Heejun Chang

List of Publications by Year
in descending order

122 papers	6,381 citations	53794 45 h-index	76900 74 g-index
132 all docs	132 docs citations	132 times ranked	6170 citing authors

#	Article	IF	Citations
1	Spatial analysis of water quality trends in the Han River basin, South Korea. Water Research, 2008, 42, 3285-3304.	11.3	396
2	Urban water demand modeling: Review of concepts, methods, and organizing principles. Water Resources Research, 2011, 47, .	4.2	289
3	Effects of land cover, topography, and built structure on seasonal water quality at multiple spatial scales. Journal of Hazardous Materials, 2012, 209-210, 48-58.	12.4	235
4	A review of hydrological modelling of basin-scale climate change and urban development impacts. Progress in Physical Geography, 2009, 33, 650-671.	3.2	191
5	Rates of urbanisation and the resiliency of air and water quality. Science of the Total Environment, 2008, 400, 238-256.	8.0	176
6	Defining Extreme Events: A Crossâ€Disciplinary Review. Earth's Future, 2018, 6, 441-455.	6.3	167
7	The effects of climate change and urbanization on the runoff of the Rock Creek basin in the Portland metropolitan area, Oregon, USA. Hydrological Processes, 2009, 23, 805-815.	2.6	162
8	Interdependent Infrastructure as Linked Social, Ecological, and Technological Systems (SETSs) to Address Lockâ€in and Enhance Resilience. Earth's Future, 2018, 6, 1638-1659.	6.3	153
9	Spatial and temporal changes in runoff caused by climate change in a complex large river basin in Oregon. Journal of Hydrology, 2010, 388, 186-207.	5.4	139
10	Effects of Urban Spatial Structure, Sociodemographics, and Climate on Residential Water Consumption in Hillsboro, Oregon¹. Journal of the American Water Resources Association, 2010, 46, 461-472.	2.4	134
11	Longâ€term trend of precipitation and runoff in Korean river basins. Hydrological Processes, 2008, 22, 2644-2656.	2.6	132
12	Microplastics in freshwater: A global review of factors affecting spatial and temporal variations. Environmental Pollution, 2022, 292, 118393.	7.5	129
13	Assessment of freshwater ecosystem services in the Tualatin and Yamhill basins under climate change and urbanization. Applied Geography, 2014, 53, 402-416.	3.7	122
14	Pluvial flood risk and opportunities for resilience. Wiley Interdisciplinary Reviews: Water, 2018, 5, e1302.	6.5	121
15	Comparative streamflow characteristics in urbanizing basins in the Portland Metropolitan Area, Oregon, USA. Hydrological Processes, 2007, 21, 211-222.	2.6	100
16	Landscape and anthropogenic factors affecting spatial patterns of water quality trends in a large river basin, South Korea. Journal of Hydrology, 2018, 564, 26-40.	5.4	98
17	Spatial Variations of Single-Family Residential Water Consumption in Portland, Oregon. Urban Geography, 2010, 31, 953-972.	3.0	95
18	Spatial and Temporal Variations of Water Quality in the Han River and Its Tributaries, Seoul, Korea, 1993â€"2002. Water, Air, and Soil Pollution, 2005, 161, 267-284.	2.4	94

