

Matthew L Bolton

List of Publications by Year in descending order

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Version: 2024-02-01

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papers

947
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567281

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all docs

54
docs citations

54
times ranked

480
citing authors

#	ARTICLE	IF	CITATIONS
1	Using Formal Verification to Evaluate Human-Automation Interaction: A Review. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2013, 43, 488-503.	9.3	136
2	A Systematic Approach to Model Checking Human-Automation Interaction Using Task Analytic Models. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2011, 41, 961-976.	2.9	92
3	Automatically Generating Specification Properties From Task Models for the Formal Verification of Human-Automation Interaction. IEEE Transactions on Human-Machine Systems, 2014, 44, 561-575.	3.5	72
4	Generating phenotypical erroneous human behavior to evaluate human-automation interaction using model checking. International Journal of Human Computer Studies, 2012, 70, 888-906.	5.6	63
5	Formally verifying human-automation interaction as part of a system model: limitations and tradeoffs. Innovations in Systems and Software Engineering, 2010, 6, 219-231.	2.1	50
6	Generating Erroneous Human Behavior From Strategic Knowledge in Task Models and Evaluating Its Impact on System Safety With Model Checking. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2013, 43, 1314-1327.	9.3	37
7	A formal approach to discovering simultaneous additive masking between auditory medical alarms. Applied Ergonomics, 2017, 58, 500-514.	3.1	31
8	Getting Better Hospital Alarm Sounds Into a Global Standard. Ergonomics in Design, 2018, 26, 4-13.	0.7	30
9	Spatial Awareness in Synthetic Vision Systems: Using Spatial and Temporal Judgments to Evaluate Texture and Field of View. Human Factors, 2007, 49, 961-974.	3.5	22
10	Model Checking Human-Human Communication Protocols Using Task Models and Miscommunication Generation. Journal of Aerospace Information Systems, 2015, 12, 476-489.	1.4	21
11	Using Model Checking to Explore Checklist-Guided Pilot Behavior. The International Journal of Aviation Psychology, 2012, 22, 343-366.	0.7	20
12	Using task analytic models to visualize model checker counterexamples. , 2010, , .		19
13	Properties for formally assessing the performance level of human-human collaborative procedures with miscommunications and erroneous human behavior. International Journal of Industrial Ergonomics, 2018, 63, 75-88.	2.6	19
14	A Formal Machine-Learning Approach to Generating Human-Machine Interfaces From Task Models. IEEE Transactions on Human-Machine Systems, 2017, 47, 822-833.	3.5	18
15	Using Relative Position and Temporal Judgments to Identify Biases in Spatial Awareness for Synthetic Vision Systems. The International Journal of Aviation Psychology, 2008, 18, 183-206.	0.7	16
16	Comparing perceptual judgment and subjective measures of spatial awareness. Applied Ergonomics, 2009, 40, 597-607.	3.1	16
17	Enhanced operator function model: A generic human task behavior modeling language. , 2009, , .		16
18	A task-based taxonomy of erroneous human behavior. International Journal of Human Computer Studies, 2017, 108, 105-121.	5.6	16

#	ARTICLE	IF	CITATIONS
19	Evaluating the applicability of the double system lens model to the analysis of phishing email judgments. <i>Computers and Security</i> , 2018, 77, 128-137.	6.0	16
20	Toward a multi-method approach to formalizing human-automation interaction and human-human communications. , 2011, , .		15
21	Automatic validation and failure diagnosis of human-device interfaces using task analytic models and model checking. <i>Computational and Mathematical Organization Theory</i> , 2013, 19, 288-312.	2.0	14
22	A Method for the Formal Verification of Human-interactive Systems. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2009, 53, 764-768.	0.3	14
23	Using Model Checking to Detect Simultaneous Masking in Medical Alarms. <i>IEEE Transactions on Human-Machine Systems</i> , 2016, 46, 174-185.	3.5	13
24	A formal method for assessing the impact of task-based erroneous human behavior on system safety. <i>Reliability Engineering and System Safety</i> , 2019, 188, 168-180.	8.9	12
25	The level of measurement of trust in automation. <i>Theoretical Issues in Ergonomics Science</i> , 2021, 22, 274-295.	1.8	12
26	Improving the scalability of formal human-automation interaction verification analyses that use task-analytic models. <i>Innovations in Systems and Software Engineering</i> , 2017, 13, 1-17.	2.1	11
27	The development of a next-generation human reliability analysis: Systems analysis for formal pharmaceutical human reliability (SAFPH). <i>Reliability Engineering and System Safety</i> , 2020, 202, 106927.	8.9	11
28	An Experimental Validation of Masking in IEC 60601-1-8:2006-Compliant Alarm Sounds. <i>Human Factors</i> , 2020, 62, 954-972.	3.5	10
29	Novel Developments in Formal Methods for Human Factors Engineering. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2017, 61, 715-717.	0.3	9
30	A Formal Analysis of Masking Between Reserved Alarm Sounds of the IEC 60601-1-8 International Medical Alarm Standard. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2018, 62, 523-527.	0.3	9
31	Extended SAFPH (Systems Analysis for Formal Pharmaceutical Human Reliability): Two approaches based on extended CREAM and a comparative analysis. <i>Safety Science</i> , 2020, 132, 104944.	4.9	9
32	Enhanced Operator Function Model (EOFM): A Task Analytic Modeling Formalism for Including Human Behavior in the Verification of Complex Systems. <i>Human-computer Interaction Series</i> , 2017, , 343-377.	0.6	8
33	Masking Between Reserved Alarm Sounds of the IEC 60601-1-8 International Medical Alarm Standard: A Systematic, Formal Analysis. <i>Human Factors</i> , 2022, 64, 835-851.	3.5	8
34	The Level of Measurement of Subjective Situation Awareness and Its Dimensions in the Situation Awareness Rating Technique (SART). <i>IEEE Transactions on Human-Machine Systems</i> , 2022, 52, 1147-1154.	3.5	8
35	A Method for the Formal Verification of Human-interactive Systems. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2009, 53, 764-768.	0.3	7
36	Using Task Analytic Models and Phenotypes of Erroneous Human Behavior to Discover System Failures Using Model Checking. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2010, 54, 992-996.	0.3	7

