

Catherine M. Burns

List of Publications by Year in descending order

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141
papers

2,626
citations

377584

21
h-index

340414

39
g-index

163
all docs

163
docs citations

163
times ranked

2192
citing authors

#	ARTICLE	IF	CITATIONS
1	Ecological Interface Design. , 0, , .		290
2	Behavior Change Techniques Present in Wearable Activity Trackers: A Critical Analysis. JMIR MHealth and UHealth, 2016, 4, e40.	1.8	254
3	There Is More to Monitoring a Nuclear Power Plant than Meets the Eye. Human Factors, 2000, 42, 36-55.	2.1	178
4	Evaluation of Ecological Interface Design for Nuclear Process Control: Situation Awareness Effects. Human Factors, 2008, 50, 663-679.	2.1	120
5	Putting It All Together: Improving Display Integration in Ecological Displays. Human Factors, 2000, 42, 226-241.	2.1	87
6	Modeling a medical environment: an ontology for integrated medical informatics design. International Journal of Medical Informatics, 2001, 62, 79-99.	1.6	85
7	Autonomous Driving in the Real World. , 2016, , .		85
8	Trust in autonomous vehicles: The case of Tesla Autopilot and Summon. , 2017, , .		82
9	Effect of a Mobile Phone Intervention on Quitting Smoking in a Young Adult Population of Smokers: Randomized Controlled Trial. JMIR MHealth and UHealth, 2018, 6, e10893.	1.8	57
10	A participant-observer study of ergonomics in engineering design.. Applied Ergonomics, 2000, 31, 73-82.	1.7	53
11	To Cross or Not to Cross. , 2018, , .		53
12	Lessons From a Comparison of Work Domain Models: Representational Choices and Their Implications. Human Factors, 2004, 46, 711-727.	2.1	50
13	Effect of a Mobile Phone Intervention on Quitting Smoking in a Young Adult Population of Smokers: Randomized Controlled Trial Study Protocol. JMIR Research Protocols, 2015, 4, e10.	0.5	50
14	Using team cognitive work analysis to reveal healthcare team interactions in a birthing unit. Ergonomics, 2014, 57, 973-986.	1.1	46
15	Navigation strategies with ecological displays. International Journal of Human Computer Studies, 2000, 52, 111-129.	3.7	44
16	Boundary, Purpose, and Values in Work-Domain Models: Models of Naval Command and Control. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2005, 35, 603-616.	3.4	43
17	Team Cognitive Work Analysis. Journal of Cognitive Engineering and Decision Making, 2013, 7, 123-140.	0.9	42
18	Ecological Interface Design in the Nuclear Domain: An Empirical Evaluation of Ecological Displays for the Secondary Subsystems of a Boiling Water Reactor Plant Simulator. IEEE Transactions on Nuclear Science, 2008, 55, 3597-3610.	1.2	36

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19	Sustained Attention in Auditory and Visual Monitoring Tasks. <i>Human Factors</i> , 2015, 57, 1403-1416.	2.1	35
20	Towards viable, useful and usable human factors design guidance. <i>Applied Ergonomics</i> , 1997, 28, 311-322.	1.7	33
21	Ecological interface design: a new approach for visualizing network management. <i>Computer Networks</i> , 2003, 43, 369-388.	3.2	33
22	Clinician-Driven Design of VitalPAD: An Intelligent Monitoring and Communication Device to Improve Patient Safety in the Intensive Care Unit. <i>IEEE Journal of Translational Engineering in Health and Medicine</i> , 2018, 6, 1-14.	2.2	31
23	Ecological Interface Design in the Nuclear Domain: An Application to the Secondary Subsystems of a Boiling Water Reactor Plant Simulator. <i>IEEE Transactions on Nuclear Science</i> , 2008, 55, 3579-3596.	1.2	28
24	Towards proactive monitoring in the petrochemical industry. <i>Safety Science</i> , 2006, 44, 27-36.	2.6	24
25	Model-Based Approaches for Analyzing Cognitive Work: A Comparison of Abstraction Hierarchy, Multilevel Flow Modeling, and Decision Ladder Modeling. <i>International Journal of Cognitive Ergonomics</i> , 2001, 5, 357-366.	0.3	23
26	The effects of domain knowledge on trust in explainable AI and task performance: A case of peer-to-peer lending. <i>International Journal of Human Computer Studies</i> , 2022, 162, 102792.	3.7	23
27	Work Domain Analysis for Intentional Systems. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 1999, 43, 333-337.	0.2	22
28	A personal assistant for dementia to stay at home safe at reduced cost. <i>Gerontechnology</i> , 2013, 11, .	0.0	21
29	“My pharmacist”: Creating and maintaining relationship between physicians and pharmacists in primary care settings. <i>Research in Social and Administrative Pharmacy</i> , 2020, 16, 102-107.	1.5	20
30	Advances in the Application of Cognitive Work Analysis. , 2008, , 1-14.		19
31	Trust tokens in team development. <i>Team Performance Management</i> , 2014, 20, 39-64.	0.6	18
32	Modeling Automation With Cognitive Work Analysis to Support Human-Automation Coordination. <i>Journal of Cognitive Engineering and Decision Making</i> , 2017, 11, 299-322.	0.9	18
33	Physician and Pharmacist Medication Decision-Making in the Time of Electronic Health Records: Mixed-Methods Study. <i>JMIR Human Factors</i> , 2018, 5, e24.	1.0	18
34	Evidence for Direct Perception From Cognition in the Wild. <i>Ecological Psychology</i> , 1996, 8, 269-280.	0.7	17
35	A Work Domain Analysis of Patient Monitoring in the Operating Room. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 1998, 42, 1038-1042.	0.2	17
36	Scenario Mapping with Work Domain Analysis. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2001, 45, 424-428.	0.2	16

