# Bruce L Rhoads

List of Publications by Year
in descending order



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|---|---|---|---|
| 101 papers | 6,074 citations | 38660 50 h-index | 76769 74 g-index |
| 124 all docs | 124 docs citations | 124 times ranked | 2889 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Flow structure at an asymmetrical stream confluence. Geomorphology, 1995, 11, 273-293. | 1.1 | 228 |
| 2 | Interaction Between Scientists and Nonscientists in Community-Based Watershed Management: Emergence of the Concept of Stream Naturalization. Environmental Management, 1999, 24, 297-308. | 1.2 | 216 |
| 3 | <scp>I</scp>ntervention: Critical physical geography. Canadian Geographer / Geographie Canadien, 2014, 58, 1-10. | 1.0 | 216 |
| 4 | Field investigation of three-dimensional flow structure at stream confluences: 1. Thermal mixing and time-averaged velocities. Water Resources Research, 2001, 37, 2393-2410. | 1.7 | 198 |
| 5 | Three-dimensional flow structure and channel change in an asymmetrical compound meander loop, Embarras River, Illinois. Earth Surface Processes and Landforms, 2003, 28, 625-644. | 1.2 | 164 |
| 6 | Structure of turbulent flow at a river confluence with momentum and velocity ratios close to 1: Insight provided by an eddyâ€resolving numerical simulation. Water Resources Research, 2011, 47, . | 1.7 | 153 |
| 7 | Time-averaged flow structure in the central region of a stream confluence. Earth Surface Processes and Landforms, 1998, 23, 171-191. | 1.2 | 151 |
| 8 | Field investigation of three-dimensional flow structure at stream confluences: 2. Turbulence. Water Resources Research, 2001, 37, 2411-2424. | 1.7 | 147 |
| 9 | Assessment of the flow regime alterations in the middle reach of the Yangtze River associated with dam construction: potential ecological implications. Hydrological Processes, 2016, 30, 3949-3966. | 1.1 | 138 |
| 10 | Spatial and temporal structure of shear layer turbulence at a stream confluence. Water Resources Research, 2004, 40, . | 1.7 | 116 |
| 11 | Lateral momentum flux and the spatial evolution of flow within a confluence mixing interface. Water Resources Research, 2008, 44, . | 1.7 | 116 |
| 12 | Extreme sediment pulses generated by bend cutoffs along a large meandering river. Nature Geoscience, 2011, 4, 675-678. | 5.4 | 115 |
| 13 | Numerical analysis of the effect of momentum ratio on the dynamics and sedimentâ€entrainment capacity of coherent flow structures at a stream confluence. Journal of Geophysical Research, 2012, 117, . | 3.3 | 112 |
| 14 | Spatial variability in bank resistance to erosion on a large meandering, mixed bedrock-alluvial river. Geomorphology, 2016, 252, 80-97. | 1.1 | 108 |
| 15 | Influence of four run-of-river dams on channel morphology and sediment characteristics in Illinois, USA. Geomorphology, 2014, 206, 215-229. | 1.1 | 99 |
| 16 | Response of bed morphology and bed material texture to hydrological conditions at an asymmetrical stream confluence. Geomorphology, 2009, 109, 161-173. | 1.1 | 97 |
| 17 | Flow structure and channel morphology at a natural confluent meander bend. Geomorphology, 2012, 163-164, 84-98. | 1.1 | 96 |
| 18 | Influence of floodplain erosional heterogeneity on planform complexity of meandering rivers. Geophysical Research Letters, 2011, 38, n/a-n/a. | 1.5 | 95 |

