydrometeorology*, **2016**, 17, 1951-1972	3.7	99
105	Evaluation of the Global Land Data Assimilation System using global river discharge data and a source-to-sink routing scheme. *Water Resources Research*, **2010**, 46,	5.4	96
104	Evaluation of 10 Methods for Initializing a Land Surface Model. *Journal of Hydrometeorology*, **2005**, 6, 146-155	3.7	96
103	Groundwater Storage Changes: Present Status from GRACE Observations. *Surveys in Geophysics*, **2016**, 37, 397-417	7.6	91
102	Forward-Looking Assimilation of MODIS-Derived Snow-Covered Area into a Land Surface Model. *Journal of Hydrometeorology*, **2009**, 10, 130-148	3.7	90
101	Groundwater rejuvenation in parts of India influenced by water-policy change implementation. *Scientific Reports*, **2017**, 7, 7453	4.9	84
100	Assimilation of terrestrial water storage from GRACE in a snow-dominated basin. *Water Resources Research*, **2012**, 48,	5.4	84
99	Sensitivity of Land Surface Simulations to Model Physics, Land Characteristics, and Forcings, at Four CEOP Sites. *Journal of the Meteorological Society of Japan*, **2007**, 85A, 187-204	2.8	81
98	Estimating evapotranspiration using an observation based terrestrial water budget. *Hydrological Processes*, **2011**, 25, 4082-4092	3.3	80

97	Attenuation effect on seasonal basin-scale water storage changes from GRACE time-variable gravity. *Journal of Geodesy*, **2007**, 81, 237-245	4.5	80
96	Terrestrial water mass load changes from Gravity Recovery and Climate Experiment (GRACE). *Water Resources Research*, **2006**, 42,	5.4	79
95	Evaluation of a model-based groundwater drought indicator in the conterminous U.S.. *Journal of Hydrology*, **2015**, 526, 78-88	6	78
94	Spatial distribution of soil moisture over 6 and 30 cm depth, Mahurangi river catchment, New Zealand. *Journal of Hydrology*, **2003**, 276, 254-274	6	73
93	Satellites provide the big picture. *Science*, **2015**, 349, 684-5	33.3	72
92	Assimilation of gridded terrestrial water storage observations from GRACE into a land surface model. *Water Resources Research*, **2016**, 52, 4164-4183	5.4	72
91	Spatial sensitivity of the Gravity Recovery and Climate Experiment (GRACE) time-variable gravity observations. *Journal of Geophysical Research*, **2005**, 110,		71
90	Development of land surface albedo parameterization based on Moderate Resolution Imaging Spectroradiometer (MODIS) data. *Journal of Geophysical Research*, **2005**, 110,		70
89	Benefits and Pitfalls of GRACE Data Assimilation: a Case Study of Terrestrial Water Storage Depletion in India. *Geophysical Research Letters*, **2017**, 44, 4107-4115	4.9	66
88	Improving land-surface model hydrology: Is an explicit aquifer model better than a deeper soil profile?. *Geophysical Research Letters*, **2007**, 34,	4.9	66
87	Rivers and Floodplains as Key Components of Global Terrestrial Water Storage Variability. *Geophysical Research Letters*, **2017**, 44, 10,359-10,368	4.9	61
86	State of the Climate in 2014. *Bulletin of the American Meteorological Society*, **2015**, 96, ES1-ES32	6.1	61
85	Contemporary estimates of Pan-Arctic freshwater discharge from GRACE and reanalysis. *Geophysical Research Letters*, **2007**, 34,	4.9	57
84	Assimilation of GRACE Terrestrial Water Storage Observations into a Land Surface Model for the Assessment of Regional Flood Potential. *Remote Sensing*, **2015**, 7, 14663-14679	5	56
83	Impact of Irrigation Methods on Land Surface Model Spinup and Initialization of WRF Forecasts. *Journal of Hydrometeorology*, **2015**, 16, 1135-1154	3.7	55
82	Seasonal global mean sea level change from satellite altimeter, GRACE, and geophysical models. *Journal of Geodesy*, **2005**, 79, 532-539	4.5	55
81	Water Balance in the Amazon Basin from a Land Surface Model Ensemble. *Journal of Hydrometeorology*, **2014**, 15, 2586-2614	3.7	54
80	Reply to comment by H. Vereecken et al. on Field observations of soil moisture variability across scales *Water Resources Research*, **2008**, 44,	5.4	53

