

Helena Mitasova

List of Publications by Year in descending order

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Version: 2024-02-01

96
papers

3,708
citations

172386

29
h-index

138417

58
g-index

105
all docs

105
docs citations

105
times ranked

3745
citing authors

#	ARTICLE	IF	CITATIONS
1	Modelling topographic potential for erosion and deposition using GIS. <i>International Journal of Geographical Information Science</i> , 1996, 10, 629-641.	2.2	407
2	Interpolation by regularized spline with tension: I. Theory and implementation. <i>Mathematical Geosciences</i> , 1993, 25, 641-655.	0.9	333
3	Interpolation by regularized spline with tension: II. Application to terrain modeling and surface geometry analysis. <i>Mathematical Geosciences</i> , 1993, 25, 657-669.	0.9	278
4	Spatial and temporal variability of streambed hydraulic conductivity in West Bear Creek, North Carolina, USA. <i>Journal of Hydrology</i> , 2008, 358, 332-353.	2.3	169
5	Distributed soil erosion simulation for effective erosion prevention. <i>Water Resources Research</i> , 1998, 34, 505-516.	1.7	147
6	General variational approach to the interpolation problem. <i>Computers and Mathematics With Applications</i> , 1988, 16, 983-992.	1.4	145
7	An evaluation of methods to determine slope using digital elevation data. <i>Catena</i> , 2004, 58, 215-233.	2.2	124
8	Efficient extraction of drainage networks from massive, radar-based elevation models with least cost path search. <i>Hydrology and Earth System Sciences</i> , 2011, 15, 667-678.	1.9	114
9	Multivariate Interpolation of Precipitation Using Regularized Spline with Tension. <i>Transactions in GIS</i> , 2002, 6, 135-150.	1.0	107
10	Modelling spatially and temporally distributed phenomena: new methods and tools for GRASS GIS. <i>International Journal of Geographical Information Science</i> , 1995, 9, 433-446.	2.2	100
11	Simultaneous Spline Approximation and Topographic Analysis for Lidar Elevation Data in Open-Source GIS. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2005, 2, 375-379.	1.4	90
12	Geospatial analysis of a coastal sand dune field evolution: Jockey's Ridge, North Carolina. <i>Geomorphology</i> , 2005, 72, 204-221.	1.1	86
13	Spatial and temporal dynamics of coupled groundwater and nitrogen fluxes through a streambed in an agricultural watershed. <i>Water Resources Research</i> , 2009, 45, .	1.7	75
14	Open Geospatial Software and Data: A Review of the Current State and A Perspective into the Future. <i>ISPRS International Journal of Geo-Information</i> , 2020, 9, 90.	1.4	65
15	Open Source GIS. <i>Kluwer International Series in Engineering and Computer Science</i> , 2002, , .	0.2	61
16	Raster-Based Analysis of Coastal Terrain Dynamics from Multitemporal Lidar Data. <i>Journal of Coastal Research</i> , 2009, 252, 507-514.	0.1	61
17	Validation of a 3-D enhancement of the Universal Soil Loss Equation for prediction of soil erosion and sediment deposition. <i>Catena</i> , 2005, 64, 281-296.	2.2	58
18	Computational Modeling and Neolithic Socioecological Dynamics: A Case Study from Southwest Asia. <i>American Antiquity</i> , 2010, 75, 364-386.	0.6	57

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19	Looking for the future in the past: Long-term change in socioecological systems. Ecological Modelling, 2012, 241, 42-53.	1.2	49
20	Effect of sampling density and design on estimation of streambed attributes. Journal of Hydrology, 2008, 355, 164-180.	2.3	47
21	Role of dynamic cartography in simulations of landscape processes based on multivariate fields. Computers and Geosciences, 1997, 23, 437-446.	2.0	45
22	Scientific visualization of landscapes and landforms. Geomorphology, 2012, 137, 122-137.	1.1	44
23	The effects of interdune vegetation changes on eolian dune field evolution: a numerical modeling case study at Jockey's Ridge, North Carolina, USA. Earth Surface Processes and Landforms, 2009, 34, 1245-1254.	1.2	43
24	Quantifying Rapid Changes in Coastal Topography using Modern Mapping Techniques and Geographic Information System. Environmental and Engineering Geoscience, 2004, 10, 1-11.	0.3	42
25	TerraStream. , 2007, , .		42
26	Aboveground carbon loss associated with the spread of ghost forests as sea levels rise. Environmental Research Letters, 2020, 15, 104028.	2.2	39
27	Design of a light oil piezomanometer for measurement of hydraulic head differences and collection of groundwater samples. Water Resources Research, 2007, 43, .	1.7	38
28	Tangible Modeling with Open Source GIS. , 2015, , .		37
29	Relationships among groundwater age, denitrification, and the coupled groundwater and nitrogen fluxes through a streambed. Water Resources Research, 2009, 45, .	1.7	35
30	TanGeoMS: Tangible Geospatial Modeling System. IEEE Transactions on Visualization and Computer Graphics, 2010, 16, 1605-1612.	2.9	35
31	Comparison of Darcian flux calculations and seepage meter measurements in a sandy streambed in North Carolina, United States. Water Resources Research, 2010, 46, .	1.7	31
32	Real-time landscape model interaction using a tangible geospatial modeling environment. IEEE Computer Graphics and Applications, 2006, 26, 55-63.	1.0	30
33	Fusion of high-resolution DEMs for water flow modeling. Open Geospatial Data, Software and Standards, 2017, 2, .	4.3	30
34	Geochemistry of four tropical montane watersheds, Central Panama. Applied Geochemistry, 2009, 24, 624-640.	1.4	29
35	GRASS as Open Source Free Software GIS: Accomplishments and Perspectives. Transactions in GIS, 2004, 8, 145-154.	1.0	27
36	Quantifying the fate of agricultural nitrogen in an unconfined aquifer: Stream-based observations at three measurement scales. Water Resources Research, 2016, 52, 1961-1983.	1.7	27

