Bryan Tyrone Adey

List of Publications by Year
in descending order

108 papers	**1,831** citations	361045 **20** h-index	329751 **37** g-index
110 all docs	**110** docs citations	**110** times ranked	**1410** citing authors

#	Article	IF	Citations
1	Productivity of digital fabrication in construction: Cost and time analysis of a robotically built wall. Automation in Construction, 2018, 92, 297-311.	4.8	263
2	Construction automation: Research areas, industry concerns and suggestions for advancement. Automation in Construction, 2018, 94, 22-38.	4.8	137
3	Modeling of corrosion-induced concrete cover cracking: A critical analysis. Construction and Building Materials, 2013, 42, 225-237.	3.2	103
4	Concrete cover cracking owing to reinforcement corrosion â€" theoretical considerations and practical experience. Materials and Corrosion - Werkstoffe Und Korrosion, 2012, 63, 1069-1077.	0.8	76
5	Prediction of road accidents: A Bayesian hierarchical approach. Accident Analysis and Prevention, 2013, 51, 274-291.	3.0	67
6	Determination of Nearâ€Optimal Restoration Programs for Transportation Networks Following Natural Hazard Events Using Simulated Annealing. Computer-Aided Civil and Infrastructure Engineering, 2018, 33, 618-637.	6.3	55
7	Using look-ahead plans to improve material flow processes on construction projects when using BIM and RFID technologies. Construction Innovation, 2020, 20, 471-508.	1.5	46
8	A Bayesian network model to predict accidents on Swiss highways. Infrastructure Asset Management, 2015, 2, 145-158.	1.2	43
9	Predicting road traffic accidents using artificial neural network models. Infrastructure Asset Management, 2018, 5, 132-144.	1.2	42
10	Use of exponential hidden Markov models for modelling pavement deterioration. International Journal of Pavement Engineering, 2013, 14, 645-654.	2.2	38
11	Identifying enablers for coordination across construction supply chain processes: a systematic literature review. Engineering, Construction and Architectural Management, 2021, 28, 1083-1113.	1.8	38
12	Estimating network related risks: A methodology and an application in the transport sector. Natural Hazards and Earth System Sciences, 2018, 18, 2273-2293.	1.5	36
13	Use of Unmanned Aerial Vehicle Photogrammetry to Obtain Topographical Information to Improve Bridge Risk Assessment. Journal of Infrastructure Systems, 2018, 24, .	1.0	32
14	Quantitative investigation on the accuracy and precision of Scan-to-BIM under different modelling scenarios. Automation in Construction, 2021, 126, 103686.	4.8	30
15	GPU-Accelerated Rendering Methods to Visually Analyze Large-Scale Disaster Simulation Data. Journal of Geovisualization and Spatial Analysis, 2017, 1, 1.	2.1	27
16	Determining an Optimal Set of Work Zones on Large Infrastructure Networks in a GIS Framework. Journal of Infrastructure Systems, 2018, 24, .	1.0	27
17	Methodology and base cost models to determine the total benefits of preservation interventions on road sections in Switzerland. Structure and Infrastructure Engineering, 2012, 8, 639-654.	2.0	26
18	A road infrastructure asset management process: gains in efficiency and effectiveness. Infrastructure Asset Management, 2019, 6, 2-14.	1.2	26