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| 19 | Hydrologic control of spatial patterns of suspended sediment concentration at a stream confluence. Journal of Hydrology, 1995, 168, 251-263. | 2.3 | 94 |
| 20 | Initiation of river meandering. Progress in Physical Geography, 1991, 15, 127-156. | 1.4 | 93 |
| 21 | Depositional response of a headwater stream to channelization, East Central Illinois, USA. River Research and Applications, 2003, 19, 77-100. | 0.7 | 93 |
| 22 | Interaction among mean flow, turbulence, bed morphology, bank failures and channel planform in an evolving compound meander loop. Geomorphology, 2012, 163-164, 70-83. | 1.1 | 93 |
| 23 | Use of multispectral satellite remote sensing to assess mixing of suspended sediment downstream of large river confluences. Journal of Hydrology, 2018, 556, 325-338. | 2.3 | 93 |
| 24 | Flow structure and channel morphodynamics of meander bend chute cutoffs: A case study of the Wabash River, USA. Journal of Geophysical Research F: Earth Surface, 2013, 118, 2468-2487. | 1.0 | 91 |
| 25 | Historical changes in channel network extent and channel planform in an intensively managed landscape: Natural versus human-induced effects. Geomorphology, 2016, 252, 17-31. | 1.1 | 91 |
| 26 | Catastrophic Human-Induced Change in Stream-Channel Planform and Geometry in an Agricultural Watershed, Illinois, USA. Annals of the American Association of Geographers, 2003, 93, 783-796. | 3.0 | 89 |
| 27 | Stream geomorphology, bank vegetation, and three-dimensional habitat hydraulics for fish in midwestern agricultural streams. Water Resources Research, 2003, 39, . | 1.7 | 85 |
| 28 | High-resolution Numerical Simulation of Flow Through a Highly Sinuous River Reach. Water Resources Management, 2004, 18, 177-199. | 1.9 | 84 |
| 29 | Empirical analysis of the planform curvatureâ€migration relation of meandering rivers. Water Resources Research, 2009, 45, . | 1.7 | 84 |
| 30 | A Continuously Varying Parameter Model of Downstream Hydraulic Geometry. Water Resources Research, 1991, 27, 1865-1872. | 1.7 | 82 |
| 31 | CHANGES IN STREAM CHANNEL CHARACTERISTICS AT TRIBUTARY JUNCTIONS. Physical Geography, 1987, 8, 346-361. | 0.6 | 79 |
| 32 | STREAM POWER TERMINOLOGY. Professional Geographer, 1987, 39, 189-195. | 1.0 | 78 |
| 33 | A Multiscale Conceptual Framework for Integrated Ecogeomorphological Research to Support Stream Naturalization in the Agricultural Midwest. Environmental Management, 2002, 29, 16-33. | 1.2 | 75 |
| 34 | Influence of junction angle on threeâ€dimensional flow structure and bed morphology at confluent meander bends during different hydrological conditions. Earth Surface Processes and Landforms, 2015, 40, 252-271. | 1.2 | 74 |
| 35 | Influence of a large woody debris obstruction on three-dimensional flow structure in a meander bend. Geomorphology, 2003, 51, 159-173. | 1.1 | 73 |
| 36 | Effect of large woody debris configuration on three-dimensional flow structure in two low-energy meander bends at varying stages. Water Resources Research, 2004, 40, . | 1.7 | 73 |

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| 37 | Turbulent flow structure at a discordant river confluence: Asymmetric jet dynamics with implications for channel morphology. Journal of Geophysical Research F: Earth Surface, 2017, 122, 1278-1293. | 1.0 | 72 |
| 38 | Numerical evaluation of the effects of planform geometry and inflow conditions on flow, turbulence structure, and bed shear velocity at a stream confluence with a concordant bed. Journal of Geophysical Research F: Earth Surface, 2014, 119, 2079-2097. | 1.0 | 68 |
| 39 | Rates and patterns of thermal mixing at a small stream confluence under variable incoming flow conditions. Hydrological Processes, 2015, 29, 4442-4456. | 1.1 | 64 |
| 40 | Influence of planform geometry and momentum ratio on thermal mixing at a stream confluence with a concordant bed. Environmental Fluid Mechanics, 2016, 16, 845-873. | 0.7 | 64 |
| 41 | Spatialâ€"temporal structure of mixing interface turbulence at two large river confluences. Environmental Fluid Mechanics, 2014, 14, 1043-1070. | 0.7 | 63 |
| 42 | Continuous Characterization of the Planform Geometry and Curvature of Meandering Rivers. Geographical Analysis, 2008, 40, 1-25. | 1.9 | 62 |
| 43 | The Dynamic Basis of Geomorphology Reenvisioned. Annals of the American Association of Geographers, 2006, 96, 14-30. | 3.0 | 61 |
| 44 | Threeâ€dimensional flow structure and bed morphology in large elongate meander loops with different outer bank roughness characteristics. Water Resources Research, 2016, 52, 9621-9641. | 1.7 | 60 |
| 45 | Three-dimensional flow structure, morphodynamics, suspended sediment, and thermal mixing at an asymmetrical river confluence of a straight tributary and curving main channel. Geomorphology, 2018, 323, 51-69. | 1.1 | 60 |
| 46 | On secondary circulation, helical motion andÂRozovskii-based analysis of time-averagedÂtwo-dimensional velocity fields at confluences. Earth Surface Processes and Landforms, 1999, 24, 369-375. | 1.2 | 58 |
| 47 | Threeâ€dimensional flow structure and patterns of bed shear stress in an evolving compound meander bend. Earth Surface Processes and Landforms, 2016, 41, 1211-1226. | 1.2 | 58 |
| 48 | LSPIV Measurements of Twoâ€Dimensional Flow Structure in Streams Using Small Unmanned Aerial Systems: 2. Hydrodynamic Mapping at River Confluences. Water Resources Research, 2018, 54, 7981-7999. | 1.7 | 54 |
| 49 | Spatial autoregressive structure of meander evolution revisited. Geomorphology, 2010, 120, 91-106. | 1.1 | 50 |
| 50 | Mutual Adjustments between Process and Form in a Desert Mountain Fluvial System. Annals of the American Association of Geographers, 1988, 78, 271-287. | 3.0 | 47 |
| 51 | Impact of flow variability on the morphology of a low-energy meandering river. Earth Surface Processes and Landforms, 1991, 16, 357-367. | 1.2 | 42 |
| 52 | Resolving twoâ€dimensional flow structure in rivers using largeâ€scale particle image velocimetry: An example from a stream confluence. Water Resources Research, 2015, 51, 7977-7994. | 1.7 | 41 |
| 53 | Length scales and statistical characteristics of outer bank roughness for large elongate meander bends: The influence of bank material properties, floodplain vegetation and flow inundation. Earth Surface Processes and Landforms, 2017, 42, 2024-2037. | 1.2 | 40 |
| 54 | Assessment of Floodplain Vulnerability during Extreme Mississippi River Flood 2011. Environmental Science & Technology, 2014, 48, 2619-2625. | 4.6 | 39 |

