Norman E Fenton

List of Publications by Year
in descending order

154	7,664	81900	71685
papers	citations	39 h-index	76 g-index

171	171	171	4180
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A critique of software defect prediction models. IEEE Transactions on Software Engineering, 1999, 25, 675-689.	5.6	745
2	Quantitative analysis of faults and failures in a complex software system. IEEE Transactions on Software Engineering, 2000, 26, 797-814.	5.6	515
3	Towards a framework for software measurement validation. IEEE Transactions on Software Engineering, 1995, 21, 929-944.	5.6	371
4	Software measurement: a necessary scientific basis. IEEE Transactions on Software Engineering, 1994, 20, 199-206.	5.6	360
5	Building large-scale Bayesian networks. Knowledge Engineering Review, 2000, 15, 257-284.	2.6	218
6	Software Metrics. , 0, , .		203
7	Science and substance: a challenge to software engineers. IEEE Software, 1994, 11, 86-95.	1.8	187
8	Software metrics. , 2000, , .		182
9	Using Ranked Nodes to Model Qualitative Judgments in Bayesian Networks. IEEE Transactions on Knowledge and Data Engineering, 2007, 19, 1420-1432.	5.7	170
10	Software metrics: successes, failures and new directions. Journal of Systems and Software, 1999, 47, 149-157.	4.5	167
11	Risk Assessment and Decision Analysis with Bayesian Networks. , 0, , .		165
12	Predicting software defects in varying development lifecycles using Bayesian nets. Information and Software Technology, 2007, 49, 32-43.	4.4	151
13	Towards Operational Measures of Computer Security. Journal of Computer Security, 1993, 2, 211-229.	0.8	147
14	Software measurement: uncertainty and causal modeling. IEEE Software, 2002, 19, 116-122.	1.8	128
15	Using Bayesian Networks to Model Expected and Unexpected Operational Losses. Risk Analysis, 2005, 25, 963-972.	2.7	119
16	From complex questionnaire and interviewing data to intelligent Bayesian network models for medical decision support. Artificial Intelligence in Medicine, 2016, 67, 75-93.	6.5	119
17	Implementing effective software metrics programs. IEEE Software, 1997, 14, 55-65.	1.8	115
18	On the effectiveness of early life cycle defect prediction with Bayesian Nets. Empirical Software Engineering, 2008, 13, 499-537.	3.9	112

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19	A General Structure for Legal Arguments About Evidence Using Bayesian Networks. Cognitive Science, 2013, 37, 61-102.	1.7	112
20	Improved reliability modeling using Bayesian networks and dynamic discretization. Reliability Engineering and System Safety, 2010, 95, 412-425.	8.9	111
21	Risk and confidence analysis for fuzzy multicriteria decision making. Knowledge-Based Systems, 2006, 19, 430-437.	7.1	104
22	Making decisions: using Bayesian nets and MCDA. Knowledge-Based Systems, 2001, 14, 307-325.	7.1	99
23	pi-football: A Bayesian network model for forecasting Association Football match outcomes. Knowledge-Based Systems, 2012, 36, 322-339.	7.1	94
24	Risk Assessment and Decision Analysis with Bayesian Networks. , 0, , .		92
25	A Bayesian network framework for project cost, benefit and risk analysis with an agricultural development case study. Expert Systems With Applications, 2016, 60, 141-155.	7.6	90
26	Bayesian networks in healthcare: Distribution by medical condition. Artificial Intelligence in Medicine, 2020, 107, 101912.	6.5	87
27	Predicting football results using Bayesian nets and other machine learning techniques. Knowledge-Based Systems, 2006, 19, 544-553.	7.1	84
28	Deriving structurally based software measures. Journal of Systems and Software, 1990, 12, 177-187.	4.5	75
29	A philosophy for software measurement. Journal of Systems and Software, 1990, 12, 277-281.	4.5	71
30	Integrating expert knowledge with data in Bayesian networks: Preserving data-driven expectations when the expert variables remain unobserved. Expert Systems With Applications, 2016, 56, 197-208.	7.6	69
31	Bayesian network approach to multinomial parameter learning using data and expert judgments. International Journal of Approximate Reasoning, 2014, 55, 1252-1268.	3.3	68
32	Using Bayesian belief networks to predict the reliability of military vehicles. Computing & Control Engineering Journal, 2001, 12, 11-20.	0.0	65
33	Project Scheduling: Improved Approach to Incorporate Uncertainty Using Bayesian Networks. Project Management Journal, 2007, 38, 39-49.	4.3	64
34	Axiomatic approach to Software Metrication through Program Decomposition. Computer Journal, 1986, 29, 330-339.	2.4	58
35	Evaluating software engineering standards. Computer, 1994, 27, 71-79.	1.1	51
36	Modelling dependable systems using hybrid Bayesian networks. Reliability Engineering and System Safety, 2008, 93, 933-939.	8.9	51