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37	Ecological Interface Design in Aviation Domains: Work Domain Analysis of Automated Collision Detection and Avoidance. Proceedings of the Human Factors and Ergonomics Society, 2003, 47, 119-123.	0.2	16
38	Designing for Social Engagement in Online Social Networks Using Communities-of-Practice Theory and Cognitive Work Analysis. Journal of Cognitive Engineering and Decision Making, 2012, 6, 194-213.	0.9	15
39	Designing for patient risk assessment in primary health care: a case study for ergonomic work analysis. Cognition, Technology and Work, 2016, 18, 215-231.	1.7	15
40	A Cognitive Work Analysis of Cardiac Care Nurses Performing Teletriage. , 2008, , 149-174.		15
41	Improving Social Connection Through a Communities-of-Practice-Inspired Cognitive Work Analysis Approach. Human Factors, 2014, 56, 361-383.	2.1	14
42	Using a Collaborative Research Approach to Develop an Interdisciplinary Research Agenda for the Study of Mobile Health Interventions for Older Adults. JMIR MHealth and UHealth, 2015, 3, e11.	1.8	14
43	Judgements about the value and cost of human factors information in design. Information Processing and Management, 1996, 32, 259-271.	5.4	13
44	Strategies for Bridging the Gap between Analysis and Design for Ecological Interface Design. Proceedings of the Human Factors and Ergonomics Society, 2004, 48, 479-483.	0.2	12
45	Work Domain Analysis for Establishing Collaborative Work Requirements. Proceedings of the Human Factors and Ergonomics Society, 2009, 53, 314-318.	0.2	12
46	Using Cognitive Work Analysis and a Persuasive Design Approach to Create Effective Blood Pressure Management Systems. Proceedings of the International Symposium of Human Factors and Ergonomics in Healthcare, 2014, 3, 36-43.	0.2	12
47	Modeling Patient Treatment With Medical Records: An Abstraction Hierarchy to Understand User Competencies and Needs. JMIR Human Factors, 2017, 4, e16.	1.0	12
48	A framework for describing and understanding interdisciplinary interactions in design. , 1995, , .		11
49	Understanding "interpersonal trust" from a human factors perspective: insights from situation awareness and the lens model. Theoretical Issues in Ergonomics Science, 2014, 15, 88-110.	1.0	11
50	Rasmussen and the boundaries of empirical evaluation. Applied Ergonomics, 2017, 59, 649-656.	1.7	11
51	Using Human Factors Methods to Evaluate the Labelling of Injectable Drugs. Healthcare Quarterly, 2008, 11, 122-128.	0.7	10
52	Mobile Patient Monitoring for the Pediatric Intensive Care Unit Work Domain Analysis and Rapid Prototyping Results. , 2013, , .		10
53	Effects of Urban Violence on Primary Healthcare: The Challenges of Community Health Workers in Performing House Calls in Dangerous Areas. Journal of Community Health, 2019, 44, 569-576.	1.9	10
54	Muddling Through Wicked Design Problems. Ergonomics in Design, 1997, 5, 25-30.	0.4	9