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19	Prioritizing transportation network recovery using a resilience measure. Sustainable and Resilient Infrastructure, 2020, , 1-12.	1.7	24
20	Using a Tabu-search Algorithm and 4D Models to Improve Construction Project Schedules. Procedia Engineering, 2017, 196, 698-705.	1.2	21
21	Optimal intervention strategies for multiple objects affected by manifest and latent deterioration processes. Structure and Infrastructure Engineering, 2015, 11, 389-401.	2.0	20
22	Optimal Intervention Planning: A Bottom-Up Approach to Renewing Aging Water Infrastructure. Journal of Water Resources Planning and Management - ASCE, 2020, 146, .	1.3	20
23	Supplier-contractor coordination approach to managing demand fluctuations of ready-mix concrete. Automation in Construction, 2021, 121, 103423.	4.8	20
24	Implicit supervision for fault detection and segmentation of emerging fault types with Deep Variational Autoencoders. Neurocomputing, 2021, 454, 324-324.	3.5	20
25	Methodology for determination of financial needs of gradually deteriorating bridges with only structure level data. Structure and Infrastructure Engineering, 2011, 7, 645-660.	2.0	19
26	Estimating and communicating the risk of neglecting maintenance. Infrastructure Asset Management, 2019, 6, 109-128.	1.2	19
27	Automated Construction Progress and Quality Monitoring for Commercial Buildings with Unmanned Aerial Systems: An Application Study from Switzerland. Infrastructures, 2020, 5, 98.	1.4	18
28	Sustainable funding strategies for stormwater infrastructure management: A system dynamics model. Sustainable Cities and Society, 2021, 64, 102485.	5.1	18
29	Investigation of a static and a dynamic neighbourhood methodology to develop work programs for multiple close municipal infrastructure networks. Structure and Infrastructure Engineering, 2017, 13, 361-389.	2.0	16
30	Stress tests for a road network using fragility functions and functional capacity loss functions. Reliability Engineering and System Safety, 2018, 173, 78-93.	5.1	16
31	A Network Flow Model Approach to Determining Optimal Intervention Programs for Railway Infrastructure Networks. Infrastructures, 2018, 3, 31.	1.4	16
32	Defining road service to facilitate road infrastructure asset management. Infrastructure Asset Management, 2020, 7, 240-255.	1.2	16
33	A methodology for the prediction of structure level costs based on element condition states. Structure and Infrastructure Engineering, 2013, 9, 735-748.	2.0	15
34	A Process for the Development and Evaluation of Preliminary Construction Material Quantity Estimation Models Using Backward Elimination Regression and Neural Networks. Journal of Cost Analysis and Parametrics, 2014, 7, 180-218.	0.3	15
35	Determination of Risk-Reducing Intervention Programs for Railway Lines and the Significance of Simplifications. Journal of Infrastructure Systems, 2018, 24, 04017038.	1.0	15
36	Preliminary Resource-based Estimates Combining Artificial Intelligence Approaches and Traditional Techniques. Procedia Engineering, 2016, 164, 261-268.	1.2	13

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37	Determination of Markov Transition Probabilities to be Used in Bridge Management from Mechanistic-Empirical Models. Journal of Bridge Engineering, 2017, 22, .	1.4	13
38	A new process for the evaluation of the net-benefit of flexible ground-floor ceiling in the face of use transition uncertainty. Journal of Building Engineering, 2018, 15, 156-170.	1.6	13
39	Defining and quantifying railway service to plan infrastructure interventions. Infrastructure Asset Management, 2020, 7, 146-166.	1.2	13
40	Environmental analysis of new construction and maintenance processes of road pavements in Switzerland. Structure and Infrastructure Engineering, 2014, 10, 1-24.	2.0	12
41	A model for the evaluation of intervention strategies for bridges affected by manifest and latent deterioration processes. Structure and Infrastructure Engineering, 2015, 11, 1466-1483.	2.0	12
42	A hybrid methodology to estimate construction material quantities at an early project phase. International Journal of Construction Management, 2017, 17, 165-196.	2.2	12
43	Exploiting digitalization for the coordination of required changes to improve engineer-to-order materials flow management. Construction Innovation, 2022, 22, 76-100.	1.5	12
44	On the usefulness of a cost-performance indicator curve at the strategic level for consideration of energy efficiency measures for building portfolios. Energy and Buildings, 2016, 119, 267-282.	3.1	11
45	Evaluating the operation and routine maintenance of municipal roads in Switzerland. Infrastructure Asset Management, 2017, 4, 96-108.	1.2	11
46	Total Cost-Benefit Analysis of Alternative Corrosion Management Strategies for a Steel Roadway Bridge. Journal of Bridge Engineering, 2013, 18, 318-327.	1.4	10
47	Investigation of the use of three existing methodologies to determine optimal life-cycle activity profiles for bridges. Structure and Infrastructure Engineering, 2015, 11, 1484-1509.	2.0	10
48	A REAL OPTION APPROACH TO DETERMINE OPTIMAL INTERVENTION WINDOWS FOR MULTI-NATIONAL RAIL CORRIDORS. Journal of Civil Engineering and Management, 2015, 22, 38-46.	1.9	10
49	Investigation of the Case-based Reasoning Retrieval Process to Estimate Resources in Construction Projects. Procedia Engineering, 2015, 123, 169-181.	1.2	10
50	Functional Loss Assessment and Restoration Analysis to Quantify Indirect Consequences of Hazards. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering, 2016, 2, 04016008.	1.1	10
51	Estimation of traffic flow changes using networks in networks approaches. Applied Network Science, 2019, 4, .	0.8	10
52	BIM-based estimation of vertical transportation demands during the construction of high-rise buildings. Automation in Construction, 2020, 110, 102985.	4.8	10
53	Usefulness of quantifying effects on rail service when comparing intervention strategies. Infrastructure Asset Management, 2020, 7, 167-189.	1.2	9
54	Considering automated vehicle deployment uncertainty in the design of optimal parking garages using real options. Journal of Building Engineering, 2021, 34, 101703.	1.6	9