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37	Predicting Project Velocity in XP Using a Learning Dynamic Bayesian Network Model. IEEE Transactions on Software Engineering, 2009, 35, 124-137.	5.6	49
38	Not just data: A method for improving prediction with knowledge. Journal of Biomedical Informatics, 2014, 48, 28-37.	4.3	49
39	Metrics and software structure. Information and Software Technology, 1987, 29, 301-320.	4.4	48
40	Using Bayesian networks to predict software defects and reliability. Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability, 2008, 222, 701-712.	0.7	48
41	Bayes and the Law. Annual Review of Statistics and Its Application, 2016, 3, 51-77.	7.0	48
42	Legal idioms: a framework for evidential reasoning. Argument and Computation, 2013, 4, 46-63.	1.1	46
43	Policy: Development goals should enable decision-making. Nature, 2015, 523, 152-154.	27.8	44
44	A Bayesian network approach for cybersecurity risk assessment implementing and extending the FAIR model. Computers and Security, 2020, 89, 101659.	6.0	44
45	Applying Bayesian Belief Networks to System Dependability Assessment. , 1996, , 71-94.		43
46	Software measurement: A conceptual framework. Journal of Systems and Software, 1990, 12, 223-231.	4.5	42
47	Towards smart-data: Improving predictive accuracy in long-term football team performance. Knowledge-Based Systems, 2017, 124, 93-104.	7.1	39
48	Profiting from an inefficient association football gambling market: Prediction, risk and uncertainty using Bayesian networks. Knowledge-Based Systems, 2013, 50, 60-86.	7.1	38
49	Solving the Problem of Inadequate Scoring Rules for Assessing Probabilistic Football Forecast Models. Journal of Quantitative Analysis in Sports, 2012, 8, .	1.0	37
50	Determining the level of ability of football teams by dynamic ratings based on the relative discrepancies in scores between adversaries. Journal of Quantitative Analysis in Sports, 2013, 9, 37-50.	1.0	37
51	An empirical study of Bayesian network parameter learning with monotonic influence constraints. Decision Support Systems, 2016, 87, 69-79.	5.9	37
52	COVID-19 infection and death rates: the need to incorporate causal explanations for the data and avoid bias in testing. Journal of Risk Research, 2020, 23, 862-865.	2.6	37
53	How effective are software engineering methods?. Journal of Systems and Software, 1993, 22, 141-146.	4.5	36
54	Risk assessment and risk management of violent reoffending among prisoners. Expert Systems With Applications, 2015, 42, 7511-7529.	7.6	36