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37	Space-Time Cube Representation of Stream Bank Evolution Mapped by Terrestrial Laser Scanning. IEEE Geoscience and Remote Sensing Letters, 2013, 10, 1369-1373.	1.4	24
38	Modeling restorative potential of urban environments by coupling viewscape analysis of lidar data with experiments in immersive virtual environments. Landscape and Urban Planning, 2020, 195, 103704.	3.4	24
39	Path sampling method for modeling overland water flow, sediment transport, and short term terrain evolution in Open Source GIS. Developments in Water Science, 2004, 55, 1479-1490.	0.1	23
40	Chapter 17 Geomorphometry in GRASS GIS. Developments in Soil Science, 2009, 33, 387-410.	0.5	23
41	Geospatial analysis of vulnerable beach-foredune systems from decadal time series of lidar data. Journal of Coastal Conservation, 2010, 14, 161-172.	0.7	19
42	Generalized 3D fragmentation index derived from lidar point clouds. Open Geospatial Data, Software and Standards, 2017, 2, .	4.3	18
43	Chapter Ten Free and Open Source Geospatial Tools for Environmental Modelling and Management. Developments in Integrated Environmental Assessment, 2008, 3, 163-180.	0.0	17
44	Least Cost Path Extraction of Topographic Features for Storm Impact Scale Mapping. Journal of Coastal Research, 2012, 28, 970.	0.1	17
45	Bank erosion of legacy sediment at the transition from vertical to lateral stream incision. Earth Surface Processes and Landforms, 2015, 40, 1764-1778.	1.2	17
46	Observation and modeling of the evolution of an ephemeral storm-induced inlet: Pea Island Breach, North Carolina, USA. Continental Shelf Research, 2018, 156, 55-69.	0.9	16
47	Space-time analytics of human physiology for urban planning. Computers, Environment and Urban Systems, 2021, 85, 101554.	3.3	16
48	Predicting flood damage probability across the conterminous United States. Environmental Research Letters, 2022, 17, 034006.	2.2	15
49	Multiscale Soil Erosion Simulations For Land Use Management. , 2001, , 321-347.		14
50	Free and open source desktop and Web GIS solutions. Applied Geomatics, 2012, 4, 65-66.	1.2	14
51	Integrating Free and Open Source Solutions into Geospatial Science Education. ISPRS International Journal of Geo-Information, 2015, 4, 942-956.	1.4	14
52	Tangible geospatial modeling for collaborative solutions to invasive species management. Environmental Modelling and Software, 2017, 92, 176-188.	1.9	14
53	More is Not Better: The Emotional Dynamics of an Excellent Experience. Journal of Hospitality and Tourism Research, 2022, 46, 78-99.	1.8	14
54	Estimating Monthly Solar Radiation in South-Central Chile. Chilean Journal of Agricultural Research, 2011, 71, 601-609.	0.4	13