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19	Potential Impacts of Climate Change on Flood-Induced Travel Disruptions: A Case Study of Portland, Oregon, USA. Annals of the American Association of Geographers, 2010, 100, 938-952.	3.0	93
20	Climate Change, Landâ€Use Change, and Floods: Toward an Integrated Assessment. Geography Compass, 2008, 2, 1549-1579.	2.7	91
21	Quantifying uncertainty in urban flooding analysis considering hydro-climatic projection and urban development effects. Hydrology and Earth System Sciences, 2011, 15, 617-633.	4.9	91
22	Assessment of urban flood vulnerability using the social-ecological-technological systems framework in six US cities. Sustainable Cities and Society, 2021, 68, 102786.	10.4	88
23	Spatial variations of summer precipitation trends in South Korea, 1973â€“2005. Environmental Research Letters, 2007, 2, 045012.	5.2	87
24	Valuing ecological systems and services. F1000 Biology Reports, 2011, 3, 14.	4.0	84
25	Impact of climate variation and change on Mid-Atlantic Region hydrology and water resources. Climate Research, 2000, 14, 207-218.	1.1	82
26	A social-ecological-technological systems framework for urban ecosystem services. One Earth, 2022, 5, 505-518.	6.8	77
27	What is responsible for increasing flood risks? The case of Gangwon Province, Korea. Natural Hazards, 2009, 48, 339-354.	3.4	72
28	Potential changes in Korean water resources estimated by high-resolution climate simulation. Climate Research, 2008, 35, 213-226.	1.1	69
29	Assessment of future runoff trends under multiple climate change scenarios in the Willamette River Basin, Oregon, USA. Hydrological Processes, 2011, 25, 258-277.	2.6	67
30	Local landscape predictors of maximum stream temperature and thermal sensitivity in the Columbia River Basin, USA. Science of the Total Environment, 2013, 461-462, 587-600.	8.0	67
31	Toward a formal definition of water scarcity in naturalâ€human systems. Water Resources Research, 2013, 49, 4506-4517.	4.2	65
32	Impacts of Climate Change and Urban Development on Water Resources in the Tualatin River Basin, Oregon. Annals of the American Association of Geographers, 2011, 101, 249-271.	3.0	63
33	Selection of hydrologic modeling approaches for climate change assessment: A comparison of model scale and structures. Journal of Hydrology, 2012, 464-465, 233-248.	5.4	62
34	Identifying the Relationships Between Urban Water Consumption and Weather Variables in Seoul, Korea. Physical Geography, 2009, 30, 324-337.	1.4	60
35	Why Land Planners and Water Managers Don't Talk to One Another and Why They Should!. Society and Natural Resources, 2013, 26, 356-364.	1.9	58
36	THE EFFECTS OF CLIMATE CHANGE ON STREAM FLOW AND NUTRIENT LOADING1. Journal of the American Water Resources Association, 2001, 37, 973-985.	2.4	57

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37	Land-use, temperature, and single-family residential water use patterns in Portland, Oregon and Phoenix, Arizona. Applied Geography, 2012, 35, 142-151.	3.7	57
38	Valuing water quality in urban watersheds: A comparative analysis of Johnson Creek, Oregon, and Burnt Bridge Creek, Washington. Water Resources Research, 2014, 50, 4254-4268.	4.2	54
39	Urban flood risk and green infrastructure: Who is exposed to risk and who benefits from investment? A case study of three U.S. Cities. Landscape and Urban Planning, 2022, 223, 104417.	7.5	54
40	Spatial Analysis of Water Use in Oregon, USA, 1985â€“2005. Water Resources Management, 2009, 23, 755-774.	3.9	53
41	Finding water scarcity amid abundance using humanâ€“natural system models. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11884-11889.	7.1	53
42	Response of discharge, TSS, and E. coli to rainfall events in urban, suburban, and rural watersheds. Environmental Sciences: Processes and Impacts, 2014, 16, 2313-2324.	3.5	51
43	Climate change and waterâ€related ecosystem services: impacts of drought in california, usa. Ecosystem Health and Sustainability, 2016, 2, .	3.1	51
44	Basin Hydrologic Response to Changes in Climate and Land Use: the Conestoga River Basin, Pennsylvania. Physical Geography, 2003, 24, 222-247.	1.4	50
45	Socio-hydrology with hydrosocial theory: two sides of the same coin?. Hydrological Sciences Journal, 2020, 65, 1443-1457.	2.6	49
46	The influence of floodplain restoration on flow and sediment dynamics in an urban river. Journal of Flood Risk Management, 2018, 11, S986.	3.3	48
47	Modeling the impact of land use and climate change on neighborhood-scale evaporation and nighttime cooling: A surface energy balance approach. Landscape and Urban Planning, 2011, 103, 139-155.	7.5	47
48	Uncertainty assessment of climate change impacts for hydrologically distinct river basins. Journal of Hydrology, 2012, 466-467, 73-87.	5.4	47
49	Climate change impacts on spatial patterns in drought risk in the Willamette River Basin, Oregon, USA. Theoretical and Applied Climatology, 2012, 108, 355-371.	2.8	46
50	Recent research approaches to urban flood vulnerability, 2006â€“2016. Natural Hazards, 2017, 88, 633-649.	3.4	46
51	Climate change, urban development, and community perception ofÂanÂextreme flood: A case study of Vernonia, Oregon, USA. Applied Geography, 2014, 46, 137-146.	3.7	45
52	Spatial analysis of urban flooding and extreme heat hazard potential in Portland, OR. International Journal of Disaster Risk Reduction, 2019, 39, 101117.	3.9	41
53	Multi-scale analysis of oxygen demand trends in an urbanizing Oregon watershed, USA. Journal of Environmental Management, 2008, 87, 567-581.	7.8	39
54	Tradeoffs Between Water Conservation and Temperature Amelioration In Phoenix and Portland: Implications For Urban Sustainability. Urban Geography, 2012, 33, 1030-1054.	3.0	37