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55	Improving the consideration of life-cycle costs in bridge decision-making in Switzerland. Structure and Infrastructure Engineering, 2005, 1, 145-157.	2.0	8
56	Prediction of road accidents: comparison of two Bayesian methods. Structure and Infrastructure Engineering, 2014, 10, 1394-1416.	2.0	8
57	Improving the Estimation of Markov Transition Probabilities Using Mechanistic-Empirical Models. Frontiers in Built Environment, 2017, 3, .	1.2	8
58	On the role of inspections and interventions in infrastructure management. Materials and Corrosion - Werkstoffe Und Korrosion, 2012, 63, 1134-1146.	0.8	7
59	A Simulation and Visualization Environment for Spatiotemporal Disaster Risk Assessments of Network Infrastructures. Cartographica, 2017, 52, 349-363.	0.2	7
60	Modelling the functional capacity losses of networks exposed to hazards. Sustainable and Resilient Infrastructure, 2020, 5, 30-48.	1.7	7
61	Identifying the Input Uncertainties to Quantify When Prioritizing Railway Assets for Risk-Reducing Interventions. CivilEng, 2020, 1, 106-131.	0.8	7
62	Modelling the Complex Relationship between Interventions, Interventions Costs and the Service Provided When Evaluating Intervention Programs on Railway Infrastructure Networks. Infrastructures, 2020, 5, 113.	1.4	7
63	A Methodology to Ensure the Consideration of Flexibility and Robustness in the Selection of Facility Renewal Projects. International Journal of Architecture Engineering and Construction, 2015, 4, .	0.1	7
64	Designing for Digital Fabrication: An Empirical Study of Industry Needs, Perceived Benefits, and Strategies for Adoption. Journal of Management in Engineering - ASCE, 2022, 38, .	2.6	7
65	Investigation of the Ability to Estimate Values of Road Section Condition Indicators Based on Their Spatial Correlation. Journal of Infrastructure Systems, 2016, 22, 04016006.	1.0	6
66	A method to visualize the evolution of multiple interacting spatial systems. ISPRS Journal of Photogrammetry and Remote Sensing, 2016, 117, 217-226.	4.9	6
67	Development of intervention programs for inland waterway networks using genetic algorithms. Structure and Infrastructure Engineering, 2018, 14, 550-564.	2.0	6
68	Quantifying net benefits of intervention programmes to enable their digitalised generation. Infrastructure Asset Management, 2021, 8, 141-154.	1.2	6
69	Evaluation of intervention strategies for a road link in the Netherlands. Built Environment Project and Asset Management, 2014, 4, 180-198.	0.9	5
70	Performance measures for road managers facing diverse environments. Benchmarking, 2016, 23, 1876-1891.	2.9	5
71	Modelling multi-layer spatially embedded random networks. Journal of Complex Networks, 2019, 7, 254-280.	1.1	5
72	Determination of intervention programs for multiple municipal infrastructure networks: considering network operator and service costs. Sustainable and Resilient Infrastructure, 2020, 5, 49-61.	1.7	5

