

SUPPLEMENTARY MATERIALS

Table S1. Top 15 most published journals.

Rank	Journals	ISSN	Country	Articles	Representation	Cited	Area	Category	SJR Q	SJR 2018	Highest percentile	H-Index
1	Geoheritage	18672477	Germany	165	32.61%	1818	Earth and Planetary Sciences; Environmental Science; Social Sciences	Earth and Planetary Sciences (miscellaneous); Nature and Landscape Conservation; Geography, Planning and Development	2	0.56	89% 69/628 Geography, Planning and Development	21
2	Geojournal of Tourism and Geosites	20650817	Romania	33	6.52%	139	Earth and Planetary Sciences; Social Sciences	Earth and Planetary Sciences (miscellaneous); Geography, Planning and Development	3	0.24	52% 295/628 Geography, Planning and Development	7
3	Geosciences (Switzerland)	20763263	Switzerland	15	2.96%	49	Earth and Planetary Sciences	Earth and Planetary Sciences (miscellaneous)	2	0.39	73% 48/181 General Earth and Planetary Sciences	14
4	Proceedings of the Geologists' Association	00167878	United Kingdom	12	2.37%	226	Earth and Planetary Sciences	Geology Paleontology	2	0.51	62% 35/93 Paleontology	35

5	Anuario do Instituto de Geociencias	01019759	Brazil	12	2.37%	47	Earth and Planetary Sciences; Environmental Science; Social Sciences	Economic Geology; Geology; Environmental Science (miscellaneous); Development Geography, Planning and Development	3	0.19	24% 162/214 Development	10
6	Open Geosciences	23915447	Germany	10	1.98%	42	Earth and Planetary Sciences	Earth and Planetary Sciences (miscellaneous)	3	0.3	53% 85/181 General Earth and Planetary Sciences	19
7	Journal of African Earth Sciences	1464343X	United Kingdom	10	1.98%	104	Earth and Planetary Sciences	Earth-Surface Processes; Geology	2	0.6	70% 63/217 Geology	64
8	Quaestiones Geographicae	0137477X	Poland	9	1.78%	59	Earth and Planetary Sciences	Earth and Planetary Sciences (miscellaneous)	3	0.24	47% 96/181 General Earth and Planetary Sciences	13
9	Resources	20799276	Switzerland	9	1.78%	12	Environmental Science	Management, Monitoring, Policy and Law; Nature and Landscape Conservation	2	0.65	81% 27/141 Nature and Landscape Conservation	19

10	Bulletin of the Geological Society of Malaysia	01266187	Malaysia	8	1.58%	22	Earth and Planetary Sciences	Earth and Planetary Sciences (miscellaneous)	2	0.56	31% 59/86 Earth and Planetary Sciences (miscellaneous)	8
11	Sustainability (Switzerland)	20711050	Switzerland	8	1.58%	30	Energy; Environmental Science; Social Sciences	Renewable Energy, Sustainability and the Environment; Management, Monitoring, Policy and Law; Geography, Planning and Development	2	0.55	91% 55/628 Geography, Planning and Development	53
12	e-Review of Tourism Research	19415842	United States	6	1.19%	8	Business, Management and Accounting; Environmental Science; Social Sciences	Tourism, Leisure and Hospitality Management; Nature and Landscape Conservation; Geography, Planning and Development	3	0.18	26% 462/628 Geography, Planning and Development	7
13	Quaternary International	10406182	United Kingdom	6	1.19%	120	Earth and Planetary Sciences	Earth-Surface Processes	1	1.6	75% 34/136 Earth-Surface Processes	93
14	Journal of Environmental	20687729	Germany	5	0.99%	5	Environmental Science;	Environmental Science (miscellaneous);	3	0.2	38% 176/288	8

	Management and Tourism						Neuroscie nce	Neuroscience (miscellaneous)			Management, Monitoring, Policy and Law 58% 56/136 Earth-Surface Processes	
15	Geografia Fisica e Dinamica Quaternaria	3919838	Italia	5	0.99%	123	Earth and Planetary Sciences	Earth-Surface Procsses	2	0.68		22
Total				313	61.86%	2804						

Table S2. Number of co-occurrences of the selected keywords per cluster.

Period	Cluster	Co-occurrences	Links	Total link strength	Author-Keywords
I	1 (6 nodes)	1	9	9	Natural monument
		1	9	9	Cantón jura
		1	9	9	Geopark
		1	9	9	Sauropoda
		1	9	9	Palaeontological heritage
	2 (7 nodes)	5	23	29	Geotourism
		3	11	13	Geomorphosite
		1	5	5	Aeolian islands
		1	5	5	Lipari
	3 (7 nodes)	1	7	7	Geoconservation
		1	7	7	Education
		1	7	7	Regional geology
	4 (5 nodes)	1	6	6	Tunisia
		1	6	6	Desert
		1	6	6	Desertification
II	1 (4 nodes)	59	8	63	Geotourism
		23	8	42	Geoheritage
		15	8	31	Geopark
		8	8	21	Geosite
	2	13	6	29	Geoconservation

