

# Douglas L Van Bossuyt

## List of Publications by Year in descending order

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Version: 2024-02-01

72  
papers

410  
citations

933264

10  
h-index

996849

15  
g-index

72  
all docs

72  
docs citations

72  
times ranked

147  
citing authors

#	ARTICLE	IF	CITATIONS
1	Operationalizing digital twins through model-based systems engineering methods. <i>Systems Engineering</i> , 2020, 23, 724-750.	1.6	28
2	The Function-Based Design for Sustainability Method. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2017, 139, .	1.7	21
3	Risk attitudes in risk-based design: Considering risk attitude using utility theory in risk-based design. <i>Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM</i> , 2012, 26, 393-406.	0.7	19
4	On Measuring Engineering Risk Attitudes <sup>1</sup> . <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2013, 135, .	1.7	19
5	A Zero Trust Hybrid Security and Safety Risk Analysis Method. <i>Journal of Computing and Information Science in Engineering</i> , 2021, 21, .	1.7	18
6	Modeling of function failure propagation across uncoupled systems. , 2015, , .		16
7	Resilience and Cost Trade Space for Microgrids on Islands. <i>IEEE Systems Journal</i> , 2022, 16, 3939-3949.	2.9	15
8	Analyzing Mission Impact of Military Installations Microgrid for Resilience. <i>Systems</i> , 2021, 9, 69.	1.2	15
9	The Integration of Reliability, Availability, and Maintainability into Model-Based Systems Engineering. <i>Systems</i> , 2022, 10, 101.	1.2	13
10	Systems Engineering Issues in Microgrids for Military Installations. <i>In cose International Symposium</i> , 2020, 30, 731-746.	0.2	12
11	Distributed Energy-Resource Design Method to Improve Energy Security in Critical Facilities. <i>Energies</i> , 2021, 14, 2773.	1.6	12
12	Design for Fused Filament Fabrication Additive Manufacturing. , 2015, , .		11
13	A case for trading risk in complex conceptual design trade studies. <i>Research in Engineering Design - Theory, Applications, and Concurrent Engineering</i> , 2013, 24, 259-275.	1.2	10
14	Conceptual design of sacrificial sub-systems: failure flow decision functions. <i>Research in Engineering Design - Theory, Applications, and Concurrent Engineering</i> , 2018, 29, 23-38.	1.2	10
15	A method of identifying and analyzing irrational system behavior in a system of systems. <i>Systems Engineering</i> , 2019, 22, 519-537.	1.6	10
16	The Naval Postgraduate School's Department of Systems Engineering Approach to Mission Engineering Education through Capstone Projects. <i>Systems</i> , 2019, 7, 38.	1.2	9
17	Investigation of Nanogrids for Improved Navy Installation Energy Resilience. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 4298.	1.3	9
18	Early Combined Safety - Security Defense in Depth Assessment of Complex Systems. , 2020, , .		8

#	ARTICLE	IF	CITATIONS
19	Determinants that Are Believed to Influence the Acceptance and Adoption of Mission Critical Autonomous Systems. , 2021, , .		8
20	A graph theory approach to predicting functional failure propagation during conceptual systems design. Systems Engineering, 2021, 24, 100-121.	1.6	8
21	Energy Resilience Impact of Supply Chain Network Disruption to Military Microgrids. Infrastructures, 2022, 7, 4.	1.4	7
22	Toward a Market-Based Lean Startup Product Design Method for the Developing World. , 2014, , .		6
23	A Graph Theory Approach to Functional Failure Propagation in Early Complex Cyber-Physical Systems (CCPSs). IncoSE International Symposium, 2017, 27, 1734-1748.	0.2	6
24	A Method to Choose Between Automation and Human Operators for Recovery Actions During a Cyber Attack. Procedia Computer Science, 2019, 153, 352-360.	1.2	6
25	Toward an Automated Model-Based Geometric Method of Representing Function Failure Propagation Across Uncoupled Systems. , 2014, , .		6
26	Digital Twin-Enabled Decision Support in Mission Engineering and Route Planning. Systems, 2021, 9, 82.	1.2	6
27	Cable routing modeling in early system design to prevent cable failure propagation events. , 2016, , .		5
28	Towards a Zero Trust Hybrid Security and Safety Risk Analysis Method. , 2020, , .		5
29	Defense Installation Energy Resilience for Changing Operational Requirements. Designs, 2022, 6, 28.	1.3	5
30	Breaking the Tyranny of the Semester: A Phase-Gate Sprint Approach to Teaching Colorado School of Mines Students Important Engineering Concepts, Delivering Useful Solutions to Communities, and Working on Long Time Scale Projects. International Journal for Service Learning in Engineering, 2014, , 222-239.	0.4	4
31	Toward a Functional Failure Modeling Method of Representing Prognostic Systems During the Early Phases of Design. , 2015, , .		4
32	Irrational System Behavior in a System of Systems. , 2018, , .		4
33	Early Hybrid Safety and Security Risk Assessment Based on Interdisciplinary Dependency Models. , 2019, , .		4
34	A Functional Failure Analysis Method of Identifying and Mitigating Spurious System Emissions From a System of Interest in a System of Systems. Journal of Computing and Information Science in Engineering, 2020, 20, .	1.7	4
35	Towards Risk as a Tradeable Parameter in Complex System Design Trades. , 2010, , .		4
36	Design and Optimization Strategy to Size Resilient Stand-Alone Hybrid Microgrids in Various Climatic Conditions. , 2021, , .		4