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55	Spatial variability of the response to climate change in regional groundwater systems â€" Examples from simulations in the Deschutes Basin, Oregon. Journal of Hydrology, 2013, 486, 187-201.	5.4	37
56	Fracturing dams, fractured data: Empirical trends and characteristics of existing and removed dams in the United States. River Research and Applications, 2018, 34, 526-537.	1.7	36
57	Spatial analysis of landscape and sociodemographic factors associated with green stormwater infrastructure distribution in Baltimore, Maryland and Portland, Oregon. Science of the Total Environment, 2019, 664, 461-473.	8.0	36
58	The Value of Urban Flood Modeling. Earth's Future, 2021, 9, e2020EF001739.	6.3	36
59	Land cover, climate, and the summer surface energy balance in Phoenix, AZ, and Portland, OR. International Journal of Climatology, 2012, 32, 2020-2032.	3.5	35
60	Relationships between environmental governance and water quality in a growing metropolitan area of the Pacific Northwest, USA. Hydrology and Earth System Sciences, 2014, 18, 1383-1395.	4.9	35
61	Urbanization and floods in the Seoul Metropolitan area of South Korea: What old maps tell us. International Journal of Disaster Risk Reduction, 2019, 37, 101186.	3.9	35
62	Hydroclimatological response to dynamically downscaled climate change simulations for Korean basins. Climatic Change, 2010, 100, 485-508.	3.6	34
63	Analysis of long-term climate change on per capita water demand in urban versus suburban areas in the Portland metropolitan area, USA. Journal of Hydrology, 2016, 538, 574-586.	5.4	34
64	Spatial and temporal variations of microplastic concentrations in Portland's freshwater ecosystems. Science of the Total Environment, 2022, 833, 155143.	8.0	33
65	Vulnerability of Water Systems to the Effects of Climate Change and Urbanization: A Comparison of Phoenix, Arizona and Portland, Oregon (USA). Environmental Management, 2013, 52, 179-195.	2.7	32
66	Effects of land use change, wetland fragmentation, and best management practices on total suspended solids concentrations in an urbanizing Oregon watershed, USA. Journal of Environmental Management, 2021, 282, 111962.	7.8	32
67	Water quality during winter storm events in Spring Creek, Pennsylvania USA. Hydrobiologia, 2005, 544, 321-332.	2.0	31
68	Spatial analysis of annual runoff ratios and their variability across the contiguous U.S.. Journal of Hydrology, 2014, 511, 387-402.	5.4	31
69	Hydrologic impacts of climate change in the Upper Clackamas River Basin, Oregon, USA. Climate Research, 2007, 33, 143-157.	1.1	31
70	Water resource impacts of climate change in southwestern Bulgaria. Geo Journal, 2002, 57, 159-168.	3.1	29
71	Spatial Patterns of <scp>M</scp>arch and <scp>S</scp>eptember Streamflow Trends in <scp>P</scp>acific <scp>N</scp>orthwest Streams, 1958â€"2008. Geographical Analysis, 2012, 44, 177-201.	3.5	29
72	Water Supply, Demand, and Quality Indicators for Assessing the Spatial Distribution of Water Resource Vulnerability in the Columbia River Basin. Atmosphere - Ocean, 2013, 51, 339-356.	1.6	28

