Nicolas Ray

List of Publications by Year
in descending order

136 papers	8,581 citations	76294 40 h-index	49868 87 g-index
146 all docs	146 docs citations	146 times ranked	11391 citing authors

#	Article	IF	Citations
1	Reconstructing Native American population history. Nature, 2012, 488, 370-374.	13.7	699
2	Surfing during population expansions promotes genetic revolutions and structuration. Trends in Ecology and Evolution, 2008, 23, 347-351.	4.2	578
3	Intra-Deme Molecular Diversity in Spatially Expanding Populations. Molecular Biology and Evolution, 2003, 20, 76-86.	3.5	519
4	Statistical evaluation of alternative models of human evolution. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 17614-17619.	3.3	497
5	Genetic Variation and Population Structure in Native Americans. PLoS Genetics, 2007, 3, e185.	1.5	454
6	Geographic Patterns of Genome Admixture in Latin American Mestizos. PLoS Genetics, 2008, 4, e1000037.	1.5	377
7	Admixture in Latin America: Geographic Structure, Phenotypic Diversity and Self-Perception of Ancestry Based on 7,342 Individuals. PLoS Genetics, 2014, 10, e1004572.	1.5	350
8	Vulnerability to snakebite envenoming: a global mapping of hotspots. Lancet, The, 2018, 392, 673-684.	6.3	227
9	Consequences of Range Contractions and Range Shifts on Molecular Diversity. Molecular Biology and Evolution, 2012, 29, 207-218.	3.5	204
10	Title is missing!. Biodiversity and Conservation, 2002, 11, 2143-2165.	1.2	171
11	Rise of oceanographic barriers in continuous populations of a cetacean: the genetic structure of harbour porpoises in Old World waters. BMC Biology, 2007, 5, 30.	1.7	161
12	pathmatrix: a geographical information system tool to compute effective distances among samples. Molecular Ecology Notes, 2005, 5, 177-180.	1.7	149
13	GIS-based assessment of photovoltaic (PV) and concentrated solar power (CSP) generation potential in West Africa. Renewable and Sustainable Energy Reviews, 2018, 81, 2088-2103.	8.2	148
14	AccessMod 3.0: computing geographic coverage and accessibility to health care services using anisotropic movement of patients. International Journal of Health Geographics, 2008, 7, 63.	1.2	142
15	Large Allele Frequency Differences between Human Continental Groups are more Likely to have Occurred by Drift During range Expansions than by Selection. Annals of Human Genetics, 2009, 73, 95-108.	0.3	140
16	splatche: a program to simulate genetic diversity taking into account environmental heterogeneity. Molecular Ecology Notes, 2004, 4, 139-142.	1.7	129
17	Building an Earth Observations Data Cube: lessons learned from the Swiss Data Cube (SDC) on generating Analysis Ready Data (ARD). Big Earth Data, 2017, 1, 100-117.	2.0	129
18	Genetic consequences of habitat fragmentation during a range expansion. Heredity, 2014, 112, 291-299.	1.2	128