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| 55 | Integrating unmanned aerial systems and LSPIV for rapid, cost-effective stream gauging. Journal of Hydrology, 2018, 560, 230-246. | 2.3 | 39 |
| 56 | Structure of flow over alluvial bedforms: an experiment on linking field and laboratory methods. Earth Surface Processes and Landforms, 2006, 31, 1292-1310. | 1.2 | 38 |
| 57 | Floodplains as a source of fine sediment in grazed landscapes: Tracing the source of suspended sediment in the headwaters of an intensively managed agricultural landscape. Geomorphology, 2018, 308, 278-292. | 1.1 | 35 |
| 58 | Large River Channel Confluences. , 2008, , 73-91. | | 34 |
| 59 | The Intensively Managed Landscape Critical Zone Observatory: A Scientific Testbed for Understanding Critical Zone Processes in Agroecosystems. Vadose Zone Journal, 2018, 17, 1-21. | 1.3 | 31 |
| 60 | Density Effects at a Concordant Bed Natural River Confluence. Water Resources Research, 2020, 56, e2019WR026217. | 1.7 | 29 |
| 61 | LSPIV Measurements of Twoâ€Dimensional Flow Structure in Streams Using Small Unmanned Aerial Systems: 1. Accuracy Assessment Based on Comparison With Stationary Camera Platforms and Inâ€Stream Velocity Measurements. Water Resources Research, 2018, 54, 8000-8018. | 1.7 | 27 |
| 62 | Farmer Attitudes Toward Production of Perennial Energy Grasses in East Central Illinois: Implications for Community-Based Decision Making. Annals of the American Association of Geographers, 2011, 101, 852-862. | 3.0 | 25 |
| 63 | Advective Lateral Transport of Streamwise Momentum Governs Mixing at Small River Confluences. Water Resources Research, 2020, 56, e2019WR026817. | 1.7 | 21 |
| 64 | Influence of experimental removal of large woody debris on spatial patterns of three-dimensional flow in a meander bend. Earth Surface Processes and Landforms, 2007, 32, 460-474. | 1.2 | 19 |
| 65 | On being a â€˜realâ€™ geomorphologist. Earth Surface Processes and Landforms, 1994, 19, 269-272. | 1.2 | 18 |
| 66 | Spatial Variability in Bankfull Stage and Bank Elevations of Lowland Meandering Rivers: Relation to Rating Curves and Channel Planform Characteristics. Water Resources Research, 2020, 56, e2020WR027477. | 1.7 | 16 |
| 67 | Impact of riverine wetlands construction and operation on stream channel stability: Conceptual framework for geomorphic assessment. Environmental Management, 1990, 14, 799-807. | 1.2 | 12 |
| 68 | The C-biogeochemistry of a Midwestern USA agricultural impoundment in context: Lake Decatur in the intensively managed landscape critical zone observatory. Biogeochemistry, 2018, 138, 171-195. | 1.7 | 11 |
| 69 | Confluence Environments at the Scale of River Networks. , 2008, , 271-300. | | 8 |
| 70 | Largeâ€Scale Particle Image Velocimetry Reveals Pulsing of Incoming Flow at a Stream Confluence. Water Resources Research, 2021, 57, e2021WR029662. | 1.7 | 7 |
| 71 | Introduction: River Confluences, Tributaries and the Fluvial Network. , 2008, , 1-9. | | 6 |
| 72 | Physical Habitat Analysis and Design of In-Channel Structures on a Chicago, IL Urban Drainage: A Stream Naturalization Design Process. , 2002, , 1. | | 5 |