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55	Learning from Behavioural Changes That Fail. Trends in Cognitive Sciences, 2020, 24, 969-980.	7.8	36
56	The Heimdall framework for supporting characterisation of learning health systems. BMJ Health and Care Informatics, 2018, 25, 77-87.	3.0	34
57	A comprehensive scoping review of Bayesian networks in healthcare: Past, present and future. Artificial Intelligence in Medicine, 2021, 117, 102108.	6.5	34
58	Comparing risks of alternative medical diagnosis using Bayesian arguments. Journal of Biomedical Informatics, 2010, 43, 485-495.	4.3	32
59	A strategy for improving safety related software engineering standards. IEEE Transactions on Software Engineering, 1998, 24, 1002-1013.	5.6	28
60	When and where to transfer for Bayesian network parameter learning. Expert Systems With Applications, 2016, 55, 361-373.	7.6	28
61	Improve statistics in court. Nature, 2011, 479, 36-37.	27.8	27
62	When â€˜neutralâ€™ evidence still has probative value (with implications from the Barry George Case). Science and Justice - Journal of the Forensic Science Society, 2014, 54, 274-287.	2.1	27
63	Decision Support Software for Probabilistic Risk Assessment Using Bayesian Networks. IEEE Software, 2014, 31, 21-26.	1.8	26
64	A framework for analysing learning health systems: Are we removing the most impactful barriers?. Learning Health Systems, 2019, 3, e10189.	2.0	26
65	Project Data Incorporating Qualitative Factors for Improved Software Defect Prediction. , 2007, , .		25
66	Medical idioms for clinical Bayesian network development. Journal of Biomedical Informatics, 2020, 108, 103495.	4.3	25
67	How to model mutually exclusive events based on independent causal pathways in Bayesian network models. Knowledge-Based Systems, 2016, 113, 39-50.	7.1	23
68	A generalised mathematical theory of structured programming. Theoretical Computer Science, 1985, 36, 145-171.	0.9	22
69	Whom Do We Trust on Social Policy Interventions?. Basic and Applied Social Psychology, 2018, 40, 249-268.	2.1	22
70	The Zero-Sum Fallacy in Evidence Evaluation. Psychological Science, 2019, 30, 250-260.	3.3	21
71	Profiting from arbitrage and odds biases of the European football gambling market. The Journal of Gambling Business and Economics, 2013, 7, 41-70.	0.2	21
72	Modelling crime linkage with Bayesian networks. Science and Justice - Journal of the Forensic Science Society, 2015, 55, 209-217.	2.1	20

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73	When a software measure is not a measure. Software Engineering Journal, 1992, 7, 357.	0.7	20
74	Viewpoint Article: Conducting and Presenting Empirical Software Engineering. Empirical Software Engineering, 2001, 6, 195-200.	3.9	18
75	Modeling dependable systems using hybrid Bayesian networks. , 2006, , .		18
76	Optimizing the Calculation of Conditional Probability Tables in Hybrid Bayesian Networks Using Binary Factorization. IEEE Transactions on Knowledge and Data Engineering, 2012, 24, 1306-1312.	5.7	18
77	Calculating and understanding the value of any type of match evidence when there are potential testing errors. Artificial Intelligence and Law, 2014, 22, 1-28.	4.0	18
78	Bayesian networks for unbiased assessment of referee bias in Association Football. Psychology of Sport and Exercise, 2014, 15, 538-547.	2.1	18
79	Modelling competing legal arguments using Bayesian model comparison and averaging. Artificial Intelligence and Law, 2019, 27, 403-430.	4.0	18
80	Bayesian network analysis of Covid-19 data reveals higher infection prevalence rates and lower fatality rates than widely reported. Journal of Risk Research, 2020, 23, 866-879.	2.6	18
81	Value of information analysis for interventional and counterfactual Bayesian networks in forensic medical sciences. Artificial Intelligence in Medicine, 2016, 66, 41-52.	6.5	17
82	Things to know about Bayesian Networks: Decisions under Uncertainty, Part 2. Significance, 2018, 15, 19-23.	0.4	17
83	mHealth apps for gestational diabetes mellitus that provide clinical decision support or artificial intelligence: A scoping review. Diabetic Medicine, 2022, 39, e14735.	2.3	17
84	Solving dynamic fault trees using a new Hybrid Bayesian Network inference algorithm. , 2008, , .		16
85	An Extension to the Noisy-OR Function to Resolve the â€˜Explaining Awayâ€™ Deficiency for Practical Bayesian Network Problems. IEEE Transactions on Knowledge and Data Engineering, 2019, 31, 2441-2445.	5.7	16
86	Bayesian networks in healthcare: What is preventing their adoption?. Artificial Intelligence in Medicine, 2021, 116, 102079.	6.5	16
87	Improving risk management for violence in mental health services: a multimethods approach. Programme Grants for Applied Research, 2016, 4, 1-408.	1.0	16
88	Software metrics: theory, tools and validation. Software Engineering Journal, 1990, 5, 65.	0.7	15
89	Validating software measures. Software Testing Verification and Reliability, 1991, 1, 27-42.	2.0	14
90	Using Bayesian networks to guide the assessment of new evidence in an appeal case. Crime Science, 2016, 5, 9.	2.8	14