79	Influence of thermodynamic soil and vegetation parameterizations on the simulation of soil temperature states and surface fluxes by the Noah LSM over a Tibetan plateau site. *Hydrology and Earth System Sciences*, **2009**, 13, 759-777	5.5	52
78	Toward calibration of regional groundwater models using GRACE data. *Journal of Hydrology*, **2012**, 422-423, 1-9	6	49
77	Assimilation of MODIS snow cover through the Data Assimilation Research Testbed and the Community Land Model version 4. *Journal of Geophysical Research D: Atmospheres*, **2014**, 119, 7091-7103	4.4	48
76	Development of a hydrometeorological forcing data set for global soil moisture estimation. *International Journal of Climatology*, **2005**, 25, 1697-1714	3.5	47
75	A 10 per cent increase in global land evapotranspiration from 2003 to 2019. *Nature*, **2021**, 593, 543-547	50.4	47
74	Using leaf chlorophyll to parameterize light-use-efficiency within a thermal-based carbon, water and energy exchange model. *Remote Sensing of Environment*, **2011**, 115, 1694-1705	13.2	46
73	Comparison and Assessment of Three Advanced Land Surface Models in Simulating Terrestrial Water Storage Components over the United States. *Journal of Hydrometeorology*, **2017**, 18, 625-649	3.7	45
72	Spatial variability and its scale dependency of observed and modeled soil moisture over different climate regions. *Hydrology and Earth System Sciences*, **2013**, 17, 1177-1188	5.5	45
71	NCA-LDAS Land Analysis: Development and Performance of a Multisensor, Multivariate Land Data Assimilation System for the National Climate Assessment. *Journal of Hydrometeorology*, **2019**, 20, 1571-1593	3.7	44
70	Evaluation of the Snow Simulations from the Community Land Model, Version 4 (CLM4). *Journal of Hydrometeorology*, **2016**, 17, 153-170	3.7	43
69	Use of Gravity Recovery and Climate Experiment terrestrial water storage retrievals to evaluate model estimates by the Australian water resources assessment system. *Water Resources Research*, **2011**, 47,	5.4	43
68	Inferring aquifer storage parameters using satellite and in situ measurements: Estimation under uncertainty. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	43
67	Possible link between irrigation in the U.S. High Plains and increased summer streamflow in the Midwest. *Water Resources Research*, **2011**, 47,	5.4	42
66	Retrieving snow mass from GRACE terrestrial water storage change with a land surface model. *Geophysical Research Letters*, **2007**, 34,	4.9	42
65	Global Biomass Variation and Its Geodynamic Effects: 1982-98. *Earth Interactions*, **2005**, 9, 1-19	1.5	41
64	Spatio-temporal variability of groundwater storage in India. *Journal of Hydrology*, **2017**, 544, 428-437	6	33
63	Tradeoff between cost and accuracy in large-scale surface water dynamic modeling. *Water Resources Research*, **2017**, 53, 4942-4955	5.4	32
62	The sensitivity of US wildfire occurrence to pre-season soil moisture conditions across ecosystems. *Environmental Research Letters*, **2018**, 13,	6.2	30

61	Groundwater Withdrawals Under Drought: Reconciling GRACE and Land Surface Models in the United States High Plains Aquifer. *Water Resources Research*, **2018**, 54, 5282-5299	5.4	29
60	Assessment of Irrigation Physics in a Land Surface Modeling Framework using Non-Traditional and Human-Practice Datasets. *Hydrology and Earth System Sciences*, **2017**, 21, 2953-2966	5.5	27
59	Groundwater variability across temporal and spatial scales in the central and northeastern U.S.. *Journal of Hydrology*, **2015**, 525, 769-780	6	26
58	Estimating Snow Water Storage in North America Using CLM4, DART, and Snow Radiance Data Assimilation. *Journal of Hydrometeorology*, **2016**, 17, 2853-2874	3.7	26
57	How might recharge change under projected climate change in western US?. *Geophysical Research Letters*, **2017**, 44, 10407-10418	4.9	26
56	Global Climate. *Bulletin of the American Meteorological Society*, **2020**, 101, S9-S128	6.1	26
