

# Bryan Tyrone Adey

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

98  
papers

1,122  
citations

16  
h-index

29  
g-index

110  
ext. papers

1,459  
ext. citations

3.3  
avg, IF

5.38  
L-index

#	Paper	IF	Citations
98	Data-driven estimation of deterioration curves: a railway supporting structures case study. <i>Infrastructure Asset Management</i> , <b>2022</b> , 9, 3-17	1.8	2
97	Exploiting digitalization for the coordination of required changes to improve engineer-to-order materials flow management. <i>Construction Innovation</i> , <b>2021</b> , ahead-of-print,	4.1	3
96	Implicit supervision for fault detection and segmentation of emerging fault types with Deep Variational Autoencoders. <i>Neurocomputing</i> , <b>2021</b> , 454, 324-324	5.4	6
95	Quantitative investigation on the accuracy and precision of Scan-to-BIM under different modelling scenarios. <i>Automation in Construction</i> , <b>2021</b> , 126, 103686	9.6	7
94	Making comparable risk estimates for railway assets of different types. <i>Infrastructure Asset Management</i> , <b>2021</b> , 8, 53-74	1.8	1
93	A-VTS model of bitumen viscosity transformed and made continuous across families of grades. <i>International Journal of Pavement Engineering</i> , <b>2021</b> , 22, 664-674	2.6	0
92	Sustainable funding strategies for stormwater infrastructure management: A system dynamics model. <i>Sustainable Cities and Society</i> , <b>2021</b> , 64, 102485	10.1	8
91	Considering automated vehicle deployment uncertainty in the design of optimal parking garages using real options. <i>Journal of Building Engineering</i> , <b>2021</b> , 34, 101703	5.2	4
90	Supplier-contractor coordination approach to managing demand fluctuations of ready-mix concrete. <i>Automation in Construction</i> , <b>2021</b> , 121, 103423	9.6	9
89	Identifying enablers for coordination across construction supply chain processes: a systematic literature review. <i>Engineering, Construction and Architectural Management</i> , <b>2021</b> , 28, 1083-1113	3.1	15
88	Quantifying net benefits of intervention programmes to enable their digitalised generation. <i>Infrastructure Asset Management</i> , <b>2021</b> , 8, 141-154	1.8	2
87	Integrated Planning of Operational Maintenance Programs for Water and Gas Distribution Networks. <i>Journal of Infrastructure Systems</i> , <b>2021</b> , 27, 04021039	2.9	
86	Impact Assessment of Extreme Hydrometeorological Hazard Events on Road Networks. <i>Journal of Infrastructure Systems</i> , <b>2020</b> , 26, 04020005	2.9	3
85	A surprising theorem to reduce the mathematical complexity of an important class of infrastructure maintenance problems. <i>Sustainable and Resilient Infrastructure</i> , <b>2020</b> , 1-14	3.3	
84	Prioritizing transportation network recovery using a resilience measure. <i>Sustainable and Resilient Infrastructure</i> , <b>2020</b> , 1-12	3.3	13
83	Optimal Intervention Planning: A Bottom-Up Approach to Renewing Aging Water Infrastructure. <i>Journal of Water Resources Planning and Management - ASCE</i> , <b>2020</b> , 146, 04020044	2.8	8
82	Defining and quantifying railway service to plan infrastructure interventions. <i>Infrastructure Asset Management</i> , <b>2020</b> , 7, 146-166	1.8	10