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55	A Work Domain Analysis for Network Management. Proceedings of the Human Factors and Ergonomics Society, 2000, 44, 469-472.	0.2	9
56	Supporting Situation Awareness Through Ecological Interface Design. Proceedings of the Human Factors and Ergonomics Society, 2007, 51, 205-209.	0.2	9
57	Visual sensitivities of dynamic graphical displays. International Journal of Human Computer Studies, 2007, 65, 206-222.	3.7	9
58	Reinventing the Wheel: Control Task Analysis for Collaboration. Proceedings of the Human Factors and Ergonomics Society, 2010, 54, 274-278.	0.2	9
59	Better Handbooks, Better Design. Ergonomics in Design, 1998, 6, 21-27.	0.4	8
60	Using ecological interface design to develop an auditory interface for visually impaired travellers. , 2006, , .		8
61	A Work Domain Analysis for Diabetes Management. Proceedings of the Human Factors and Ergonomics Society, 2003, 47, 1516-1520.	0.2	7
62	From Analysis to Design: Wda for the Petrochemical Industry. Proceedings of the Human Factors and Ergonomics Society, 2003, 47, 258-262.	0.2	7
63	Visualization of Control Structure in Human-Automation System Based on Cognitive Work Analysis. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 423-430.	0.4	7
64	Ecological Interface Design for Knee and Hip Automatic Physiotherapy Assistant and Rehabilitation System. Proceedings of the International Symposium of Human Factors and Ergonomics in Healthcare, 2014, 3, 1-7.	0.2	7
65	Understanding Automated Financial Trading Using Work Domain Analysis. Proceedings of the Human Factors and Ergonomics Society, 2015, 59, 165-169.	0.2	7
66	Real-time flight simulator construction with a network for training pilots using mechatronics and cyber-physical system approaches. , 2017, , .		7
67	Exploring the Experiences of Family Caregivers of Children With Special Health Care Needs to Inform the Design of Digital Health Systems: Formative Qualitative Study. JMIR Formative Research, 2022, 6, e28895.	0.7	7
68	Mobility interfaces for the visually impaired. , 2007, , .		6
69	An Exploratory Case Study to Understand Primary Care Users and Their Data Quality Tradeoffs. Journal of Data and Information Quality, 2017, 8, 1-24.	1.5	6
70	Automation and the Human Factors Race to Catch Up. Journal of Cognitive Engineering and Decision Making, 2018, 12, 83-85.	0.9	6
71	Mental Models and Ecological Interface Design: An Experimental Investigation. Proceedings of the Human Factors and Ergonomics Society, 2002, 46, 270-274.	0.2	5
72	Control Task Analysis in Action: Collaboration in the Operating Room. Proceedings of the Human Factors and Ergonomics Society, 2011, 55, 272-276.	0.2	5

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73	What's that sound? Distance determination and aperture passage from ultrasound echoes. Disability and Rehabilitation: Assistive Technology, 2011, 6, 500-510.	1.3	5
74	Mapping Ecologically to Modalities. Proceedings of the Human Factors and Ergonomics Society, 2011, 55, 335-339.	0.2	5
75	Engaging nanotechnology: ethnography of lab-on-a-chip technology in small-scale fluidics research. Cognition, Technology and Work, 2016, 18, 33-52.	1.7	5
76	Supporting decision-making in patient risk assessment using a hierarchical fuzzy model. Cognition, Technology and Work, 2018, 20, 477-488.	1.7	5
77	Using cognitive work analysis to compare complex system domains. Theoretical Issues in Ergonomics Science, 2018, 19, 553-577.	1.0	5
78	Exploring the role of teams and technology in patients' medication decision making. Journal of the American Pharmacists Association: JAPhA, 2019, 59, S35-S43.e1.	0.7	5
79	Work Domain Analysis for Designing a Radiotherapy System Control Interface. , 0, , .		5
80	Influencing Social Problems with Interface Design. Ergonomics in Design, 2002, 10, 12-16.	0.4	4
81	Enhancing Operator Task Performance during Monitoring for Unanticipated Events through Ecological Interface Design. Proceedings of the Human Factors and Ergonomics Society, 2008, 52, 448-452.	0.2	4
82	Current State of Human Factors in Systems Design. Proceedings of the Human Factors and Ergonomics Society, 2011, 55, 267-271.	0.2	4
83	Understanding safe performance in rapidly evolving systems: a risk management analysis of the 2010 US financial market Flash Crash with Rasmussen's risk management framework. Theoretical Issues in Ergonomics Science, 2017, 18, 608-630.	1.0	4
84	Information Technology Systems at the sharp end of medication therapy management. Proceedings of the Human Factors and Ergonomics Society, 2019, 63, 698-702.	0.2	4
85	Addressing Human Factor Challenges in Paediatric Home Care: Development and Evaluation of a Mobile Home Care Communication App. Proceedings of the International Symposium of Human Factors and Ergonomics in Healthcare, 2020, 9, 37-39.	0.2	4
86	Prescribers' perspectives on including reason for use information on prescriptions and medication labels: a qualitative thematic analysis. BMC Health Services Research, 2021, 21, 89.	0.9	4
87	Work Domain Analysis for Establishing Collaborative Work Requirements. Proceedings of the Human Factors and Ergonomics Society, 2009, 53, 314-318.	0.2	4
88	Including the Reason for Use on Prescriptions Sent to Pharmacists: Scoping Review. JMIR Human Factors, 2021, 8, e22325.	1.0	4
89	Using personal digital assistants and patient care algorithms to improve access to cardiac care best practices. Studies in Health Technology and Informatics, 2007, 129, 117-21.	0.2	4
90	Reason for Use: An Opportunity to Improve Patient Safety. Studies in Health Technology and Informatics, 2019, 257, 47-52.	0.2	4