III	(3 nodes)	8	6	22	Geodiversity
		5	6	14	Sustainable development
	1 (8 nodes)	128	22	172	Geoheritage
		26	14	44	Geomorphosite
		10	13	27	Assessment
		8	3	7	Cultural heritage
		7	4	4	Urban geotourism
		6	7	15	Inventory
		5	7	14	Evaluation
		5	5	10	Geomorphological heritage
	2 (7 nodes)	245	31	338	Geotourism
		15	11	22	Tourism
		11	9	19	Sustainability
		10	10	19	Sustainable tourism
		6	7	12	Conservation
		6	5	10	Ecotourism
		5	4	8	Geotourists
	3 (4 nodes)	8	4	4	Geomorphology
		7	6	6	Motivation
		5	6	6	Geology
		5	4	4	Mining tourism
	4 (3 nodes)	10	7	15	Interpretation
		6	8	10	Karts
		5	7	10	Western caucasus
	5 (3 nodes)	10	6	15	Landscape
		7	10	17	Education
		6	5	10	Quarry
	6 (3 nodes)	41	18	96	Geoconservation
		39	18	88	Geodiversity
		9	9	29	Geoeducation
	7 (3 nodes)	46	19	93	Geopark
		20	9	34	Sustainable development

	5	7	9	SWOT analysis
8	62	21	127	Geosite
(2 nodes)	5	2	3	Volcanic geoheritage

Table S3. Top author co-citation per cluster with stronger links based on author's reference.

Cluster	Co-citations	Links	Total link strength	Main Authors	Related Publication	Main Topics
1 (56 nodes)	441	229	408.2449	Reynard, E.	[115–120]	Geomorphological heritage, Geomorphosite assessment method, Geomorphosites, Cultural geomorphology
	232	228	220.1323	Coratza, P.		
	202	222	189.7282	Panizza, M.		
	128	221	122.3453	Pereira, D.		
	99	217	97.9059	Pereira, P.		
2 (36 nodes)	278	226	261.4808	Brilha, J.	[96,121–127]	Geoheritage and geoconservation
	244	214	213.4476	Ruban, D.A.		
	143	218	134.3866	Henriques, M.H		
	139	217	133.6692	Prosser, C.D.		
	105	214	95.1832	Gordon, J.E.		
3 (33 nodes)	704	233	588.3852	Hose, T.A.	[15,22,25,97,98, 102,105,128]	Geotourism, GAM application, loess deposit
	208	207	188.0469	Markovic, S.B.		
	119	207	114.8049	Vasiljevic, D.A.		
	77	203	75.0515	Lukic, T.		
	56	200	54.8632	Vujicic, M.D.		
4 (26 nodes)	529	236	472.3633	Dowling, R.K.	[1,11,21,99,104, 129,130]	Geotourism Development, Geodiversity and its promotion through Geopark.
	353	230	327.1631	Newsome, D.		
	230	230	220.3576	Gray, M.		
	127	204	123.4042	Zouros, N.		
	121	211	115.1986	Costa, C.		
5 (16 nodes)	141	183	119.0049	Nemeth, K. Moufti, M.R.	[131–135]	Volcanic geoheritage
	57	183	55.0207			
	46	147	39.0562			
	42	95	38.9244			

	37	145	33.5842	Erfurt-cooper, P. Kereszturi, G. Nkouathio, D.G.		
	133	228	126.8341	Wimbledon, W.A. P.		
6 (16 nodes)	37	105	32.7239	Robinson, E.	[46,112,136– 140]	Geoheritage y Urban geoheritage (Conservation and Management)
	36	153	28.4889	Del lama, E.A.		
	36	164	34.0124	Mansur, K.L.		
	35	104	30.0693	Borghi, A.		
	94	204	87.0354	Migoń, P.		
7 (16 nodes)	72	198	69.6262	Kubalikova, L.	[141–144]	Study and assessment of geosite and geomorphosites for the development of geotourism
	62	149	54.6779	Zgłobicki, W.		
	53	190	47.0389	Alexandrowicz, Z.		
	50	192	45.189	Kirchner, K.		
	58	175	50.6124	Rybar, P.		
8 (14 nodes)	50	192	48.0229	Štrba, L.	[101,145–148]	Natural object assessments for geotourism
	31	181	30.1064	Fassoulas, C.		development, technologies applied to geoheritage management, geotope
	31	137	28.0494	Martinez-Grana, A.M.		
	28	142	24.4314	Goy, J.L.		
	48	47	28.7119	Ávila, S.P.		
9 (13 nodes)	44	62	31.3647	Alcalá, L.	[5,149,150]	Paleontological heritage resources and assessment
	34	123	32.1262	Carcavilla, L.		
	33	19	24.343	Cobos, A.		
	31	20	20.3097	Lockley, M.G.		
	48	49	32.325	Tropeano, M.		
10 (12 nodes)	44	51	32.3779	Sabato, L.	[151–158]	Paleogeography, speleological and anthropic landscape that promote geocultural education and geotourism
	41	28	32.2809	Pieri, P.		
	39	81	33.3577	Bentivenga, M.		
	39	135	33.1043	Roskopf, C.M.		

11	32	36	15.4661	Marschalko, M.	[159–161]	Engineering geology in geotourism
(2 nodes)	23	36	15.0814	Yilmaz, I.		