Assefa M. Melesse

List of Publications by Citations

261 papers	6,722 citations	44 h-index	73 g-index
295 ext. papers	8,170 ext. citations	3.3 avg, IF	6.58 L-index

#	Paper	IF	Citations
261	A Comprehensive Review on Water Quality Parameters Estimation Using Remote Sensing Techniques. *Sensors*, **2016**, 16,	3.8	346
260	Application of GIS-based data driven random forest and maximum entropy models for groundwater potential mapping: A case study at Mehran Region, Iran. *Catena*, **2016**, 137, 360-372	5.8	293
259	Land use and climate change impacts on the hydrology of the upper Mara River Basin, Kenya: results of a modeling study to support better resource management. *Hydrology and Earth System Sciences*, **2011**, 15, 2245-2258	5.5	291
258	Suspended sediment load prediction of river systems: An artificial neural network approach. *Agricultural Water Management*, **2011**, 98, 855-866	5.9	196
257	A Coupled Remote Sensing and Simplified Surface Energy Balance Approach to Estimate Actual Evapotranspiration from Irrigated Fields. *Sensors*, **2007**, 7, 979-1000	3.8	171
256	Impact of climate change on the hydroclimatology of Lake Tana Basin, Ethiopia. *Water Resources Research*, **2011**, 47,	5.4	149
255	Remote Sensing Sensors and Applications in Environmental Resources Mapping and Modelling. *Sensors*, **2007**, 7, 3209-3241	3.8	143
254	A comparison of various artificial intelligence approaches performance for estimating suspended sediment load of river systems: a case study in United States. *Environmental Monitoring and Assessment*, **2015**, 187, 189	3.1	137
253	Water quality assessment and apportionment of pollution sources using APCS-MLR and PMF receptor modeling techniques in three major rivers of South Florida. *Science of the Total Environment*, **2016**, 566-567, 1552-1567	10.2	115
252	EVALUATION OF THE SWAT MODEL?S SNOWMELT HYDROLOGY IN A NORTHWESTERN MINNESOTA WATERSHED. *Transactions of the American Society of Agricultural Engineers*, **2005**, 48, 1359-1376		114
251	Effect of rainfall intensity, slope and antecedent moisture content on sediment concentration and sediment enrichment ratio. *Catena*, **2012**, 90, 47-52	5.8	106
250	Modeling of sediment yield in Maybar gauged watershed using SWAT, northeast Ethiopia. *Catena*, **2015**, 127, 191-205	5.8	97
249	Flood Detection and Susceptibility Mapping Using Sentinel-1 Remote Sensing Data and a Machine Learning Approach: Hybrid Intelligence of Bagging Ensemble Based on K-Nearest Neighbor Classifier. *Remote Sensing*, **2020**, 12, 266	5	96
248	Groundwater spring potential modelling: Comprising the capability and robustness of three different modeling approaches. *Journal of Hydrology*, **2018**, 565, 248-261	6	96
247	A comparison study of DRASTIC methods with various objective methods for groundwater vulnerability assessment. *Science of the Total Environment*, **2018**, 642, 1032-1049	10.2	95
246	Modeling of Sediment Yield From Anjeni-Gauged Watershed, Ethiopia Using SWAT Model1. *Journal of the American Water Resources Association*, **2010**, 46, 514-526	2.1	95
245	Evaluating sediment storage dams: structural off-site sediment trapping measures in northwest Ethiopia. *Cuadernos De Investigacion Geografica*, **2015**, 41, 7	2.5	87

244	Landslide Susceptibility Mapping Using Different GIS-Based Bivariate Models. *Water (Switzerland)*, **2019**, 11, 1402	3	82
243	Flood Spatial Modeling in Northern Iran Using Remote Sensing and GIS: A Comparison between Evidential Belief Functions and Its Ensemble with a Multivariate Logistic Regression Model. *Remote Sensing*, **2019**, 11, 1589	5	82
242	Using Hydrologic Equivalent Wetland Concept Within SWAT to Estimate Streamflow in Watersheds with Numerous Wetlands. *Transactions of the ASABE*, **2008**, 51, 55-72	0.9	74
241	Artificial neural network application for multi-ecosystem carbon flux simulation. *Ecological Modelling*, **2005**, 189, 305-314	3	74
240	GIS-based hydrological zones and soil geo-database of Ethiopia. *Catena*, **2013**, 104, 21-31	5.8	73