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73	A review of spatial statistical approaches to modeling water quality. Progress in Physical Geography, 2019, 43, 801-826.	3.2	27
74	Determinants of single family residential water use across scales in four western US cities. Science of the Total Environment, 2017, 596-597, 451-464.	8.0	26
75	Monitoring the channel process of a stream restoration project in an urbanizing watershed: a case study of Kelley Creek, Oregon, USA. River Research and Applications, 2008, 24, 169-182.	1.7	23
76	Precipitation Intensity Trend Detection using Hourly and Daily Observations in Portland, Oregon. Climate, 2017, 5, 10.	2.8	23
77	Spatial analysis of graffiti in San Francisco. Applied Geography, 2014, 54, 63-73.	3.7	22
78	Vulnerability of Korean water resources to climate change and population growth. Water Science and Technology, 2007, 56, 57-62.	2.5	20
79	Urban water consumption and weather variation in the Portland, Oregon metropolitan area. Urban Climate, 2014, 9, 1-18.	5.7	19
80	Using spatially explicit indicators to investigate watershed characteristics and stream temperature relationships. Science of the Total Environment, 2016, 551-552, 376-386.	8.0	19
81	Dynamics of wetâ€season turbidity in relation to precipitation, discharge, and land cover in three urbanizing watersheds, Oregon. River Research and Applications, 2019, 35, 892-904.	1.7	19
82	Residents' perception of flood risk and urban stream restoration using multiâ€criteria decision analysis. River Research and Applications, 2020, 36, 2078-2088.	1.7	19
83	Using GIS-based spatial analysis to determine urban greenspace accessibility for different racial groups in the backdrop of COVID-19: a case study of four US cities. Geo Journal, 2022, 87, 4879-4899.	3.1	19
84	Winter precipitation intensity and ENSO/PDO variability in the Willamette Valley of Oregon. International Journal of Climatology, 2009, 29, 2033-2039.	3.5	17
85	Improving Higher-Order Thinking and Knowledge Retention in Environmental Science Teaching. BioScience, 2014, 64, 40-48.	4.9	17
86	Effects of runoff sensitivity and catchment characteristics on regional actual evapotranspiration trends in the conterminous US. Environmental Research Letters, 2013, 8, 044002.	5.2	16
87	Space and time dynamics of urban water demand in Portland, Oregon and Phoenix, Arizona. Stochastic Environmental Research and Risk Assessment, 2015, 29, 1135-1147.	4.0	16
88	Detecting change in precipitation indices using observed (1977â€"2016) and modeled future climate data in Portland, Oregon, USA. Journal of Water and Climate Change, 2021, 12, 1135-1153.	2.9	16
89	A Simplified Basin Model For Simulating Runoff: The Struma River GIS. Professional Geographer, 2001, 53, 533-545.	1.8	15
90	Present and Future Flood Hazard in the Lower Columbia River Estuary: Changing Flood Hazards in the Portlandâ€Vancouver Metropolitan Area. Journal of Geophysical Research: Oceans, 2020, 125, e2019JC015928.	2.6	15

