Ethan Gutmann

List of Publications by Year
in descending order

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55 papers	5,832 citations	117625 34 h-index	175258 52 g-index
72 all docs	72 docs citations	72 times ranked	6022 citing authors

#	Article	IF	Citations
1	How Well Are We Measuring Snow: The NOAA/FAA/NCAR Winter Precipitation Test Bed. Bulletin of the American Meteorological Society, 2012, 93, 811-829.	3.3	538
2	High-Resolution Coupled Climate Runoff Simulations of Seasonal Snowfall over Colorado: A Process Study of Current and Warmer Climate. Journal of Climate, 2011, 24, 3015-3048.	3.2	400
3	Continental-scale convection-permitting modeling of the current and future climate of North America. Climate Dynamics, 2017, 49, 71-95.	3.8	362
4	A unified approach for processâ€based hydrologic modeling: 1. Modeling concept. Water Resources Research, 2015, 51, 2498-2514.	4.2	354
5	Use of GPS receivers as a soil moisture network for water cycle studies. Geophysical Research Letters, 2008, 35, .	4.0	316
6	Can we measure snow depth with GPS receivers?. Geophysical Research Letters, 2009, 36, .	4.0	277
7	GPS Multipath and Its Relation to Near-Surface Soil Moisture Content. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2010, 3, 91-99.	4.9	220
8	Cascading impacts of bark beetleâ€caused tree mortality on coupled biogeophysical and biogeochemical processes. Frontiers in Ecology and the Environment, 2012, 10, 416-424.	4.0	215
9	Using GPS multipath to measure soil moisture fluctuations: initial results. GPS Solutions, 2008, 12, 173-177.	4.3	213
10	A Comparison of Statistical and Dynamical Downscaling of Winter Precipitation over Complex Terrain. Journal of Climate, 2012, 25, 262-281.	3.2	181
11	A unified approach for processâ€based hydrologic modeling: 2. Model implementation and case studies. Water Resources Research, 2015, 51, 2515-2542.	4.2	173
12	An intercomparison of statistical downscaling methods used for water resource assessments in the <scp>U</scp>nited <scp>S</scp>tates. Water Resources Research, 2014, 50, 7167-7186.	4.2	168
13	Climate Change Impacts on the Water Balance of the Colorado Headwaters: High-Resolution Regional Climate Model Simulations. Journal of Hydrometeorology, 2014, 15, 1091-1116.	1.9	166
14	A Physical Model for GPS Multipath Caused by Land Reflections: Toward Bare Soil Moisture Retrievals. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2010, 3, 100-110.	4.9	160
15	Characterizing Uncertainty of the Hydrologic Impacts of Climate Change. Current Climate Change Reports, 2016, 2, 55-64.	8.6	159
16	Our Skill in Modeling Mountain Rain and Snow is Bypassing the Skill of Our Observational Networks. Bulletin of the American Meteorological Society, 2019, 100, 2473-2490.	3.3	145
17	Simulation of seasonal snowfall over Colorado. Atmospheric Research, 2010, 97, 462-477.	4.1	144
18	Gridded Ensemble Precipitation and Temperature Estimates for the Contiguous United States. Journal of Hydrometeorology, 2015, 16, 2481-2500.	1.9	124

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19	Changes in Hurricanes from a 13-Yr Convection-Permitting Pseudoâ€“Global Warming Simulation. Journal of Climate, 2018, 31, 3643-3657.	3.2	120
20	Towards seamless largeâ€domain parameter estimation for hydrologic models. Water Resources Research, 2017, 53, 8020-8040.	4.2	108
21	Recent tree dieâ€off has little effect on streamflow in contrast to expected increases from historical studies. Water Resources Research, 2015, 51, 9775-9789.	4.2	97
22	ESD Reviews: Model dependence in multi-model climate ensembles: weighting, sub-selection and out-of-sample testing. Earth System Dynamics, 2019, 10, 91-105.	7.1	92
23	Multiscale observations of snow accumulation and peak snowpack following widespread, insectâ€induced lodgepole pine mortality. Ecohydrology, 2014, 7, 150-162.	2.4	88
24	Effects of Hydrologic Model Choice and Calibration on the Portrayal of Climate Change Impacts. Journal of Hydrometeorology, 2015, 16, 762-780.	1.9	84
25	High-Elevation Precipitation Patterns: Using Snow Measurements to Assess Daily Gridded Datasets across the Sierra Nevada, California*. Journal of Hydrometeorology, 2015, 16, 1773-1792.	1.9	83
26	Snow measurement by GPS interferometric reflectometry: an evaluation at Niwot Ridge, Colorado. Hydrological Processes, 2012, 26, 2951-2961.	2.6	79
27	A comparison of land surface model soil hydraulic properties estimated by inverse modeling and pedotransfer functions. Water Resources Research, 2007, 43, .	4.2	69
28	Implications of the Methodological Choices for Hydrologic Portrayals of Climate Change over the Contiguous United States: Statistically Downscaled Forcing Data and Hydrologic Models. Journal of Hydrometeorology, 2016, 17, 73-98.	1.9	59
29	Amountâ€weighted annual isotopic (Î´¹⁸O) values are affected by the seasonality of precipitation: A sensitivity study. Geophysical Research Letters, 2007, 34, .	4.0	55
30	Climate change impacts on flood risk and asset damages within mapped 100-year floodplains of the contiguous United States. Natural Hazards and Earth System Sciences, 2017, 17, 2199-2211.	3.6	53
31	How do hydrologic modeling decisions affect the portrayal of climate change impacts?. Hydrological Processes, 2016, 30, 1071-1095.	2.6	52
32	Snow depth mapping from stereo satellite imagery in mountainous terrain: evaluation using airborne laser-scanning data. Cryosphere, 2020, 14, 2925-2940.	3.9	52
33	The Intermediate Complexity Atmospheric Research Model (ICAR). Journal of Hydrometeorology, 2016, 17, 957-973.	1.9	46
34	A method for the determination of the hydraulic properties of soil from MODIS surface temperature for use in landâ€surface models. Water Resources Research, 2010, 46, .	4.2	37
35	The effect of soil hydraulic properties vs. soil texture in land surface models. Geophysical Research Letters, 2005, 32, .	4.0	35
36	Effects of different regional climate model resolution and forcing scales on projected hydrologic changes. Journal of Hydrology, 2016, 541, 1003-1019.	5.4	31