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55	Tangible topographic modeling for landscape architects. <i>International Journal of Architectural Computing</i> , 2018, 16, 4-21.	0.9	13
56	Highlighting recent trends in open source geospatial science and software. <i>Transactions in GIS</i> , 2020, 24, 1141-1146.	1.0	13
57	Reply to Comment by Desmet and Govers. <i>International Journal of Geographical Information Science</i> , 1997, 11, 611-618.	2.2	12
58	Tangible Landscape., 2018, , .		12
59	Projecting Urbanization and Landscape Change at Large Scale Using the FUTURES Model. <i>Land</i> , 2019, 8, 144.	1.2	12
60	Visualizations of coastal terrain time series. <i>Information Visualization</i> , 2014, 13, 266-282.	1.2	11
61	Viewshed simulation and optimization for digital terrain modelling with terrestrial laser scanning. <i>International Journal of Remote Sensing</i> , 2020, 41, 6409-6426.	1.3	11
62	An extreme climate gradient-induced ecological regionalization in the Upper Cretaceous Western Interior Basin of North America. <i>Bulletin of the Geological Society of America</i> , 2021, 133, 2125-2136.	1.6	11
63	GIS-based Analysis of Coastal Lidar Time-Series. <i>SpringerBriefs in Computer Science</i> , 2014, , .	0.2	10
64	Quantifying an aquifer nitrate budget and future nitrate discharge using field data from streambeds and well nests. <i>Water Resources Research</i> , 2016, 52, 9046-9065.	1.7	10
65	Downscaling of real-time coastal flooding predictions for decision support. <i>Natural Hazards</i> , 2021, 107, 1341-1369.	1.6	10
66	Efficient Drone-Based Rare Plant Monitoring Using a Species Distribution Model and AI-Based Object Detection. <i>Drones</i> , 2021, 5, 110.	2.7	10
67	r.sim.terrain 1.0: a landscape evolution model with dynamic hydrology. <i>Geoscientific Model Development</i> , 2019, 12, 2837-2854.	1.3	9
68	Visualization of Pedestrian Density Dynamics Using Data Extracted from Public Webcams. <i>ISPRS International Journal of Geo-Information</i> , 2019, 8, 559.	1.4	9
69	Measures of Canopy Structure from Low-Cost UAS for Monitoring Crop Nutrient Status. <i>Drones</i> , 2020, 4, 36.	2.7	8
70	Immersive tangible geospatial modeling., 2016, , .		8
71	Using a Geographic Information System (GIS) for Herbicide Management. <i>Weed Technology</i> , 1996, 10, 856-864.	0.4	6
72	SUMMARY VISUALIZATIONS FOR COASTAL SPATIAL-TEMPORAL DYNAMICS., 2013, 3, 241-253.		6

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73	High Resolution Viewscape Modeling Evaluated Through Immersive Virtual Environments. ISPRS International Journal of Geo-Information, 2020, 9, 445.	1.4	6
74	Geospatial simulation steering for adaptive management. Environmental Modelling and Software, 2020, 133, 104801.	1.9	6
75	Barrier Island Dynamics Using Mass Center Analysis: A New Way to Detect and Track Large-Scale Change. ISPRS International Journal of Geo-Information, 2014, 3, 49-65.	1.4	5
76	Evaluating online and tangible interfaces for engaging stakeholders in forecasting and control of biological invasions. Ecological Applications, 2021, 31, e02446.	1.8	5
77	New spatial measures of terrain dynamics derived from time series of lidar data. , 2009, , .		4
78	LAND COVER AND SEDIMENT LAYERS AS CONTROLS OF INLET BREACHING. Coastal Engineering Proceedings, 2012, , 114.	0.1	4
79	Spatially Explicit Fuzzy Cognitive Mapping for Participatory Modeling of Stormwater Management. Land, 2021, 10, 1114.	1.2	4
80	Surface Water Geochemistry and Chemical Weathering Across Panama. Procedia Earth and Planetary Science, 2013, 7, 342-345.	0.6	3
81	Geospatial contrasts between natural and human-altered barrier island systems: Core Banks and Ocracoke Island, North Carolina, U.S.A.. Journal of Coastal Conservation, 2018, 22, 679-694.	0.7	3
82	GIS-BASED ANALYSIS OF STORM VULNERABILITY CHANGE AT PEA ISLAND, NC. Coastal Engineering Proceedings, 2012, 1, 75.	0.1	3
83	Rapid-DEM: Rapid Topographic Updates through Satellite Change Detection and UAS Data Fusion. Remote Sensing, 2022, 14, 1718.	1.8	3
84	Lines in the Sand: Geomorphic and Geospatial Characterization and Interpretation of Sandy Shorelines and Beaches. Geography Compass, 2013, 7, 315-343.	1.5	2
85	QUANTIFICATION AND CHARACTERIZATION OF TERRAIN EVOLUTION IN THE OUTER BANKS, N.C.. , 2011, , .		2
86	Surface Water Flow Modeling. , 2018, , 107-118.		1
87	Raster-Based Analysis. SpringerBriefs in Computer Science, 2014, , 27-34.	0.2	1
88	Managing Dune Landscape Changes at Jockey's Ridge State Park, North Carolina. Tourism in Marine Environments, 2014, 9, 155-167.	0.1	1
89	Open-Source Tools for Environmental Modeling. , 2011, , 597-619.		1
90	Surface Water Flow and Soil Erosion Modeling. , 2015, , 65-76.		0

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91	Open Source Software Development. Geographic Information Science & Technology Body of Knowledge, 2021, 2021, .	0.1	0
92	Environmental Modeling Using Open Source Tools. , 2008, , 275-279.		0
93	Visualizing Coastal Change. SpringerBriefs in Computer Science, 2014, , 71-80.	0.2	0
94	Feature Extraction and Feature Change Metrics. SpringerBriefs in Computer Science, 2014, , 35-62.	0.2	0
95	Environmental Modeling Using Open Source Tools. , 2016, , 1-7.		0
96	Environmental Modeling Using Open Source Tools. , 2017, , 539-545.		0