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91	Reply To: Comments On "towards A Framework Of Software Measurement Validation". IEEE Transactions on Software Engineering, 1997, 23, 189-189.	5.6	13
92	Towards standardisation of evidence-based clinical care process specifications. Health Informatics Journal, 2020, 26, 2512-2537.	2.1	13
93	Resolving the so-called â€œprobabilistic paradoxes in legal reasoningâ€•with Bayesian networks. Science and Justice - Journal of the Forensic Science Society, 2019, 59, 367-379.	2.1	12
94	Assessment of the methodological quality of local clinical practice guidelines on the identification and management of gestational diabetes. BMJ Open, 2019, 9, e027285.	1.9	12
95	Effects of structure on the comprehensibility of formal specifications. IET Software, 1999, 146, 193.	1.0	11
96	Probabilistic modelling for software quality control. Journal of Applied Non-Classical Logics, 2002, 12, 173-188.	0.5	11
97	Software Quality Prediction Using Bayesian Networks. , 2003, , 136-172.		11
98	Implementing software metrics ? the critical success factors. Software Quality Journal, 1994, 3, 195-208.	2.2	10
99	Dependencies in evidential reports: The case for informational advantages. Cognition, 2020, 204, 104343.	2.2	10
100	Current review and next steps for artificial intelligence in multiple sclerosis risk research. Computers in Biology and Medicine, 2021, 132, 104337.	7.0	10
101	A note on the use of Z to specify flowgraph decomposition. Information and Software Technology, 1988, 30, 432-437.	4.4	9
102	Point counterpoint: do standards improve quality?. IEEE Software, 1996, 13, 22-24.	1.8	9
103	Causal analysis for attributing responsibility in legal cases. , 2015, , .		9
104	LAGOS: learning health systems and how they can integrate with patient care. BMJ Health and Care Informatics, 2019, 26, e100037.	3.0	9
105	Analyzing the Simonshaven Case Using Bayesian Networks. Topics in Cognitive Science, 2020, 12, 1092-1114.	1.9	9
106	MATROID REPRESENTATIONSâ€”AN ALGEBRAIC TREATMENT. Quarterly Journal of Mathematics, 1984, 35, 263-280.	0.8	8
107	Risk aggregation in the presence of discrete causally connected random variables. Annals of Actuarial Science, 2014, 8, 298-319.	1.5	8
108	Expected Value of Partial Perfect Information in Hybrid Models Using Dynamic Discretization. IEEE Access, 2018, 6, 7802-7817.	4.2	8

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109	Software Project and Quality Modelling Using Bayesian Networks. Advances in Computational Intelligence and Robotics Book Series, 2010, , 1-25.	0.4	8
110	A rigorous approach to structural analysis and metrication of software. Software & Microsystems, 1985, 4, 2.	0.1	7
111	An improved method for solving Hybrid Influence Diagrams. International Journal of Approximate Reasoning, 2018, 95, 93-112.	3.3	7
112	Learning health systems: the research community awareness challenge. BMJ Health and Care Informatics, 2018, 25, 38-40.	3.0	7
113	Clinical Caremap Development: How Can Caremaps Standardise Care When They Are Not Standardised?. , 2019, , .		7
114	Improved High Dimensional Discrete Bayesian Network Inference using Triplet Region Construction. Journal of Artificial Intelligence Research, 0, 69, 231-295.	7.0	7
115	Evaluating the effectiveness of Z: The claims made about CICS and where we go from here. Journal of Systems and Software, 1996, 35, 209-216.	4.5	6
116	Probabilistic Modelling for Software Quality Control. Lecture Notes in Computer Science, 2001, , 444-453.	1.3	6
117	Modelling Project Trade-Off Using Bayesian Networks. , 2009, , .		6
118	Assessing evidence and testing appropriate hypotheses. Science and Justice - Journal of the Forensic Science Society, 2014, 54, 502-504.	2.1	6
119	Response to â€œOn the use of the likelihood ratio for forensic evaluation: Response to Fenton et al.â€• Science and Justice - Journal of the Forensic Science Society, 2014, 54, 319-320.	2.1	6
120	The future of the London Buy-To-Let property market: Simulation with temporal Bayesian Networks. PLoS ONE, 2017, 12, e0179297.	2.5	6
121	Addressing the Practical Limitations of Noisy-OR Using Conditional Inter-Causal Anti-Correlation with Ranked Nodes. IEEE Transactions on Knowledge and Data Engineering, 2019, 31, 813-817.	5.7	6
122	Bayesian Hypothesis Testing and Hierarchical Modeling of Ivermectin Effectiveness. American Journal of Therapeutics, 2021, 28, e576-e579.	0.9	6
123	Realistic Synthetic Data Generation: The ATEN Framework. Communications in Computer and Information Science, 2019, , 497-523.	0.5	6
124	Real-time Online Probabilistic Medical Computation using Bayesian Networks. , 2020, , .		6
125	Propensities and Second Order Uncertainty: A Modified Taxi Cab Problem. Frontiers in Psychology, 2020, 11, 503233.	2.1	5
126	The opportunity prior. , 2017, , .		4