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| 73 | Pool-Riffle Design Based on Geomorphological Principles for Naturalizing Straight Channels. Geophysical Monograph Series, 2013, , 367-384. | 0.1 | 5 |
| 74 | The Dynamics of River Confluences. , 2020, , 269-293. | | 5 |
| 75 | Numerical Predictions of the Sensitivity of Grain Size and Channel Slope to an Increase in Precipitation. , 2008, , 367-394. | | 4 |
| 76 | HydroSedFoam: A new parallelized two-dimensional hydrodynamic, sediment transport, and bed morphology model. Computers and Geosciences, 2018, 120, 32-39. | 2.0 | 4 |
| 77 | Analysis of shallow turbulent flows using the Hilbert-Huang transform: a tool for exploring the characteristics of turbulence and coherent flow structures. Hungarian Geographical Bulletin, 2018, 67, 343-359. | 0.4 | 4 |
| 78 | The natural and human structuring of rivers and other geomorphological systems: A tribute to William L. Graf. Geomorphology, 2016, 252, 1-4. | 1.1 | 3 |
| 79 | Channel Planform â€" Controls on Development and Change. , 2020, , 186-196. | | 3 |
| 80 | Hydrologic Dispersion in Fluvial Networks. , 2008, , 307-335. | | 2 |
| 81 | The Vertical Dimension of Rivers: Longitudinal Profiles, Profile Adjustments, and Step-Pool Morphology. , 2020, , 294-318. | | 2 |
| 82 | Flow evolution near the apex of two small stream confluences using large-scale particle image velocimetry. , 2016, , . | | 2 |
| 83 | Big Pine Creek Ditch revisited: Planform recovery to channelization and the timescale of river meandering. Geomorphology, 2022, 403, 108140. | 1.1 | 2 |
| 84 | Sediment Delivery: New Approaches to Modelling an Old Problem. , 2008, , 337-366. | | 1 |
| 85 | The Dynamics of Drainage Basins and Stream Networks. , 2020, , 15-46. | | 1 |
| 86 | Sediment Transport Dynamics in Rivers. , 2020, , 97-133. | | 1 |
| 87 | The Dynamics of Braided Rivers. , 2020, , 234-251. | | 1 |
| 88 | The Dynamics of Floodplains. , 2020, , 319-342. | | 1 |
| 89 | Introduction to Part III: Channel Networks. , 2008, , 301-306. | | 0 |
| 90 | Introduction to Part I: River Channel Confluences. , 2008, , 11-16. | | 0 |

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| 91 | Introduction to Part II: Tributary-Main-Stem Interactions. , 2008, , 149-157. | | 0 |
| 92 | Place Index. , 2008, , 457-457. | | 0 |
| 93 | Sediment Dynamics at Global and Drainage-Basin Scales. , 2020, , 47-71. | | 0 |
| 94 | Flow Dynamics in Rivers. , 2020, , 72-96. | | 0 |
| 95 | Magnitude-Frequency Concepts and the Dynamics of Channel-Forming Events. , 2020, , 134-163. | | 0 |
| 96 | The Shaping of Channel Geometry. , 2020, , 164-185. | | 0 |
| 97 | The Dynamics of Meandering Rivers. , 2020, , 197-233. | | 0 |
| 98 | The Dynamics of Anabranching Rivers. , 2020, , 252-268. | | 0 |
| 99 | Human Impacts on River Dynamics. , 2020, , 343-368. | | 0 |
| 100 | River Dynamics and Management. , 2020, , 369-403. | | 0 |
| 101 | Flowing Water, Turbulent and Laminar Flows. , 2022, , . | | 0 |