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73	A demonstration of the use of a unified service model for urban infrastructure networks. Infrastructure Asset Management, 2020, 7, 269-281.	1.2	5
74	Making comparable risk estimates for railway assets of different types. Infrastructure Asset Management, 2021, 8, 53-74.	1.2	5
75	Potential Use of Inventory Theory to Bundle Interventions in Bridge Management Systems. , 0, .		5
76	A Review of the State-of-the-Art in Railway Risk Management. International Journal of Railway, 2017, 10, 5-11.	0.2	5
77	Investigation of the use of a Weibull model for the determination of optimal road link intervention strategies. Structure and Infrastructure Engineering, 2014, 10, 684-696.	2.0	4
78	Prioritizing Preproject Planning Activities Using Value of Information Analysis. Journal of Management in Engineering - ASCE, 2020, 36, .	2.6	4
79	Exploiting digitalisation to plan interventions on large water distribution networks. Infrastructure Asset Management, 0, , 1-16.	1.2	4
80	Using Bayesian networks to estimate bridge characteristics in early road designs. Infrastructure Asset Management, 2022, 9, 40-56.	1.2	4
81	Data-driven estimation of deterioration curves: a railway supporting structures case study. Infrastructure Asset Management, 2022, 9, 3-17.	1.2	4
82	Digitalizing the Determination of Railway Infrastructure Intervention Programs: A Network Optimization Model. Journal of Infrastructure Systems, 2022, 28, .	1.0	4
83	Using real option methods as a tool to determine optimal building work programs. Structure and Infrastructure Engineering, 2016, , 1-16.	2.0	3
84	Improving the planning and design phases of construction projects by using a Case-Based Digital Building System. International Journal of Construction Management, 2020, 20, 900-911.	2.2	3
85	Impact Assessment of Extreme Hydrometeorological Hazard Events on Road Networks. Journal of Infrastructure Systems, 2020, 26, 04020005.	1.0	3
86	Estimating, and setting targets for, the resilience of transport infrastructure. Infrastructure Asset Management, 2021, 8, 167-190.	1.2	3
87	Evaluating highway design considering uncertain mobility patterns and decision flexibility. Infrastructure Asset Management, 2022, 9, 135-155.	1.2	3
88	Determination of Postdisaster Restoration Programs for Road Networks Using a Double-Stage Optimization Approach. Journal of Infrastructure Systems, 2022, 28, .	1.0	3
89	A-VTS model of bitumen viscosity transformed and made continuous across families of grades. International Journal of Pavement Engineering, 2021, 22, 664-674.	2.2	2
90	Estimating the resilience of, and targets for, a transport system using expert opinion. Infrastructure Asset Management, 2021, 8, 191-208.	1.2	2

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91	Required accuracy of information when determining optimal railway intervention programmes. Infrastructure Asset Management, 0, , 1-10.	1.2	2
92	Integrated Planning of Operational Maintenance Programs for Water and Gas Distribution Networks. Journal of Infrastructure Systems, 2021, 27, .	1.0	2
93	Initial Investigations into the Use of Three Heuristic Algorithms to Determine Optimal Intervention Programs for Multiple Railway Objects. International Journal of Architecture Engineering and Construction, 2017, 6, .	0.1	2
94	A network model to optimally group road maintenance interventions for work zone development. Structure and Infrastructure Engineering, 2023, 19, 1007-1023.	2.0	2
95	Probabilistic Models to Evaluate Effectiveness of Steel Bridge Weld Fatigue Retrofitting by Peening. Transportation Research Record, 2012, 2285, 27-35.	1.0	1
96	The effect of management decision processes on the management of bridges. , 2013, , .		1
97	A Markov Model to Determine Optimal Intervention Strategies for Multiple Objects Affected by Uncorrelated Manifest and Latent Processes. , 2013, , .		1
98	THE EFFECT OF MANAGEMENT DECISION PROCESSES ON THE MANAGEMENT OF BRIDGES. Journal of Civil Engineering and Management, 2015, 22, 94-104.	1.9	1
99	Determination of the most sustainable bridge work programs through the improved structure level considerations. Structure and Infrastructure Engineering, 2018, 14, 1123-1139.	2.0	1
100	Identifying Changes in Bicycle Accident Trends Using GIS and Time Series Information in the City of Zürich. Frontiers in Sustainable Cities, 2020, 2, .	1.2	1
101	Investing in water supply resilience considering uncertainty and management flexibility. Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction, 0, , 1-12.	1.1	1
102	Methodology to Determine Financial Needs of River Structures. , 2010, , .		0
103	Development of a Decision Making Methodology to Optimize the Process of Scope Definition Improvement: A Building Adaptive Reuse Case Study. , 2020, , .		0
104	A surprising theorem to reduce the mathematical complexity of an important class of infrastructure maintenance problems. Sustainable and Resilient Infrastructure, 2020, , 1-14.	1.7	0
105	Automatic Generation of the Consumption for Temporary Construction Structures Using BIM: Applications to Formwork. , 2018, , .		0
106	Are current design service lives for asphalt concrete pavements suboptimal? An analytic argument for longer design service lives. Sustainable and Resilient Infrastructure, 0, , 1-23.	1.7	0
107	Determination of Optimal Rolling Planning Period for the Management of BIM-Based Construction Supply Chain Processes. , 2022, , .		0
108	Assessing the Effects of Closure-Free Periods on Railway Intervention Costs and Service. Journal of Infrastructure Systems, 2022, 28, .	1.0	0