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37	Feasibility Analysis of a Mobile Microgrid Design to Support DoD Energy Resilience Goals. <i>Systems</i> , 2022, 10, 74.	1.2	4
38	Toward Understanding Collaborative Design Center Trade Study Software Upgrade and Migration Risks. , 2010, , .		3
39	Functional Impact Comparison of Common and Innovative Products. , 2013, , .		3
40	Lean Design for the Developing World: Making Design Decisions Through the Use of Validated Learning Techniques in the Developing World. , 2014, , .		3
41	Toward Risk-Informed Operation of Autonomous Vehicles to Increase Resilience in Unknown and Dangerous Environments. , 2016, , .		3
42	A Model Driven Approach for Early Assessment of Defense in Depth Capabilities of Complex Sociotechnical Systems. , 2017, , .		3
43	Assessing the Consequence of Cyber and Physical Malicious Attacks in Complex, Cyber-Physical Systems During Early System Design. , 2018, , .		3
44	A Generative Human-in-the-Loop Approach for Conceptual Design Exploration Using Flow Failure Frequency in Functional Models1. <i>Journal of Computing and Information Science in Engineering</i> , 2019, 19, .	1.7	3
45	Toward a Dedicated Failure Flow Arrestor Function Methodology. , 2015, , .		3
46	Prognostic systems representation in a function-based Bayesian model during engineering design. <i>International Journal of Prognostics and Health Management</i> , 2017, 8, .	0.6	3
47	Insight into User Acceptance and Adoption of Autonomous Systems in Mission Critical Environments. <i>International Journal of Human-Computer Interaction</i> , 2023, 39, 1423-1437.	3.3	3
48	On Measuring Engineering Risk Attitudes. , 2011, , .		2
49	Toward Implementing Quantifiable Social Justice Metrics in the Design Process. , 2016, , .		2
50	Active mission success estimation through functional modeling. <i>Research in Engineering Design - Theory, Applications, and Concurrent Engineering</i> , 2018, 29, 565-588.	1.2	2
51	Early Assessment of Drone Fleet Defence in Depth Capabilities for Mission Success. , 2019, , .		2
52	Autonomous System Design and Controls Design for Operations in High Risk Environments. , 2016, , .		2
53	System Analysis of Counter-Unmanned Aerial Systems Kill Chain in an Operational Environment. <i>Systems</i> , 2021, 9, 79.	1.2	2
54	Use, Acceptance, and Adoption of Automated Systems with Intrinsic and Extrinsic Motivation Based Incentive Mechanisms. , 2022, , .		2

#	ARTICLE	IF	CITATIONS
55	Toward Considering Risk Attitudes in Engineering Organizations Using Utility Theory. , 2012, , .		1
56	Toward Customer Needs Cultural Risk Indicator Insights for Product Development. , 2015, , .		1
57	Risk Attitude Informed Route Planning in a Simulated Planetary Rover. , 2015, , .		1
58	A model-driven approach for incorporating human reliability analysis in early emergency operating procedure development. , 2016, , .		1
59	A Functional Modelling Based Methodology for Testing the Predictions of Fault Detection and Identification Systems. , 2016, , .		1
60	Risk modeling of variable probability external initiating events. , 2017, , .		1
61	Toward a Generative Human-in-the-Loop Approach for Conceptual Design Exploration Using Flow Failure Frequency in Functional Models. , 2018, , .		1
62	Stored System Inherent Availability Optimization from a System of Systems Physics of Failure Perspective. , 2019, , .		1
63	How Do Systems Fail?. , 2020, , .		1
64	A Method to Account for Personnel Risk Attitudes in System Design and Maintenance Activity Development. Systems, 2020, 8, 26.	1.2	1
65	Toward a Functional Failure Analysis Method of Identifying and Mitigating Spurious System Emissions in a System of Systems. , 2019, , .		1
66	The Integration of Affective Design Into QFD. , 2008, , .		0
67	Making a Difference and a Profit. Mechanical Engineering, 2015, 137, 38-43.	0.0	0
68	Toward a Probabilistic Risk Assessment (PRA) Method for Assessing Mishaps in Legacy Systems Using Mishap Reports. Incose International Symposium, 2020, 30, 1064-1078.	0.2	0
69	Toward an Early-Phase Conceptual System Design Risk-Informed Decision Making Framework. , 2012, , .		0
70	The Application of Retrospective Customer Needs Cultural Risk Indicator Method to Soap Dispenser Design for Children in Ethiopia. , 2016, , .		0
71	Feature Selection for Monitoring Erosive Cavitation on a Hydroturbine. International Journal of Prognostics and Health Management, 2017, 8, .	0.6	0
72	Preliminary Design and Testing of a Resetting Combination Anchor, Antenna, and Tether Mechanism for a Spherical Autonomous Underwater Vehicle. Applied Sciences (Switzerland), 2022, 12, 5072.	1.3	0