#	ARTICLE	IF	CITATIONS
37	A formal method for including the probability of erroneous human task behavior in system analyses. Reliability Engineering and System Safety, 2021, 213, 107764.	8.9	7
38	Using formal methods to reason about taskload and resource conflicts in simulated air traffic scenarios. Innovations in Systems and Software Engineering, 2018, 14, 1-14.	2.1	6
39	A computationally efficient formal method for discovering simultaneous masking in medical alarms. Applied Acoustics, 2018, 141, 403-415.	3.3	5
40	Using the Lens Model and Cognitive Continuum Theory to Understand the Effects of Cognition on Phishing Victimization. Proceedings of the Human Factors and Ergonomics Society, 2019, 63, 173-177.	0.3	5
41	Subjective Measurement of Trust: Is It on the Level?. Proceedings of the Human Factors and Ergonomics Society, 2019, 63, 212-216.	0.3	5
42	An Approach to Model Checking the Perceptual Interactions of Medical Alarms. Proceedings of the Human Factors and Ergonomics Society, 2014, 58, 822-826.	0.3	4
43	Learning Formal Human-machine Interface Designs From Task Analytic Models. Proceedings of the Human Factors and Ergonomics Society, 2015, 59, 652-656.	0.3	4
44	A formal approach to modeling and analyzing human taskload in simulated air traffic scenarios. , 2015, , .		4
45	Task-based Automated Test Case Generation for Human-machine Interaction. Proceedings of the Human Factors and Ergonomics Society, 2019, 63, 807-811.	0.3	4
46	Modeling human perception Could Stevens' Power Law be an emergent feature?. Conference Proceedings IEEE International Conference on Systems, Man, and Cybernetics, 2008, , .	0.0	3
47	A Formal Human Reliability Analysis of a Community Pharmacy Dispensing Procedure. Proceedings of the Human Factors and Ergonomics Society, 2017, 61, 728-732.	0.3	3
48	Information, Data Entry, and Reporting Requirements for a Resident Handoff of Care Support Tool. , 2013, , .		2
49	Using Model Checking to Detect Masking in IEC 60601-1-8-compliant Alarm Configurations. Proceedings of the Human Factors and Ergonomics Society, 2016, 60, 636-640.	0.3	2
50	A LAMSTAR Network-Based Human Judgment Analysis. IEEE Transactions on Human-Machine Systems, 2017, 47, 951-957.	3.5	2
51	A Taxonomy of Forcing Functions for Addressing Human Errors in Human-machine Interaction. , 2021, , .		2
52	An Analysis of Air Traffic Management Concepts of Operation Using Simulation and Formal Verification. , 2019, , .		1
53	Medical Alarm Audibility System Checker (MAASC): A Computational Tool for Checking Medical Alarm Configurations for Simultaneous Masking. Proceedings of the International Symposium of Human Factors and Ergonomics in Healthcare, 2020, 9, 302-303.	0.3	1
54	A Formal Methods Approach for Predicting How Users will Utilize System Features. Proceedings of the Human Factors and Ergonomics Society, 2018, 62, 641-645.	0.3	0