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127	Causality, the critical but often ignored component guiding us through a world of uncertainties in risk assessment. Journal of Risk Research, 2021, 24, 617-621.	2.6	4
128	Learning from Data in Bayesian Networks. , 2018, , 553-572.		4
129	A causal Bayesian network approach for consumer product safety and risk assessment. Journal of Safety Research, 2022, 80, 198-214.	3.6	4
130	Software quality programmes: a snapshot of theory versus reality. Software Quality Journal, 1996, 5, 235-242.	2.2	3
131	Automated population of causal models for improved software risk assessment. , 2005, , .		3
132	Improved Bayesian Networks for Software Project Risk Assessment Using Dynamic Discretisation. , 2006, , 139-148.		3
133	Moving From Philosophy to Practice in Software Measurement. Workshops in Computing, 1992, , 38-59.	0.4	3
134	An Extended MPL-C Model for Bayesian Network Parameter Learning with Exterior Constraints. Lecture Notes in Computer Science, 2014, , 581-596.	1.3	3
135	Comment: Expert Elicitation for Reliable System Design. Statistical Science, 2006, 21, .	2.8	3
136	Lawmaps: enabling legal AI development through visualisation of the implicit structure of legislation and lawyerly process. Artificial Intelligence and Law, 2023, 31, 169-194.	4.0	3
137	CHARACTERIZATION OF ATOMIC MATROIDS. Quarterly Journal of Mathematics, 1983, 34, 49-60.	0.8	2
138	The Role of Measurement in Software Safety Assessment. , 1997, , 217-248.		2
139	Explaining Away, Augmentation, and the Assumption of Independence. Frontiers in Psychology, 2020, 11, 502751.	2.1	2
140	Software quality: Theory and management. Alan C. Gillies. Published by Chapman & Hall, London, U.K., 1992. ISBN 0 412 4513 0, 250 pages. Price: Â£19.95, Soft Cover. Software Testing Verification and Reliability, 1992, 2, 155-155.	2.0	1
141	Lawnmowers versus terrorists. Significance, 2018, 15, 12-13.	0.4	1
142	The opportunity prior: a proof-based prior for criminal cases. Law, Probability and Risk, 0, , .	2.4	1
143	A Study of Using Bethe/Kikuchi Approximation for Learning Directed Graphic Models. IEEE Access, 2021, 9, 125428-125438.	4.2	1
144	Software Measurement: Why a Formal Approach?. Workshops in Computing, 1992, , 3-27.	0.4	1

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145	How to Improve Safety Critical Systems Standards. , 1997, , 96-110.		1
146	Matroid Representation of Projective Spaces. European Journal of Combinatorics, 1984, 5, 123-126.	0.8	0
147	Program structures: Some new characterisations. Journal of Computer and System Sciences, 1991, 43, 467-483.	1.2	0
148	Software Metrics: a Practitioner's Guide to Improved Product Development. Software Engineering Journal, 1994, 9, 40.	0.7	0
149	Extending Support Vector Machines to Discover Temporal Periodic Patterns. , 2010, , .		0
150	Defining the Structure of Bayesian Networks. , 2018, , 201-245.		0
151	The Role of Bayes in Forensic and Legal Evidence Presentation. , 2018, , 493-521.		0
152	Standardising Clinical Caremaps: Model, Method and Graphical Notation for Caremap Specification. Communications in Computer and Information Science, 2020, , 429-452.	0.5	0
153	Managing Knowledge in Computational Models for Global Food, Nutrition and Health Technologies. , 2020, , .		0
154	Data Visualisation in Midwifery: The Challenge of Seeing what Datasets Hide. Studies in Health Technology and Informatics, 2020, 270, 1239-1240.	0.3	0