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19	Challenges for drought mitigation in Africa: The potential use of geospatial data and drought information systems. Applied Geography, 2012, 34, 471-486.	1.7	127
20	Genetic isolation by distance and landscape connectivity in the American marten (Martes americana). Landscape Ecology, 2006, 21, 877-889.	1.9	125
21	Principal Component Analysis under Population Genetic Models of Range Expansion and Admixture. Molecular Biology and Evolution, 2010, 27, 1257-1268.	3.5	125
22	SPLATCHE2: a spatially explicit simulation framework for complex demography, genetic admixture and recombination. Bioinformatics, 2010, 26, 2993-2994.	1.8	113
23	Bayesian Estimation of Recent Migration Rates After a Spatial Expansion. Genetics, 2005, 170, 409-417.	1.2	112
24	Recovering the geographic origin of early modern humans by realistic and spatially explicit simulations. Genome Research, 2005, 15, 1161-1167.	2.4	100
25	A Statistical Evaluation of Models for the Initial Settlement of the American Continent Emphasizes the Importance of Gene Flow with Asia. Molecular Biology and Evolution, 2010, 27, 337-345.	3.5	97
26	Leachates draining from controlled municipal solid waste landfill: Detailed geochemical characterization and toxicity tests. Waste Management, 2016, 55, 238-248.	3.7	87
27	Knowledge generation using satellite earth observations to support sustainable development goals (SDG): A use case on Land degradation. International Journal of Applied Earth Observation and Geoinformation, 2020, 88, 102068.	1.4	73
28	Colonization history of the Swiss Rhine basin by the bullhead (*Cottus gobio*): inference under a Bayesian spatially explicit framework. Molecular Ecology, 2008, 17, 757-772.	2.0	71
29	Monitoring land degradation at national level using satellite Earth Observation time-series data to support SDG15 â€" exploring the potential of data cube. Big Earth Data, 2020, 4, 3-22.	2.0	62
30	Assessment of trace metal and rare earth elements contamination in rivers around abandoned and active mine areas. The case of Lubumbashi River and Tshamilemba Canal, Katanga, Democratic Republic of the Congo. Chemie Der Erde, 2016, 76, 353-362.	0.8	58
31	A first step towards inferring levels of longâ€distance dispersal during past expansions. Molecular Ecology Resources, 2010, 10, 902-914.	2.2	56
32	Combining genetic, historical and geographical data to reconstruct the dynamics of bioinvasions: application to the cane toad *Bufo marinus*. Molecular Ecology Resources, 2010, 10, 886-901.	2.2	54
33	Subjective uncertainties in habitat suitability maps. Ecological Modelling, 2006, 195, 172-186.	1.2	52
34	Response to Comment on "Ongoing Adaptive Evolution of ASPM, a Brain Size Determinant in Homo sapiens" and "Microcephalin, a Gene Regulating Brain Size, Continues to Evolve Adaptively in Humans". Science, 2006, 313, 172b-172b.	6.0	51
35	Influence of Admixture and Paleolithic Range Contractions on Current European Diversity Gradients. Molecular Biology and Evolution, 2013, 30, 57-61.	3.5	48
36	Assessing landscape connectivity with calibrated costâ€distance modelling: predicting common toad distribution in a context of spreading agriculture. Journal of Applied Ecology, 2009, 46, 833-841.	1.9	47

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37	Contrasting Patterns of Nuclear and mtDNA Diversity in Native American Populations. Annals of Human Genetics, 2010, 74, 525-538.	0.3	44
38	Grid computing technology for hydrological applications. Journal of Hydrology, 2011, 403, 186-199.	2.3	44
39	Distributed computation of large scale SWAT models on the Grid. Environmental Modelling and Software, 2013, 41, 223-230.	1.9	43
40	High contamination in the areas surrounding abandoned mines and mining activities: An impact assessment of the Dilala, Luilu and Mpingiri Rivers, Democratic Republic of the Congo. Chemosphere, 2018, 191, 1008-1020.	4.2	43
41	Spatially enabling the Global Framework for Climate Services: Reviewing geospatial solutions to efficiently share and integrate climate data & information. Climate Services, 2017, 8, 44-58.	1.0	41
42	SPLATCHE3: simulation of serial genetic data under spatially explicit evolutionary scenarios including long-distance dispersal. Bioinformatics, 2019, 35, 4480-4483.	1.8	41
43	Towards a knowledge base to support global change policy goals. International Journal of Digital Earth, 2020, 13, 188-216.	1.6	41
44	Mixing of porpoise ecotypes in southwestern UK waters revealed by genetic profiling. Royal Society Open Science, 2017, 4, 160992.	1.1	40
45	Identifying the snake: First scoping review on practices of communities and healthcare providers confronted with snakebite across the world. PLoS ONE, 2020, 15, e0229989.	1.1	40
46	SARS-CoV-2 antibody seroprevalence and associated risk factors in an urban district in Cameroon. Nature Communications, 2021, 12, 5851.	5.8	38
47	WPS mediation: An approach to process geospatial data on different computing backends. Computers and Geosciences, 2012, 47, 20-33.	2.0	37
48	Long-Distance Dispersal Shaped Patterns of Human Genetic Diversity in Eurasia. Molecular Biology and Evolution, 2016, 33, 946-958.	3.5	36
49	Inferring Past Demography Using Spatially Explicit Population Genetic Models. Human Biology, 2009, 81, 141-157.	0.4	35
50	Grid-enabled Spatial Data Infrastructure for environmental sciences: Challenges and opportunities. Future Generation Computer Systems, 2011, 27, 292-303.	4.9	35
51	Snakebite and its impact in rural communities: The need for a One Health approach. PLoS Neglected Tropical Diseases, 2019, 13, e0007608.	1.3	35
52	Spatial access inequities and childhood immunisation uptake in Kenya. BMC Public Health, 2020, 20, 1407.	1.2	35
53	Forty-four years of global trade in CITES-listed snakes: Trends and implications for conservation and public health. Biological Conservation, 2020, 248, 108601.	1.9	35
54	Modelling Accessibility to Urban Green Areas Using Open Earth Observations Data: A Novel Approach to Support the Urban SDG in Four European Cities. Remote Sensing, 2021, 13, 422.	1.8	33