55	Assimilating GRACE Into a Land Surface Model in the Presence of an Irrigation-Induced Groundwater Trend. *Water Resources Research*, **2019**, 55, 11274-11294	5.4	24
54	Multi-sensor assimilation of SMOS brightness temperature and GRACE terrestrial water storage observations for soil moisture and shallow groundwater estimation. *Remote Sensing of Environment* , **2019**, 227, 12-27	13.2	23
53	Movement of Amazon surface water from time-variable satellite gravity measurements and implications for water cycle parameters in land surface models. *Geochemistry, Geophysics, Geosystems*, **2010**, 11,	3.6	23
52	Long-term, non-anthropogenic groundwater storage changes simulated by three global-scale hydrological models. *Scientific Reports*, **2019**, 9, 10746	4.9	20
51	Using Satellite-Based Vegetation Cover as Indicator of Groundwater Storage in Natural Vegetation Areas. *Geophysical Research Letters*, **2019**, 46, 8082-8092	4.9	20
50	Toward a South America Land Data Assimilation System: Aspects of land surface model spin-up using the Simplified Simple Biosphere. *Journal of Geophysical Research*, **2006**, 111,		19
49	Impact of different initial soil moisture fields on Eta model weather forecasts for South America. *Journal of Geophysical Research*, **2006**, 111,		19
48	Groundwater storage change detection from and GRACE-based estimates in major river basins across India. *Hydrological Sciences Journal*, **2020**, 65, 650-659	3.5	18
47	Comparing potential recharge estimates from three Land Surface Models across the Western US. *Journal of Hydrology*, **2017**, 545, 410-423	6	14
46	GRACE improves seasonal groundwater forecast initialization over the U.S. *Journal of Hydrometeorology*, **2020**, 21, 59-71	3.7	14
45	Basin-Scale River Runoff Estimation From GRACE Gravity Satellites, Climate Models, and In Situ Observations: A Case Study in the Amazon Basin. *Water Resources Research*, **2020**, 56, e2020WR028032	5.4	13
44	U.S. CONTRIBUTIONS TO THE CEOP. *Bulletin of the American Meteorological Society*, **2006**, 87, 927-940	6.1	12

43	. *IEEE Transactions on Geoscience and Remote Sensing*, **2015**, 53, 5247-5268	8.1	11
42	The Value of Remotely Sensed Information: The Case of GRACE-Enhanced Drought Severity Index. *Weather, Climate, and Society*, **2018**, 10, 187-203	2.3	11
41	Groundwater Storage Variations in India. *Springer Hydrogeology*, **2018**, 49-59	0.4	11
40	Monitoring Subsidence Associated with Groundwater Dynamics in the Central Valley of California Using Interferometric Radar. *Geophysical Monograph Series*, **2014**, 397-406	1.1	11
39	The South American Land Data Assimilation System (SALDAS) 5-Yr Retrospective Atmospheric Forcing Datasets. *Journal of Hydrometeorology*, **2009**, 10, 999-1010	3.7	11
38	A framework for assessing the potential of remote-sensed gravity to provide new insight on the hydrology of the Murray-Darling Basin. *Australian Journal of Water Resources*, **2006**, 10, 125-138	1.2	10
37	100 Years of Progress in Hydrology. *Meteorological Monographs*, **2018**, 59, 25.1-25.51	5.7	10
36	Groundwater Storage Changes: Present Status from GRACE Observations. *Space Sciences Series of ISSI*, **2016**, 207-227	0.1	9
35	NCA-LDAS: Overview and Analysis of Hydrologic Trends for the National Climate Assessment. *Journal of Hydrometeorology*, **2019**, 20, 1595-1617	3.7	9
34	In Situ and GRACE-Based Groundwater Observations: Similarities, Discrepancies, and Evaluation in the High Plains Aquifer in Kansas. *Water Resources Research*, **2018**, 54, 8034-8044	5.4	9
33	Earth observations and integrative models in support of food and water security. *Remote Sensing in Earth Systems Sciences*, **2019**, 2, 18-38	3.1	8
32	Dominant Patterns of Water Storage Changes in the Nile Basin During 2003–2013. *Geophysical Monograph Series*, **2014**, 367-381	1.1	8
31	Using enhanced GRACE water storage data to improve drought detection by the U.S. and North American Drought Monitors **2010**,		7
30	Evaluation and validation of mascon recovery using GRACE KBRR data with independent mass flux estimates in the Mississippi Basin. *Journal of Geodesy*, **2009**, 83, 817-827	4.5	7