81	BIM-based estimation of vertical transportation demands during the construction of high-rise buildings. <i>Automation in Construction</i> , <b>2020</b> , 110, 102985	9.6	5
80	Automated Construction Progress and Quality Monitoring for Commercial Buildings with Unmanned Aerial Systems: An Application Study from Switzerland. <i>Infrastructures</i> , <b>2020</b> , 5, 98	2.6	5
79	Using look-ahead plans to improve material flow processes on construction projects when using BIM and RFID technologies. <i>Construction Innovation</i> , <b>2020</b> , 20, 471-508	4.1	23
78	Prioritizing Preproject Planning Activities Using Value of Information Analysis. <i>Journal of Management in Engineering - ASCE</i> , <b>2020</b> , 36, 04020064	5.3	2
77	A demonstration of the use of a unified service model for urban infrastructure networks. <i>Infrastructure Asset Management</i> , <b>2020</b> , 7, 269-281	1.8	3
76	Usefulness of quantifying effects on rail service when comparing intervention strategies. <i>Infrastructure Asset Management</i> , <b>2020</b> , 7, 167-189	1.8	6
75	Identifying the Input Uncertainties to Quantify When Prioritizing Railway Assets for Risk-Reducing Interventions. <i>CivilEng</i> , <b>2020</b> , 1, 106-131	1.7	5
74	Modelling the Complex Relationship between Interventions, Interventions Costs and the Service Provided When Evaluating Intervention Programs on Railway Infrastructure Networks. <i>Infrastructures</i> , <b>2020</b> , 5, 113	2.6	5
73	Modelling the functional capacity losses of networks exposed to hazards. <i>Sustainable and Resilient Infrastructure</i> , <b>2020</b> , 5, 30-48	3.3	7
72	Improving the planning and design phases of construction projects by using a Case-Based Digital Building System. <i>International Journal of Construction Management</i> , <b>2020</b> , 20, 900-911	1.9	3
71	Determination of intervention programs for multiple municipal infrastructure networks: considering network operator and service costs. <i>Sustainable and Resilient Infrastructure</i> , <b>2020</b> , 5, 49-61	3.3	4
70	Defining road service to facilitate road infrastructure asset management. <i>Infrastructure Asset Management</i> , <b>2020</b> , 7, 240-255	1.8	13
69	A road infrastructure asset management process: gains in efficiency and effectiveness. <i>Infrastructure Asset Management</i> , <b>2019</b> , 6, 2-14	1.8	15
68	Estimation of traffic flow changes using networks in networks approaches. <i>Applied Network Science</i> , <b>2019</b> , 4,	2.9	6
67	Modelling multi-layer spatially embedded random networks. <i>Journal of Complex Networks</i> , <b>2019</b> , 7, 254-280	3.0	3
66	Estimating and communicating the risk of neglecting maintenance. <i>Infrastructure Asset Management</i> , <b>2019</b> , 6, 109-128	1.8	15
65	Predicting road traffic accidents using artificial neural network models. <i>Infrastructure Asset Management</i> , <b>2018</b> , 5, 132-144	1.8	15
64	Determination of Near-Optimal Restoration Programs for Transportation Networks Following Natural Hazard Events Using Simulated Annealing. <i>Computer-Aided Civil and Infrastructure Engineering</i> , <b>2018</b> , 33, 618-637	8.4	37

63	Stress tests for a road network using fragility functions and functional capacity loss functions. <i>Reliability Engineering and System Safety</i> , <b>2018</b> , 173, 78-93	6.3	9
62	A new process for the evaluation of the net-benefit of flexible ground-floor ceiling in the face of use transition uncertainty. <i>Journal of Building Engineering</i> , <b>2018</b> , 15, 156-170	5.2	9
61	Productivity of digital fabrication in construction: Cost and time analysis of a robotically built wall. <i>Automation in Construction</i> , <b>2018</b> , 92, 297-311	9.6	138
60	Development of intervention programs for inland waterway networks using genetic algorithms. <i>Structure and Infrastructure Engineering</i> , <b>2018</b> , 14, 550-564	2.9	4
59	Determination of the most sustainable bridge work programs through the improved structure level considerations. <i>Structure and Infrastructure Engineering</i> , <b>2018</b> , 14, 1123-1139	2.9	1
58	Construction automation: Research areas, industry concerns and suggestions for advancement. <i>Automation in Construction</i> , <b>2018</b> , 94, 22-38	9.6	71
57	Determination of Risk-Reducing Intervention Programs for Railway Lines and the Significance of Simplifications. <i>Journal of Infrastructure Systems</i> , <b>2018</b> , 24, 04017038	2.9	12
56	Determining an Optimal Set of Work Zones on Large Infrastructure Networks in a GIS Framework. <i>Journal of Infrastructure Systems</i> , <b>2018</b> , 24, 04017048	2.9	18
55	Use of Unmanned Aerial Vehicle Photogrammetry to Obtain Topographical Information to Improve Bridge Risk Assessment. <i>Journal of Infrastructure Systems</i> , <b>2018</b> , 24, 04017041	2.9	19
54	A Network Flow Model Approach to Determining Optimal Intervention Programs for Railway Infrastructure Networks. <i>Infrastructures</i> , <b>2018</b> , 3, 31	2.6	12
53	Estimating network related risks: A methodology and an application in the transport sector. <i>Natural Hazards and Earth System Sciences</i> , <b>2018</b> , 18, 2273-2293	3.9	24
52	Investigation of a static and a dynamic neighbourhood methodology to develop work programs for multiple close municipal infrastructure networks. <i>Structure and Infrastructure Engineering</i> , <b>2017</b> , 13, 361-389	2.9	13
51	A hybrid methodology to estimate construction material quantities at an early project phase. <i>International Journal of Construction Management</i> , <b>2017</b> , 17, 165-196	1.9	8
50	Evaluating the operation and routine maintenance of municipal roads in Switzerland. <i>Infrastructure Asset Management</i> , <b>2017</b> , 4, 96-108	1.8	10
49	A Simulation and Visualization Environment for Spatiotemporal Disaster Risk Assessments of Network Infrastructures. <i>Cartographica</i> , <b>2017</b> , 52, 349-363	0.7	6
48	Determination of Markov Transition Probabilities to be Used in Bridge Management from Mechanistic-Empirical Models. <i>Journal of Bridge Engineering</i> , <b>2017</b> , 22, 04017063	2.7	9
47	Using a Tabu-search Algorithm and 4D Models to Improve Construction Project Schedules. <i>Procedia Engineering</i> , <b>2017</b> , 196, 698-705		14
46	GPU-Accelerated Rendering Methods to Visually Analyze Large-Scale Disaster Simulation Data. <i>Journal of Geovisualization and Spatial Analysis</i> , <b>2017</b> , 1, 1	3.5	21