239	EFFECTS OF STATSGO AND SSURGO AS INPUTS ON SWAT MODELS SNOWMELT SIMULATION. *Journal of the American Water Resources Association*, **2006**, 42, 1217-1236	2.1	70
238	Application of Dempster-Shafer theory, spatial analysis and remote sensing for groundwater potentiality and nitrate pollution analysis in the semi-arid region of Khuzestan, Iran. *Science of the Total Environment*, **2016**, 568, 1110-1123	10.2	67
237	Spatial and Temporal Land Cover Changes in the Simen Mountains National Park, a World Heritage Site in Northwestern Ethiopia. *Remote Sensing*, **2011**, 3, 752-766	5	67
236	Modelling the rainfallRunoff process of the Mara River basin using the Soil and Water Assessment Tool. *Hydrological Processes*, **2012**, 26, 4038-4049	3.3	66
235	Spatial, inter and intra-annual variability of the Upper Blue Nile Basin rainfall. *Hydrological Processes* , **2009**, 23, 3075-3082	3.3	66
234	Impact of Climate Change on the Hydrology of Upper Tiber River Basin Using Bias Corrected Regional Climate Model. *Water Resources Management*, **2014**, 28, 1327-1343	3.7	63
233	Influences of Potential Evapotranspiration Estimation Methods on SWATs Hydrologic Simulation in a Northwestern Minnesota Watershed. *Transactions of the ASABE*, **2006**, 49, 1755-1771	0.9	61
232	Water Quality Monitoring Using Remote Sensing and an Artificial Neural Network. *Water, Air, and Soil Pollution*, **2012**, 223, 4875-4887	2.6	60
231	Field-scale investigation of the effect of land use on sediment yield and runoff using runoff plot data and models in the Mara River basin, Kenya. *Catena*, **2012**, 89, 54-64	5.8	60
230	The effect of slope steepness and antecedent moisture content on interrill erosion, runoff and sediment size distribution in the highlands of Ethiopia. *Hydrology and Earth System Sciences*, **2011**, 15, 2367-2375	5.5	60
229	Novel ensembles of COPRAS multi-criteria decision-making with logistic regression, boosted regression tree, and random forest for spatial prediction of gully erosion susceptibility. *Science of the Total Environment*, **2019**, 688, 903-916	10.2	59
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227	Modeling the impact of land use changes on runoff and sediment yield in the Le Sueur watershed, Minnesota using GeoWEPP. *Catena*, **2013**, 107, 35-45	5.8	54

226	Modelling lake stage and water balance of Lake Tana, Ethiopia. *Hydrological Processes*, **2009**, 23, 3534-3544	3.3	53
225	Global Daily Reference Evapotranspiration Modeling and Evaluation1. *Journal of the American Water Resources Association*, **2008**, 44, 969-979	2.1	53
224	Assortment and spatiotemporal analysis of surface water quality using cluster and discriminant analyses. *Catena*, **2017**, 151, 247-258	5.8	51
223	Comparing flow regime, channel hydraulics, and biological communities to infer flow□ecology relationships in the Mara River of Kenya and Tanzania. *Hydrological Sciences Journal*, **2014**, 59, 801-819	3.5	51
222	SWAT model application and prediction uncertainty analysis in the Lake Tana Basin, Ethiopia. *Hydrological Processes*, **2009**, 24, n/a-n/a	3.3	51
221	Spatially distributed storm runoff depth estimation using Landsat images and GIS. *Computers and Electronics in Agriculture*, **2002**, 37, 173-183	6.5	50
220	Simulated wetland conservation-restoration effects on water quantity and quality at watershed scale. *Journal of Environmental Management*, **2010**, 91, 1511-25	7.9	49
219	STORM RUNOFF PREDICTION BASED ON A SPATIALLY DISTRIBUTED TRAVEL TIME METHOD UTILIZING REMOTE SENSING AND GIS1. *Journal of the American Water Resources Association*, **2004**, 40, 863-879	2.1	48
218	Evaporation and Evapotranspiration **2013**,		43
217	Flash Flood Susceptibility Modeling Using New Approaches of Hybrid and Ensemble Tree-Based Machine Learning Algorithms. *Remote Sensing*, **2020**, 12, 3568	5	42
216	Surface Water and Groundwater Resources of Ethiopia: Potentials and Challenges of Water Resources Development **2014**, 97-117		42