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55	Reviewing innovative Earth observation solutions for filling science-policy gaps in hydrology. Journal of Hydrology, 2014, 518, 267-277.	2.3	32
56	Bringing GEOSS Services into Practice: A Capacity Building Resource on Spatial Data Infrastructures (SDI). Transactions in GIS, 2017, 21, 811-824.	1.0	32
57	Paving the Way to Increased Interoperability of Earth Observations Data Cubes. Data, 2019, 4, 113.	1.2	31
58	Proposing standardised geographical indicators of physical access to emergency obstetric and newborn care in low-income and middle-income countries. BMJ Global Health, 2019, 4, e000778.	2.0	31
59	National Open Data Cubes and Their Contribution to Country-Level Development Policies and Practices. Data, 2019, 4, 144.	1.2	31
60	GEOEssential â€" mainstreaming workflows from data sources to environment policy indicators with essential variables. International Journal of Digital Earth, 2020, 13, 322-338.	1.6	31
61	Air temperature forecasting using artificial neural network for Ararat valley. Earth Science Informatics, 2021, 14, 711-722.	1.6	31
62	Access to antivenoms in the developing world: A multidisciplinary analysis. Toxicon: X, 2021, 12, 100086.	1.2	28
63	Data Cube on Demand (DCoD): Generating an earth observation Data Cube anywhere in the world. International Journal of Applied Earth Observation and Geoinformation, 2020, 87, 102035.	1.4	27
64	Defining service catchment areas in low-resource settings. BMJ Global Health, 2021, 6, e006381.	2.0	27
65	Paving the Way towards an Armenian Data Cube. Data, 2019, 4, 117.	1.2	26
66	Towards integrated essential variables for sustainability. International Journal of Digital Earth, 2020, 13, 158-165.	1.6	26
67	Toward a definition of Essential Mountain Climate Variables. One Earth, 2021, 4, 805-827.	3.6	26
68	Sharing Environmental Data through GEOSS. International Journal of Applied Geospatial Research, 2011, 2, 1-17.	0.2	26
69	Lifting the Information Barriers to Address Sustainability Challenges with Data from Physical Geography and Earth Observation. Sustainability, 2017, 9, 858.	1.6	25
70	Long-distance dispersal suppresses introgression of local alleles during range expansions. Heredity, 2017, 118, 135-142.	1.2	24
71	Snow Cover Evolution in the Gran Paradiso National Park, Italian Alps, Using the Earth Observation Data Cube. Data, 2019, 4, 138.	1.2	24
72	The winding road to health: A systematic scoping review on the effect of geographical accessibility to health care on infectious diseases in low- and middle-income countries. PLoS ONE, 2021, 16, e0244921.	1.1	24

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73	Modelling geographical accessibility to support disaster response and rehabilitation of a healthcare system: an impact analysis of Cyclones Idai and Kenneth in Mozambique. BMJ Open, 2020, 10, e039138.	0.8	23
74	Snakebite and snake identification: empowering neglected communities and health-care providers with AI. The Lancet Digital Health, 2019, 1, e202-e203.	5.9	22
75	MapX: An open geospatial platform to manage, analyze and visualize data on natural resources and the environment. SoftwareX, 2019, 9, 77-84.	1.2	22
76	Essential Variables for Environmental Monitoring: What Are the Possible Contributions of Earth Observation Data Cubes?. Data, 2020, 5, 100.	1.2	22
77	A plea for a worldwide development of dark infrastructure for biodiversity â€" Practical examples and ways to go forward. Landscape and Urban Planning, 2022, 219, 104332.	3.4	22
78	Filling the gap between Earth observation and policy making in the Black Sea catchment with enviroGRIDS. Environmental Science and Policy, 2015, 46, 1-12.	2.4	20
79	Participatory approaches and open data on venomous snakes: A neglected opportunity in the global snakebite crisis?. PLoS Neglected Tropical Diseases, 2018, 12, e0006162.	1.3	20
80	Parsimony-based pedigree analysis and individual-based landscape genetics suggest topography to restrict dispersal and connectivity in the endangered capercaillie. Biological Conservation, 2012, 152, 241-252.	1.9	19
81	Novel transdisciplinary methodology for cross-sectional analysis of snakebite epidemiology at national scale. PLoS Neglected Tropical Diseases, 2021, 15, e0009023.	1.3	19
82	Spatial Dynamic Modelling of Future Scenarios of Land Use Change in Vaud and Valais, Western Switzerland. ISPRS International Journal of Geo-Information, 2017, 6, 115.	1.4	16
83	Wet Markets and Food Safety: TripAdvisor for Improved Global Digital Surveillance. JMIR Public Health and Surveillance, 2019, 5, e11477.	1.2	16
84	Essential earth observation variables for high-level multi-scale indicators and policies. Environmental Science and Policy, 2022, 131, 105-117.	2.4	16
85	Environmental data gaps in Black Sea catchment countries: INSPIRE and GEOSS State of Play. Environmental Science and Policy, 2015, 46, 13-25.	2.4	15
86	GEOCAB Portal: A gateway for discovering and accessing capacity building resources in Earth Observation. International Journal of Applied Earth Observation and Geoinformation, 2017, 54, 95-104.	1.4	15
87	Explaining and Measuring Social-Ecological Pathways: The Case of Global Changes and Water Security. Sustainability, 2018, 10, 4378.	1.6	15
88	Optimising geographical accessibility to primary health care: a geospatial analysis of community health posts and community health workers in Niger. BMJ Global Health, 2021, 6, e005238.	2.0	15
89	Assessment of the effect of snakebite on health and socioeconomic factors using a One Health perspective in the Terai region of Nepal: a cross-sectional study. The Lancet Global Health, 2022, 10, e409-e415.	2.9	15
90	Downscaling Switzerland Land Use/Land Cover Data Using Nearest Neighbors and an Expert System. Land, 2022, 11, 615.	1.2	14