45	Improving the Estimation of Markov Transition Probabilities Using Mechanistic-Empirical Models. <i>Frontiers in Built Environment</i> , <b>2017</b> , 3,	2.2	6
44	A Review of the State-of-the-Art in Railway Risk Management. <i>International Journal of Railway</i> , <b>2017</b> , 10, 5-11	4	2
43	Initial Investigations into the Use of Three Heuristic Algorithms to Determine Optimal Intervention Programs for Multiple Railway Objects. <i>International Journal of Architecture Engineering and Construction</i> , <b>2017</b> , 6,	0.5	2
42	Performance measures for road managers facing diverse environments. <i>Benchmarking</i> , <b>2016</b> , 23, 1876-1891	1.8	5
41	Functional Loss Assessment and Restoration Analysis to Quantify Indirect Consequences of Hazards. <i>ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering</i> , <b>2016</b> , 2, 04016008	1.7	8
40	A method to visualize the evolution of multiple interacting spatial systems. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , <b>2016</b> , 117, 217-226	11.8	3
39	On the usefulness of a cost-performance indicator curve at the strategic level for consideration of energy efficiency measures for building portfolios. <i>Energy and Buildings</i> , <b>2016</b> , 119, 267-282	7	10
38	Preliminary Resource-based Estimates Combining Artificial Intelligence Approaches and Traditional Techniques. <i>Procedia Engineering</i> , <b>2016</b> , 164, 261-268		10
37	Using real option methods as a tool to determine optimal building work programs. <i>Structure and Infrastructure Engineering</i> , <b>2016</b> , 1-16	2.9	3
36	Investigation of the Ability to Estimate Values of Road Section Condition Indicators Based on Their Spatial Correlation. <i>Journal of Infrastructure Systems</i> , <b>2016</b> , 22, 04016006	2.9	6
35	Optimal intervention strategies for multiple objects affected by manifest and latent deterioration processes. <i>Structure and Infrastructure Engineering</i> , <b>2015</b> , 11, 389-401	2.9	18
34	Investigation of the Case-based Reasoning Retrieval Process to Estimate Resources in Construction Projects. <i>Procedia Engineering</i> , <b>2015</b> , 123, 169-181		9
33	Investigation of the use of three existing methodologies to determine optimal life-cycle activity profiles for bridges. <i>Structure and Infrastructure Engineering</i> , <b>2015</b> , 11, 1484-1509	2.9	8
32	A Bayesian network model to predict accidents on Swiss highways. <i>Infrastructure Asset Management</i> , <b>2015</b> , 2, 145-158	1.8	22
31	THE EFFECT OF MANAGEMENT DECISION PROCESSES ON THE MANAGEMENT OF BRIDGES. <i>Journal of Civil Engineering and Management</i> , <b>2015</b> , 22, 94-104	3	1
30	A model for the evaluation of intervention strategies for bridges affected by manifest and latent deterioration processes. <i>Structure and Infrastructure Engineering</i> , <b>2015</b> , 11, 1466-1483	2.9	10
29	A REAL OPTION APPROACH TO DETERMINE OPTIMAL INTERVENTION WINDOWS FOR MULTI-NATIONAL RAIL CORRIDORS. <i>Journal of Civil Engineering and Management</i> , <b>2015</b> , 22, 38-46	3	8
28	A Methodology to Ensure the Consideration of Flexibility and Robustness in the Selection of Facility Renewal Projects. <i>International Journal of Architecture Engineering and Construction</i> , <b>2015</b> , 4,	0.5	5

