

# Jeffrey D Niemann

## List of Publications by Year in descending order

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Version: 2024-02-01

49  
papers

1,155  
citations

394421

19  
h-index

395702

33  
g-index

49  
all docs

49  
docs citations

49  
times ranked

1285  
citing authors

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | A quantitative evaluation of Playfair's law and its use in testing long-term stream erosion models. <i>Earth Surface Processes and Landforms</i> , 2001, 26, 1317-1332.   | 2.5 | 127       |
| 2  | Analysis and estimation of soil moisture at the catchment scale using EOFs. <i>Journal of Hydrology</i> , 2007, 334, 388-404.   | 5.4 | 98        |
| 3  | Spatial patterns from EOF analysis of soil moisture at a large scale and their dependence on soil, land-use, and topographic properties. <i>Advances in Water Resources</i> , 2007, 30, 366-381.                | 3.8 | 87        |
| 4  | A method to downscale soil moisture to fine resolutions using topographic, vegetation, and soil data. <i>Advances in Water Resources</i> , 2015, 76, 81-96.   | 3.8 | 57        |
| 5  | Identification and characterization of dendritic, parallel, pinnate, rectangular, and trellis networks based on deviations from planform self-similarity. <i>Journal of Geophysical Research</i> , 2008, 113, . | 3.3 | 53        |
| 6  | Modelling the potential impacts of groundwater hydrology on long-term drainage basin evolution. <i>Earth Surface Processes and Landforms</i> , 2006, 31, 1802-1823.   | 2.5 | 50        |
| 7  | Evaluation of an empirical orthogonal function-based method to downscale soil moisture patterns based on topographical attributes. <i>Hydrological Processes</i> , 2012, 26, 2696-2709.                         | 2.6 | 46        |
| 8  | A morpho-climatic instantaneous unit hydrograph model for urban catchments based on the kinematic wave approximation. <i>Journal of Hydrology</i> , 2009, 377, 317-334.   | 5.4 | 41        |
| 9  | AutoRAPID: A Model for Prompt Streamflow Estimation and Flood Inundation Mapping over Regional to Continental Extents. <i>Journal of the American Water Resources Association</i> , 2017, 53, 280-299.          | 2.4 | 41        |
| 10 | Controls on topographic dependence and temporal instability in catchment-scale soil moisture patterns. <i>Water Resources Research</i> , 2013, 49, 1625-1642.   | 4.2 | 40        |
| 11 | Impacts of surface elevation on the growth and scaling properties of simulated river networks. <i>Geomorphology</i> , 2001, 40, 37-55.  | 2.6 | 35        |
| 12 | Sensitivity of regional hydrology to climate changes, with application to the Illinois River basin. <i>Water Resources Research</i> , 2005, 41, .   | 4.2 | 35        |
| 13 | Self-similarity and multifractality of fluvial erosion topography: 1. Mathematical conditions and physical origin. <i>Water Resources Research</i> , 2000, 36, 1923-1936.                                       | 4.2 | 33        |
| 14 | Effects of gullies on space-time patterns of soil moisture in a semiarid grassland. <i>Journal of Hydrology</i> , 2010, 389, 289-300.   | 5.4 | 33        |
| 15 | Evaluation of sampling techniques to characterize topographically-dependent variability for soil moisture downscaling. <i>Journal of Hydrology</i> , 2014, 516, 304-316.  | 5.4 | 29        |
| 16 | Evaluating the parameter identifiability and structural validity of a probability-distributed model for soil moisture. <i>Journal of Hydrology</i> , 2008, 353, 93-108.   | 5.4 | 26        |
| 17 | An evaluation of the geomorphically effective event for fluvial processes over long periods. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.   | 3.3 | 25        |
| 18 | Self-similarity and multifractality of fluvial erosion topography: 2. Scaling properties. <i>Water Resources Research</i> , 2000, 36, 1937-1951.  | 4.2 | 24        |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 19 | Method for Assessing Impacts of Parameter Uncertainty in Sediment Transport Modeling Applications. <i>Journal of Hydraulic Engineering</i> , 2011, 137, 623-636.   | 1.5  | 20        |
| 20 | Impacts of precipitation and potential evapotranspiration patterns on downscaling soil moisture in regions with large topographic relief. <i>Water Resources Research</i> , 2017, 53, 1553-1574.           | 4.2  | 20        |
| 21 | Under what conditions do parallel river networks occur?. <i>Geomorphology</i> , 2011, 132, 260-271.  | 2.6  | 19        |
| 22 | Planform geometry and relief characterization of drainage networks in high-relief environments: An analysis of Chilean Andean basins. <i>Geomorphology</i> , 2019, 341, 46-64.                             | 2.6  | 17        |
| 23 | How do streamflow generation mechanisms affect watershed hypsometry?. <i>Earth Surface Processes and Landforms</i> , 2008, 33, 751-772.  | 2.5  | 15        |
| 24 | A comparison of experimental and natural drainage basin morphology across a range of scales. <i>Journal of Geophysical Research</i> , 2005, 110, n/a-n/a.  | 3.3  | 14        |
| 25 | An evaluation of nonlinear methods for estimating catchment-scale soil moisture patterns based on topographic attributes. <i>Journal of Hydroinformatics</i> , 2012, 14, 800-814.                          | 2.4  | 13        |
| 26 | Assessing the impact of travel time formulations on the performance of spatially distributed travel time methods applied to hillslopes. <i>Journal of Hydrology</i> , 2014, 519, 1315-1327.                | 5.4  | 13        |
| 27 | Evaluation of Parameter and Model Uncertainty in Simple Applications of a 1D Sediment Transport Model. <i>Journal of Hydraulic Engineering</i> , 2015, 141, .  | 1.5  | 13        |
| 28 | Prediction of regional water balance components based on climate, soil, and vegetation parameters, with application to the Illinois River Basin. <i>Water Resources Research</i> , 2004, 40, .             | 4.2  | 12        |
| 29 | Effects of woody vegetation on shallow soil moisture at a semiarid montane catchment. <i>Ecohydrology</i> , 2015, 8, 935-947.  | 2.4  | 12        |
| 30 | A comparison of snowmelt-derived streamflow from temperature-index and modified-temperature-index snow models. <i>Hydrological Processes</i> , 2019, 33, 3030-3045.  | 2.6  | 12        |
| 31 | Impact of regional characteristics on the estimation of root-zone soil moisture from the evaporative index or evaporative fraction. <i>Agricultural Water Management</i> , 2020, 238, 106225.              | 5.6  | 10        |
| 32 | Temporal Variations of NDVI and LAI and Interactions With Hydroclimatic Variables in a Large and Agro-ecologically Diverse Region. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2022, 127, . | 3.0  | 10        |
| 33 | A physically based interpolation method for fluvially eroded topography. <i>Water Resources Research</i> , 2003, 39, .   | 4.2  | 9         |
| 34 | Impact of Shallow Groundwater on Evapotranspiration Losses from Uncultivated Land in an Irrigated River Valley. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 2011, 137, 501-512.         | 1.0  | 9         |
| 35 | Downscaling soil moisture over regions that include multiple coarse-resolution grid cells. <i>Remote Sensing of Environment</i> , 2017, 199, 187-200.  | 11.0 | 9         |
| 36 | Reconstruction of hillslope and valley paleotopography by application of a geomorphic model. <i>Computers and Geosciences</i> , 2009, 35, 1776-1784.   | 4.2  | 6         |