215	MODSIM-based water allocation modeling of Awash River Basin, Ethiopia. *Catena*, **2013**, 109, 118-128	5.8	42
214	Watershed scale application of WEPP and EROSION 3D models for assessment of potential sediment source areas and runoff flux in the Mara River Basin, Kenya. *Catena*, **2012**, 95, 63-72	5.8	41
213	Development of an automated GIS tool for reproducing the HAND terrain model. *Environmental Modelling and Software*, **2018**, 102, 1-12	5.2	40
212	Climate change, land-cover dynamics and ecohydrology of the Nile River Basin. *Hydrological Processes*, **2009**, 23, 3651-3652	3.3	40
211	Ensemble models of GLM, FDA, MARS, and RF for flood and erosion susceptibility mapping: a priority assessment of sub-basins. *Geocarto International*, **2020**, 1-20	2.7	39
210	SWPT: An automated GIS-based tool for prioritization of sub-watersheds based on morphometric and topo-hydrological factors. *Geoscience Frontiers*, **2019**, 10, 2167-2175	6	38
209	Erosion and Sediment Transport Modelling in Shallow Waters: A Review on Approaches, Models and Applications. *International Journal of Environmental Research and Public Health*, **2018**, 15,	4.6	37

208	Performance of High Resolution Satellite Rainfall Products over Data Scarce Parts of Eastern Ethiopia. *Remote Sensing*, **2015**, 7, 11639-11663	5	37
207	Nile River Basin **2014**,		37
206	Nile River Basin **2011**,		36
205	Spatiotemporal dynamics of land surface parameters in the Red River of the North Basin. *Physics and Chemistry of the Earth*, **2004**, 29, 795-810	3	35
204	Modeling Climate Change Impact on the Hydrology of Keleta Watershed in the Awash River Basin, Ethiopia. *Environmental Modeling and Assessment*, **2019**, 24, 95-107	2	34
203	Spatial delineation of soil erosion vulnerability in the Lake Tana Basin, Ethiopia. *Hydrological Processes*, **2009**, 23, n/a-n/a	3.3	34
202	Evaporation estimation of rift valley lakes: comparison of models. *Sensors*, **2009**, 9, 9603-15	3.8	33
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200	SEVUCAS: A Novel GIS-Based Machine Learning Software for Seismic Vulnerability Assessment. *Applied Sciences (Switzerland)*, **2019**, 9, 3495	2.6	31
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197	Hydrological analysis of the Upper Tiber River Basin, Central Italy: a watershed modelling approach. *Hydrological Processes*, **2013**, 27, 2339-2351	3.3	30
196	Hydro-Meteorology and Water Budget of the Mara River Basin Under Land Use Change Scenarios **2011**, 39-68		30
195	Estimation of spatially distributed surface energy fluxes using remotely-sensed data for agricultural fields. *Hydrological Processes*, **2005**, 19, 2653-2670	3.3	29
194	Estimating the Sediment Flux and Budget for a Data Limited Rift Valley Lake in Ethiopia. *Hydrology*, **2019**, 6, 1	2.8	29
193	El Niño Southern Oscillation link to the Blue Nile River Basin hydrology. *Hydrological Processes*, **2009**, 23, n/a-n/a	3.3	28
192	Modelling the impacts of subsurface drainage on surface runoff and sediment yield in the Le Sueur Watershed, Minnesota, USA. *Hydrological Sciences Journal*, **2013**, 58, 570-586	3.5	27
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187	Streamflow prediction uncertainty analysis and verification of SWAT model in a tropical watershed. *Environmental Earth Sciences*, **2016**, 75, 1	2.9	26
186	The response of water balance components to land cover change based on hydrologic modeling and partial least squares regression (PLSR) analysis in the Upper Awash Basin. *Journal of Hydrology: Regional Studies*, **2019**, 26, 100640	3.6	26
185	Water hyacinth: review of its impacts on hydrology and ecosystem services lessons for management of Lake Tana **2019**, 237-251		25
184	The Nile River Basin **2014**, 7-21		25
183	Soil Erosion Modelling and Risk Assessment in Data Scarce Rift Valley Lake Regions, Ethiopia. *Water (Switzerland)*, **2018**, 10, 1684	3	25