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91	A web platform for landuse, climate, demography, hydrology and beach erosion in the Black Sea catchment. Scientific Data, 2017, 4, 170087.	2.4	13
92	Addressing the global snakebite crisis with geo-spatial analyses â€" Recent advances and future direction. Toxicon: X, 2021, 11, 100076.	1.2	13
93	Drying conditions in Switzerland â€" indication from a 35-year Landsat time-series analysis of vegetation water content estimates to support SDGs. Big Earth Data, 0, , 1-31.	2.0	13
94	Snakebite epidemiology in humans and domestic animals across the Terai region in Nepal: a multicluster random survey. The Lancet Global Health, 2022, 10, e398-e408.	2.9	13
95	Facilitating the production of ISO-compliant metadata of geospatial datasets. International Journal of Applied Earth Observation and Geoinformation, 2016, 44, 239-243.	1.4	12
96	Assessing the Increase of Snakebite Incidence in Relationship to Flooding Events. Journal of Environmental and Public Health, 2020, 2020, 1-9.	0.4	12
97	An interoperable cloud-based scientific GATEWAY for NDVI time series analysis. Computer Standards and Interfaces, 2015, 41, 79-84.	3.8	11
98	Assessing the Dynamics of Organic Aerosols over the North Atlantic Ocean. Scientific Reports, 2017, 7, 45476.	1.6	11
99	An interoperable web portal for parallel geoprocessing of satellite image vegetation indices. Earth Science Informatics, 2015, 8, 453-460.	1.6	9
100	National optimisation of accessibility to emergency obstetrical and neonatal care in Togo: a geospatial analysis. BMJ Open, 2021, 11, e045891.	0.8	9
101	Estimating and predicting snakebite risk in the Terai region of Nepal through a high-resolution geospatial and One Health approach. Scientific Reports, 2021, 11, 23868.	1.6	9
102	Software Platform Interoperability Throughout EnviroGRIDS Portal. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2012, 5, 1617-1627.	2.3	8
103	Breaking walls towards fully open source hydrological modeling. Water Resources, 2017, 44, 23-30.	0.3	8
104	Consequences of diverse evolutionary processes on american genetic gradients of modern humans. Heredity, 2018, 121, 548-556.	1.2	8
105	Cloud and Cloud-Shadow Detection for Applications in Mapping Small-Scale Mining in Colombia Using Sentinel-2 Imagery. Remote Sensing, 2021, 13, 736.	1.8	8
106	Modelling Physical Accessibility to Public Green Spaces in Switzerland to Support the SDG11. Geomatics, 2021, 1, 383-398.	1.0	8
107	SwissEnvEO: A FAIR National Environmental Data Repository for Earth Observation Open Science. Data Science Journal, 2021, 20, .	0.6	8
108	Conceptual model for environmental science applications on parallel and distributed infrastructures. Environmental Systems Research, 2015, 4, .	1.5	7