29	Reply to comment by Sahoo et al. on "Quantifying renewable groundwater stress with GRACE" *Water Resources Research*, **2016**, 52, 4188-4192	5.4	6
28	Terrestrial water storage **2019**, 41-64		6
27	Monitoring Aquifer Depletion from Space. *Geophysical Monograph Series*, **2014**, 347-366	1.1	6
26	Observation of Hydrological Processes Using Remote Sensing **2011**, 351-399		6

25	The Future of Earth Observation in Hydrology		6
24	Irrigation Water Demand Sensitivity to Climate Variability Across the Contiguous United States. *Water Resources Research*, **2021**, 57, 2020WR027738	5.4	6
23	Underlying Fundamentals of Kalman Filtering for River Network Modeling. *Journal of Hydrometeorology*, **2020**, 21, 453-474	3.7	5
22	Controls of Terrestrial Water Storage Changes Over the Central Congo Basin Determined by Integrating PALSAR ScanSAR, Envisat Altimetry, and GRACE Data. *Geophysical Monograph Series*, **2014**, 115-129	1.1	5
21	GRACE-Based Estimates of Global Groundwater Depletion. *Geophysical Monograph Series*, **2016**, 135-146	1.1	5
20	Evaluation of Simulated Snow and Snowmelt Timing in the Community Land Model Using Satellite-based Products and Streamflow Observations. *Journal of Advances in Modeling Earth Systems*, **2018**, 10, 2933-2951	7.1	5
19	Realizing the Potential of Satellite Gravimetry for Hydrology: Second GRACE Hydrology Workshop; Austin, Texas, 4 November 2009. *Eos*, **2010**, 91, 96	1.5	4
18	Using climate regionalization to understand Climate Forecast System Version 2 (CFSv2) precipitation performance for the Conterminous United States (CONUS). *Geophysical Research Letters*, **2016**, 43, 6485-6492	4.9	4
17	Groundwater Recharge Estimated by Land Surface Models: An Evaluation in the Conterminous United States. *Journal of Hydrometeorology*, **2021**, 22, 499-522	3.7	4
16	Influence of thermodynamic soil and vegetation parameterizations on the simulation of soil temperature states and surface fluxes by the Noah LSm over a Tibetan plateau site **2009**,		3
15	Achieving Breakthroughs in Global Hydrologic Science by Unlocking the Power of Multisensor, Multidisciplinary Earth Observations. *AGU Advances*, **2021**, 2, e2021AV000455	5.4	3
14	Application of Satellite Gravimetry for Water Resource Vulnerability Assessment **2013**, 151-159		2
13	Assessment of Irrigation Physics in a Land Surface Modeling Framework using Non-Traditional and Human-Practice Datasets		2
12	Spatial variability and its scale dependency of observed and modeled soil moisture under different climate conditions		2
11	Earth observation: Serving the needs of an increasingly global society **2009**, 153-196		2
10	A High-Resolution Land Data Assimilation System Optimized for the Western United States. *Journal of the American Water Resources Association*,	2.1	2
9	Monitoring drought with GRACE data assimilation **2016**,		2
8	An Evaluation of Remotely Sensed and In Situ Data Sufficiency for SGMA-Scale Groundwater Studies in the Central Valley, California. *Journal of the American Water Resources Association*, **2021**, 57, 664	2.1	2

7	Data Assimilation of Terrestrial Water Storage Observations to Estimate Precipitation Fluxes: A Synthetic Experiment. *Remote Sensing*, **2021**, 13, 1223	5	2
6	Retrieval and Validation of VIIRS Snow Cover Information for Terrestrial Water Cycle Applications. *Geophysical Monograph Series*, **2014**, 175-197	1.1	1
5	NASA Giovanni. *Geophysical Monograph Series*, **2014**, 331-346	1.1	1
4	Changes in Snowpacks of Canadian Prairies for 1979–2004 Detected from Snow Water Equivalent Data of SMMR and SSM/I Passive Microwave and Related Climatic Factors. *Geophysical Monograph Series*, **2014**, 227-243	1.1	1
3	Filters to estimate water storage variations from GRACE **2005**, 607-611		1
2	Groundwater drought: environmental controls and monitoring **2021**, 145-162		1
1	Applications of Gravity Recovery and Climate Experiment (GRACE) in global groundwater study **2021**, 531-543		