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91	Stressors and Strategies for Managing Urban Water Scarcity: Perspectives from the Field. Water (Switzerland), 2015, 7, 6775-6787.	2.7	14
92	Development of Future Land Cover Change Scenarios in the Metropolitan Fringe, Oregon, U.S., with Stakeholder Involvement. Land, 2014, 3, 322-341.	2.9	13
93	Facilitating collaborative urban water management through university-utility cooperation. Sustainable Cities and Society, 2016, 27, 475-483.	10.4	13
94	A community-engaged approach to transdisciplinary doctoral training in urban ecosystem services. Sustainability Science, 2020, 15, 699-715.	4.9	13
95	Understanding Urban Flood Resilience in the Anthropocene: A Socialâ€"Ecologicalâ€"Technological Systems (SETS) Learning Framework. Annals of the American Association of Geographers, 2021, 111, 837-857.	2.2	13
96	Resident perceptions of urban stream restoration and water quality in South Korea. River Research and Applications, 2018, 34, 481-492.	1.7	11
97	Spatial characteristics and frequency of citizen-observed pluvial flooding events in relation to storm size in Portland, Oregon. Urban Climate, 2019, 29, 100487.	5.7	11
98	Comparing the functional recognition of aesthetics, hydrology, and quality in urban stream restoration through the framework of environmental perception. River Research and Applications, 2019, 35, 543-552.	1.7	11
99	Environmental and spatial factors affecting surface water quality in a Himalayan watershed, Central Nepal. Environmental and Sustainability Indicators, 2021, 9, 100096.	3.3	11
100	Assessing mechanisms of climate change impact on the upland forest water balance of the Willamette River Basin, Oregon. Ecohydrology, 2017, 10, e1776.	2.4	10
101	Sources of contaminated flood sediments in a ruralâ€"urban catchment: Johnson Creek, Oregon. Journal of Flood Risk Management, 2019, 12, .	3.3	10
102	Dreams and Migration in South Koreaâ€™s Border Region: Landscape Change and Environmental Impacts. Annals of the American Association of Geographers, 2019, 109, 476-491.	2.2	9
103	Relative impacts of climate change and land cover change on streamflow using SWAT in the Clackamas River Watershed, USA. Journal of Water and Climate Change, 2021, 12, 1454-1470.	2.9	9
104	Active rock glaciers of the contiguous United States: geographic information system inventory and spatial distribution patterns. Earth System Science Data, 2021, 13, 3979-3994.	9.9	9
105	Climate Change and Stream Temperature in the Willamette River Basin: Implications for Fish Habitat. World Scientific Series on Asia-Pacific Weather and Climate, 2018, , 119-132.	0.2	9
106	Relation Between Stream Temperature and Landscape Characteristics Using Distance Weighted Metrics. Water Resources Management, 2018, 32, 1167-1192.	3.9	8
107	Land Use Change, Extreme Precipitation Events, and Flood Damage in South Korea: A Spatial Approach. Journal of Extreme Events, 2020, 07, 2150001.	1.1	7
108	Building Water-Efficient Cities. Journal of the American Planning Association, 2019, 85, 511-524.	1.7	6

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109	Putting space into modeling landscape and water quality relationships in the Han River basin, South Korea. Computers, Environment and Urban Systems, 2020, 81, 101461.	7.1	6
110	Watershed Response to Climate Change and Fire-Burns in the Upper Umatilla River Basin, USA. Climate, 2017, 5, 7.	2.8	5
111	Modeling the system dynamics of irrigatorsâ€™ resilience to climate change in a glacier-influenced watershed. Hydrological Sciences Journal, 2021, 66, 1743-1757.	2.6	5
112	The spatial relationship between patterns of disappeared streams and residential development in Portland, Oregon, USA. Journal of Maps, 2022, 18, 210-218.	2.0	5
113	Geographical analysis of commercial motor vehicle hazardous materials crashes on the Oregon state highway system. Environmental Hazards, 2011, 10, 171-184.	2.5	4
114	Spatially-explicit assessment of flood risk caused by climate change in South Korea. KSCE Journal of Civil Engineering, 2013, 17, 233-243.	1.9	3
115	Socio-spatial analysis of residential water demand in Mexico City. Tecnologia Y Ciencias Del Agua, 2021, 12, 59-110.	0.3	3
116	The Right to Urban Streams: Quantitative Comparisons of Stakeholder Perceptions in Defining Adaptive Stream Restoration. Sustainability, 2020, 12, 9500.	3.2	2
117	Transition of water quality policies in Oregon, USA and South Korea: A historical socio-hydrological approach. Hydrological Sciences Journal, 0, , .	2.6	1
118	The June 2021 Extreme Heat Event in Portland, OR, USA: Its Impacts on Ecosystems and Human Health and Potential Adaptation Strategies. Journal of Extreme Events, 2021, 08, .	1.1	1
119	Quantifying Hydrological Uncertainty for Rain- and Snow-Dominated Watersheds with Adaptation Strategy. , 2010, , .		0
120	Characterizing urban ecosystem services: integrating the biophysical and social dimensions of human-dominated landscapes. , 2014, , .		0
121	Rapid land use change impacts on coastal ecosystem services: a South Korean case study. , 0, , 119-126.		0
122	Seasonal variation in hydrologic performance of ecoroofs of multiple depthsâ€" a case study in Portland, Oregon, USA. Urban Water Journal, 2021, 18, 128-135.	2.1	0