182	Climate Change Impact on Sediment Yield in the Upper Gilgel Abay Catchment, Blue Nile Basin, Ethiopia. *Springer Geography*, **2016**, 615-644	0.4	24
181	Hydrological Variability and Climate of the Upper Blue Nile River Basin **2011**, 3-37		24
180	River Water Salinity Prediction Using Hybrid Machine Learning Models. *Water (Switzerland)*, **2020**, 12, 2951	3	23
179	Soil Erosion Mapping and Hotspot Area Identification Using GIS and Remote Sensing in Northwest Ethiopian Highlands, Near Lake Tana **2011**, 207-224		22
178	Development of multi-model ensemble approach for enhanced assessment of impacts of climate change on climate extremes. *Science of the Total Environment*, **2020**, 704, 135357	10.2	22
177	Spaceborne and airborne sensors in water quality assessment. *International Journal of Remote Sensing*, **2016**, 37, 3143-3180	3.1	22
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174	Applicability of a Spatially Semi-Distributed Hydrological Model for Watershed Scale Runoff Estimation in Northwest Ethiopia. *Water (Switzerland)*, **2018**, 10, 923	3	21
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171	Stage level, volume and time-frequency information content of Lake Tana using stochastic and wavelet analysis methods. *Hydrological Processes*, **2013**, 27, 1475-1483	3.3	20
170	Bathymetric study of Lake Hayq, Ethiopia. *Lakes and Reservoirs: Research and Management*, **2013**, 18, 155-165	1.2	19
169	Wetland Restoration Response Analysis using MODIS and Groundwater Data. *Sensors*, **2007**, 7, 1916-1933	3.8	19
168	Critical Water Resources Issues in the Nile River Basin **2011**, 401-416		19
167	Comparative Analysis of Artificial Intelligence Models for Accurate Estimation of Groundwater Nitrate Concentration. *Sensors*, **2020**, 20,	3.8	18
166	Estimating major ion and nutrient concentrations in mangrove estuaries in Everglades National Park using leaf and satellite reflectance. *Remote Sensing of Environment*, **2014**, 154, 202-218	13.2	18
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164	Climate Change Projections in the Upper Gilgel Abay River Catchment, Blue Nile Basin Ethiopia **2014**, 363-388		18
163	Climate Change Impact on the Hydrology of Tekeze Basin, Ethiopia: Projection of Rainfall-Runoff for Future Water Resources Planning. *Water Conservation Science and Engineering*, **2018**, 3, 267-278	1.6	17
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159	Satellite Estimation of Chlorophyll-a Using Moderate Resolution Imaging Spectroradiometer (MODIS) Sensor in Shallow Coastal Water Bodies: Validation and Improvement. *Water (Switzerland)*, **2019**, 11, 1621	3	16
158	The effect of tillage practices on grain yield and water use efficiency. *Catena*, **2013**, 100, 128-138	5.8	16
157	Supervised Classification of Benthic Reflectance in Shallow Subtropical Waters Using a Generalized Pixel-Based Classifier across a Time Series. *Remote Sensing*, **2015**, 7, 5098-5116	5	16
156	Climate Teleconnections and Water Management **2014**, 685-705		16
155	Transboundary Rivers and the Nile **2014**, 565-579		15

154	Spatial and temporal variability in spectral-based surface energy evapotranspiration measured from Landsat 5TM across two mangrove ecotones. *Agricultural and Forest Meteorology*, **2015**, 213, 304-316	5.8	14
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150	Hydroclimatic Extremes Evaluation Using GRACE/GRACE-FO and Multidecadal Climatic Variables over the Nile River Basin. *Remote Sensing*, **2021**, 13, 651	5	14
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148	Long-term (11 years) study of water balance, flushing times and water chemistry of a coastal wetland undergoing restoration, Everglades, Florida, USA. *Catena*, **2016**, 144, 74-83	5.8	13
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146	Vapor Pressure Calculation Methods **2013**, 53-62		13
145	Groundwater Evaporation and Recharge for a Floodplain in a Sub-humid Monsoon Climate in Ethiopia. *Land Degradation and Development*, **2017**, 28, 1831-1841	4.4	12