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|----|--|------|-----------|
| 37 | On the Influence of Upstream Flow Contributions on the Basin Response Function for Hydrograph Prediction. <i>Water Resources Research</i> , 2019, 55, 4915-4935.                             | 4.2  | 6         |
| 38 | Using regional characteristics to improve uncalibrated estimation of rootzone soil moisture from optical/thermal remote-sensing. <i>Remote Sensing of Environment</i> , 2022, 273, 112982.   | 11.0 | 6         |
| 39 | Wildfire Impacts on Snowpack Phenology in a Changing Climate Within the Western U.S.. <i>Water Resources Research</i> , 2022, 58, .  | 4.2  | 5         |
| 40 | Modeling input errors to improve uncertainty estimates for one-dimensional sediment transport models. <i>Stochastic Environmental Research and Risk Assessment</i> , 2018, 32, 1817-1832.    | 4.0  | 4         |
| 41 | Evaluation of a surface energy balance method based on optical and thermal satellite imagery to estimate rootzone soil moisture. <i>Hydrological Processes</i> , 2015, 29, 5354-5368.        | 2.6  | 3         |
| 42 | Hydrologic Downscaling of Soil Moisture Using Global Data Sets without Site-Specific Calibration. <i>Journal of Hydrologic Engineering - ASCE</i> , 2018, 23, .                              | 1.9  | 3         |
| 43 | Identifying Runoff Production Mechanisms for Dam Safety Applications in the Colorado Front Range. <i>Journal of Hydrologic Engineering - ASCE</i> , 2020, 25, .                              | 1.9  | 3         |
| 44 | Impacts of Channel Network Type on the Unit Hydrograph. <i>Water (Switzerland)</i> , 2020, 12, 669.  | 2.7  | 3         |
| 45 | Stochastic analysis and probabilistic downscaling of soil moisture in small catchments. <i>Journal of Hydrology</i> , 2020, 585, 124711.   | 5.4  | 3         |
| 46 | Modeling hydrologic processes associated with soil saturation and debris flow initiation during the September 2013 storm, Colorado Front Range. <i>Landslides</i> , 2021, 18, 1741-1759.     | 5.4  | 3         |
| 47 | Simulating the impacts of small convective storms and channel transmission losses on gully evolution. , 2014, , .  |      | 2         |
| 48 | Enhanced hydrologic simulation may not improve downscaled soil moisture patterns without improved soil characterization. <i>Soil Science Society of America Journal</i> , 2020, 84, 672-689. | 2.2  | 1         |
| 49 | A Spatial Analysis of Dispersion Mechanisms in the Hydrological Response Using a Spatially Distributed Travel Time Model. <i>Water Resources Research</i> , 2022, 58, .                      | 4.2  | 0         |