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37	Snow Ensemble Uncertainty Project (SEUP): quantification of snow water equivalent uncertainty across North America via ensemble land surface modeling. Cryosphere, 2021, 15, 771-791.	3.9	30
38	Meteorological Applications Benefiting from an Improved Understanding of Atmospheric Exchange Processes over Mountains. Atmosphere, 2018, 9, 371.	2.3	27
39	Snowfall and snowpack in the Western U.S. as captured by convection permitting climate simulations: current climate and pseudo global warming future climate. Climate Dynamics, 2021, 57, 2191-2215.	3.8	27
40	Projected Climate Change Impacts on Hurricane Storm Surge Inundation in the Coastal United States. Frontiers in Built Environment, 2020, 6, .	2.3	23
41	DOs and DON'Ts for using climate change information for water resource planning and management: guidelines for study design. Climate Services, 2018, 12, 1-13.	2.5	21
42	Robustness of hydroclimate metrics for climate change impact research. Wiley Interdisciplinary Reviews: Water, 2018, 5, e1288.	6.5	21
43	Diagenetic origin for quartz-pebble conglomerates. Geology, 2002, 30, 323.	4.4	17
44	Snowpack dynamics in the Lebanese mountains from quasi-dynamically downscaled ERA5 reanalysis updated by assimilating remotely sensed fractional snow-covered area. Hydrology and Earth System Sciences, 2021, 25, 4455-4471.	4.9	17
45	Snow interception modelling: Isolated observations have led to many land surface models lacking appropriate temperature sensitivities. Hydrological Processes, 2021, 35, e14274.	2.6	15
46	Global Modeling of Precipitation Partitioning by Vegetation and Their Applications. , 2020, , 105-120.		11
47	Modeling Rainfall Interception Loss for an Epiphyte-Laden Quercus virginiana Forest Using Reformulated Static- and Variable-Storage Gash Analytical Models. Journal of Hydrometeorology, 2016, 17, 1985-1997.	1.9	10
48	Riparian zones attenuate nitrogen loss following bark beetleâ€induced lodgepole pine mortality. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 933-948.	3.0	9
49	Observed compression of in situ tree stems during freezing. Agricultural and Forest Meteorology, 2017, 243, 19-24.	4.8	8
50	Assessing the added value of the Intermediate Complexity Atmospheric Research (ICAR) model for precipitation in complex topography. Hydrology and Earth System Sciences, 2019, 23, 2715-2734.	4.9	8
51	Challenges and Capabilities in Estimating Snow Mass Intercepted in Conifer Canopies With Tree Sway Monitoring. Water Resources Research, 2022, 58, .	4.2	6
52	A process-based evaluation of the Intermediate Complexity Atmospheric Research Model (ICAR) 1.0.1. Geoscientific Model Development, 2021, 14, 1657-1680.	3.6	5
53	Hydroclimatic changes in Alaska portrayed by a high-resolution regional climate simulation. Climatic Change, 2021, 164, 1.	3.6	2
54	Performance portability of an intermediate-complexity atmospheric research model in coarray Fortran. , 2017, , .		1

#	Article	IF	Citations
55	Fortran Coarray Implementation of Semi-Lagrangian Convected Air Particles within an Atmospheric Model. ChemEngineering, 2021, 5, 21.	2.4	0