144	Operational Prediction of Groundwater Fluctuation in South Florida using Sequence Based Markovian Stochastic Model. *Water Resources Management*, **2011**, 25, 2279-2294	3.7	12
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141	Land use and land cover dynamics in the Keleta watershed, Awash River basin, Ethiopia. *Environmental Hazards*, **2019**, 18, 246-265	4.2	12
140	Projected changes in extreme precipitation indices from CORDEX simulations over Ethiopia, East Africa. *Atmospheric Research*, **2021**, 247, 105156	5.4	12
139	Spatial evaluation of satellite-retrieved extreme rainfall rates in the Upper Awash River Basin, Ethiopia. *Atmospheric Research*, **2021**, 249, 105297	5.4	12
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137	Bias correction and characterization of climate forecast system re-analysis daily precipitation in Ethiopia using fuzzy overlay. *Meteorological Applications*, **2016**, 23, 230-243	2.1	11

136	Interrill erosion, runoff and sediment size distribution as affected by slope steepness and antecedent moisture content		11
135	Multitemporal Land Use/Land Cover Change Detection for the Batena Watershed, Rift Valley Lakes Basin, Ethiopia. *Springer Geography*, **2016**, 51-72	0.4	11
134	Spatial and Temporal Trends of Recent Dissolved Phosphorus Concentrations in Lake Tana and its Four Main Tributaries. *Land Degradation and Development*, **2017**, 28, 1742-1751	4.4	10
133	Assessing the potential of MODIS/Terra version 5 images to improve near shore lake bathymetric surveys. *International Journal of Applied Earth Observation and Geoinformation*, **2015**, 36, 13-21	7.3	10
132	Flood susceptibility mapping at Ningdu catchment, China using bivariate and data mining techniques **2019**, 419-434		10
131	Water Quality Changes as a Result of Coalbed Methane Development in a Rocky mountain Watershed1. *Journal of the American Water Resources Association*, **2007**, 43, 1383-1399	2.1	10
130	Modeling Sediment Dynamics: Effect of Land Use, Topography, and Land Management in the Wami-Ruvu Basin, Tanzania **2014**, 165-192		10
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127	Spatial Runoff Estimation and Mapping of Potential Water Harvesting Sites: A GIS and Remote Sensing Perspective, Northwest Ethiopia. *Springer Geography*, **2016**, 565-584	0.4	8
126	Soil Erosion Susceptibility Mapping in Kozetopraghi Catchment, Iran: A Mixed Approach Using Rainfall Simulator and Data Mining Techniques. *Land*, **2020**, 9, 368	3.5	8
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124	GIS and Remote Sensing-Based Forest Resource Assessment, Quantification, and Mapping in Amhara Region, Ethiopia. *Springer Geography*, **2016**, 9-29	0.4	8
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117	Operational Actual Wetland Evapotranspiration Estimation for South Florida Using MODIS Imagery. *Remote Sensing*, **2015**, 7, 3613-3632	5	7
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115	Performance of mungbean under deficit irrigation application in the semi-arid highlands of Ethiopia. *Agricultural Water Management*, **2014**, 136, 68-74	5.9	7
114	Wetland Evapotranspiration **2013**, 93-108		7
113	Hydrometeorological Analysis of the Mara River Basin, Kenya/Tanzania **2008**,		7
112	Urban Flood Management through Urban Land Use Optimization Using LID Techniques, City of Addis Ababa, Ethiopia. *Water (Switzerland)*, **2021**, 13, 1721	3	7
111	Developing Benthic Class Specific, Chlorophyll-a Retrieving Algorithms for Optically-Shallow Water Using SeaWiFS. *Sensors*, **2016**, 16,	3.8	7
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100	Enhancing Land Cover Mapping using Landsat Derived Surface Temperature and NDVI **2001**, 1		5
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92	Groundwater Vulnerability Analysis of the Tana Sub-basin: An Application of DRASTIC Index Method. *Springer Geography*, **2016**, 435-461	0.4	4
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