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109	Integration of data and computing infrastructures for earth science: an image mosaicking use-case. Earth Science Informatics, 2016, 9, 325-342.	1.6	7
110	What is the impact of snakebite envenoming on domestic animals? A nation-wide community-based study in Nepal and Cameroon. Toxicon: X, 2021, 9-10, 100068.	1.2	7
111	Spatial Data Infrastructures in Africa: A Gap Analysis. Journal of Environmental Informatics, 0, , .	6.0	7
112	Combining school-catchment area models with geostatistical models for analysing school survey data from low-resource settings: Inferential benefits and limitations. Spatial Statistics, 2022, 51, 100679.	0.9	7
113	Grid based data processing tools and applications for black sea catchment basin. , 2011, , .		6
114	Unravelling landscape variables with multiple approaches to overcome scarce species knowledge: a landscape genetic study of the slow worm. Conservation Genetics, 2013, 14, 783-794.	0.8	6
115	MASCOT: Multi-Criteria Analytical SCOring Tool for ArcGIS Desktop. International Journal of Information Technology and Decision Making, 2014, 13, 1135-1159.	2.3	6
116	Reviewing the discoverability and accessibility to data and information products linked to Essential Climate Variables. International Journal of Digital Earth, 2020, 13, 236-252.	1.6	6
117	Definition of candidate Essential Variables for the monitoring of mineral resource exploitation. Geo-Spatial Information Science, 2019, 22, 265-278.	2.4	5
118	An Interoperable, GIS-oriented, Information and Support System for Water Resources Management. International Journal of Advanced Computer Science and Applications, 2013, 3, .	0.5	5
119	Optimising scale and deployment of community health workers in Sierra Leone: a geospatial analysis. BMJ Global Health, 2022, 7, e008141.	2.0	5
120	Assessing the Applications of Earth Observation Data for Monitoring Artisanal and Small-Scale Gold Mining (ASGM) in Developing Countries. Remote Sensing, 2022, 14, 2971.	1.8	5
121	Influence of Paleolithic range contraction, admixture and longâ€distance dispersal on genetic gradients of modern humans in Asia. Molecular Ecology, 2020, 29, 2150-2159.	2.0	4
122	Shoreline delineation service: using an earth observation data cube and sentinel 2 images for coastal monitoring. Earth Science Informatics, 2022, 15, 1587-1596.	1.6	4
123	Distributed Geocomputation for Modeling the Hydrology of the Black Sea Watershed. NATO Science for Peace and Security Series C: Environmental Security, 2012, , 141-157.	0.1	3
124	SCOPEDâ€W: SCalable Online Platform for extracting Environmental Data and Waterâ€related model outputs. Transactions in GIS, 2017, 21, 748-763.	1.0	3
125	OGC Compliant Services for Remote Sensing Processing over the Grid Infrastructure. International Journal of Advanced Computer Science and Applications, 2013, 3, .	0.5	3
126	One decade (2011â€"2020) of European agricultural water stress monitoring by MSG-SEVIRI: workflow implementation on the Virtual Earth Laboratory (VLab) platform. International Journal of Digital Earth, 2022, 15, 730-747.	1.6	3

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127	Reply to Garrigan and Hammer: Ancient lineages and assimilation. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, .	3.3	2
128	Enabling Efficient Discovery of and Access to Spatial Data Services. International Journal of Advanced Computer Science and Applications, 2013, 3, .	0.5	2
129	Remotely Sensed Data Processing on Grids by Using GreenLand Web Based Platform. International Journal of Advanced Computer Science and Applications, 2013, 3, .	0.5	2
130	Constructing and validating a transferable epidemic risk index in data scarce environments using open data: A case study for dengue in the Philippines. PLoS Neglected Tropical Diseases, 2022, 16, e0009262.	1.3	2
131	Modelling the nocturnal ecological continuum of the State of Geneva, Switzerland, based on high-resolution nighttime imagery. Remote Sensing Applications: Society and Environment, 2019, 16, 100268.	0.8	1
132	Geospatial User Feedback: How to Raise Users' Voices and Collectively Build Knowledge at the Same Time. ISPRS International Journal of Geo-Information, 2021, 10, 141.	1.4	1
133	Use of Physical Accessibility Modelling in Diagnostic Network Optimization: A Review. Diagnostics, 2022, 12, 103.	1.3	1
134	Simplified Toolbar to Accelerate Repeated Tasks (START) for ArcGIS. International Journal of Applied Geospatial Research, 2014, 5, 87-94.	0.2	0
135	Modelling forest degradation and risk of disease outbreaks in mainland Equatorial Guinea. Journal of Public Health and Emergency, 0, 5, 15-15.	4.4	0
136	Balancing Public & Economic Health in Japan during the COVID-19 Pandemic: A Descriptive Analysis. Epidemiologia, 2022, 3, 199-217.	1.1	0