27	Investigation of the use of a Weibull model for the determination of optimal road link intervention strategies. <i>Structure and Infrastructure Engineering</i> , <b>2014</b> , 10, 684-696	2.9	2
26	A Process for the Development and Evaluation of Preliminary Construction Material Quantity Estimation Models Using Backward Elimination Regression and Neural Networks. <i>Journal of Cost Analysis and Parametrics</i> , <b>2014</b> , 7, 180-218		11
25	Evaluation of intervention strategies for a road link in the Netherlands. <i>Built Environment Project and Asset Management</i> , <b>2014</b> , 4, 180-198	1.9	4
24	Environmental analysis of new construction and maintenance processes of road pavements in Switzerland. <i>Structure and Infrastructure Engineering</i> , <b>2014</b> , 10, 1-24	2.9	10
23	Prediction of road accidents: comparison of two Bayesian methods. <i>Structure and Infrastructure Engineering</i> , <b>2014</b> , 10, 1394-1416	2.9	7
22	Use of exponential hidden Markov models for modelling pavement deterioration. <i>International Journal of Pavement Engineering</i> , <b>2013</b> , 14, 645-654	2.6	28
21	Prediction of road accidents: A Bayesian hierarchical approach. <i>Accident Analysis and Prevention</i> , <b>2013</b> , 51, 274-91	6.1	52
20	Modeling of corrosion-induced concrete cover cracking: A critical analysis. <i>Construction and Building Materials</i> , <b>2013</b> , 42, 225-237	6.7	71
19	Total Cost-Benefit Analysis of Alternative Corrosion Management Strategies for a Steel Roadway Bridge. <i>Journal of Bridge Engineering</i> , <b>2013</b> , 18, 318-327	2.7	9
18	A methodology for the prediction of structure level costs based on element condition states. <i>Structure and Infrastructure Engineering</i> , <b>2013</b> , 9, 735-748	2.9	11
17	A Markov Model to Determine Optimal Intervention Strategies for Multiple Objects Affected by Uncorrelated Manifest and Latent Processes <b>2013</b> ,		1
16	On the role of inspections and interventions in infrastructure management. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , <b>2012</b> , 63, 1134-1146	1.6	7
15	Concrete cover cracking owing to reinforcement corrosion II theoretical considerations and practical experience. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , <b>2012</b> , 63, 1069-1077	1.6	54
14	Methodology and base cost models to determine the total benefits of preservation interventions on road sections in Switzerland. <i>Structure and Infrastructure Engineering</i> , <b>2012</b> , 8, 639-654	2.9	22
13	Probabilistic Models to Evaluate Effectiveness of Steel Bridge Weld Fatigue Retrofitting by Peening. <i>Transportation Research Record</i> , <b>2012</b> , 2285, 27-35	1.7	1
12	Methodology for determination of financial needs of gradually deteriorating bridges with only structure level data. <i>Structure and Infrastructure Engineering</i> , <b>2011</b> , 7, 645-660	2.9	16
11	Improving the consideration of life-cycle costs in bridge decision-making in Switzerland. <i>Structure and Infrastructure Engineering</i> , <b>2005</b> , 1, 145-157	2.9	6
10	A network model to optimally group road maintenance interventions for work zone development. <i>Structure and Infrastructure Engineering</i> , 1-17	2.9	1

9	Potential Use of Inventory Theory to Bundle Interventions in Bridge Management Systems		5
8	Are current design service lives for asphalt concrete pavements suboptimal? An analytic argument for longer design service lives. <i>Sustainable and Resilient Infrastructure</i> ,1-23	3.3	
7	Estimating the resilience of, and targets for, a transport system using expert opinion. <i>Infrastructure Asset Management</i> ,1-18	1.8	0
6	Required accuracy of information when determining optimal railway intervention programmes. <i>Infrastructure Asset Management</i> ,1-10	1.8	0
5	Using Bayesian networks to estimate bridge characteristics in early road designs. <i>Infrastructure Asset Management</i> ,1-18	1.8	2
4	Estimating, and setting targets for, the resilience of transport infrastructure. <i>Infrastructure Asset Management</i> ,1-24	1.8	0
3	Exploiting digitalisation to plan interventions on large water distribution networks. <i>Infrastructure Asset Management</i> ,1-16	1.8	2
2	Evaluating highway designs considering uncertain mobility patterns and flexibility using real options. <i>Infrastructure Asset Management</i> ,1-17	1.8	0
1	Investing in water supply resilience considering uncertainty and management flexibility. <i>Proceedings of the Institution of Civil Engineers - Smart Infrastructure and Construction</i> ,1-12	0.5	0