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91	Caregiver Expectations of Interfacing With Voice Assistants to Support Complex Home Care: Mixed Methods Study. JMIR Human Factors, 2022, 9, e37688.	1.0	4
92	Errors in Searching for Abstraction Hierarchy Information. Proceedings of the Human Factors and Ergonomics Society, 2000, 44, 270-273.	0.2	3
93	Mental Workload and the Display of Abstraction Hierarchy Information. Proceedings of the Human Factors and Ergonomics Society, 2002, 46, 235-239.	0.2	3
94	Collaboration with Ecological Interface Design. Proceedings of the Human Factors and Ergonomics Society, 2004, 48, 543-546.	0.2	3
95	Effects of Visualization Tools on Cardiac Telephone Consultation Processes. Proceedings of the Human Factors and Ergonomics Society, 2006, 50, 1044-1048.	0.2	3
96	Challenges with applying FMEA to the process for reading labels on injectable drug containers. Proceedings of the Human Factors and Ergonomics Society, 2007, 51, 735-739.	0.2	3
97	Effects of Vibrotactile Stimulation for Sustaining Performance in a Vigilance Task: A Pilot Study. Proceedings of the Human Factors and Ergonomics Society, 2011, 55, 1160-1164.	0.2	3
98	Ecological Interfaces. , 2013, , .		3
99	User Perception of Data and Medical Record Personalities. Proceedings of the International Symposium of Human Factors and Ergonomics in Healthcare, 2014, 3, 15-22.	0.2	3
100	Using Comparative Cognitive Work Analysis to Identify Design Priorities in Complex Socio-Technical Systems. Proceedings of the International Symposium of Human Factors and Ergonomics in Healthcare, 2015, 4, 118-123.	0.2	3
101	Representing Stages and Levels of Automation on a Decision Ladder. Proceedings of the Human Factors and Ergonomics Society, 2016, 60, 328-332.	0.2	3
102	Ecological interface design for financial trading: Trading performance and risk preference effects. , 2017, , .		3
103	Design and evaluation of a safety-centered user interface for radiation therapy. Practical Radiation Oncology, 2018, 8, e346-e354.	1.1	3
104	Contributions from cognitive engineering to requirements specifications for complex sociotechnical systems: A case study in the context of healthcare in Brazil. Human Factors and Ergonomics in Manufacturing, 2019, 29, 63-77.	1.4	3
105	Multisensory Cues for Encoding Urgency of System Hazards: Effect of Operator Experience on Perceived Urgency. International Journal of Aerospace Psychology, 2019, 29, 98-114.	1.1	3
106	Cognitive Engineering for Better Health Care Systems. , 2014, , 1-6.		3
107	Computer Algebra Systems and Their Effect on Cognitive Load. , 0, , .		3
108	Protocol for Usability Testing and Validation of the ISO Draft International Standard 19223 for Lung Ventilators. JMIR Research Protocols, 2017, 6, e166.	0.5	3

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109	Applications of ecological interface design in supporting the nursing process. <i>Journal of Healthcare Information Management: JHIM</i> , 2004, 18, 74-82.	0.1	3
110	Situation awareness and risk management understanding the notification issues. <i>Studies in Health Technology and Informatics</i> , 2011, 164, 372-6.	0.2	3
111	Scanning Patterns with Ecological Displays when Abstraction Levels are Separated. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 1999, 43, 163-167.	0.2	2
112	Operator support for ageing nuclear critical infrastructure systems: integrating ecological interface design with prospect theory. <i>International Journal of Critical Infrastructures</i> , 2005, 1, 299.	0.1	2
113	Non-situated vibrotactile force feedback and laparoscopy performance. , 2006, , .		2
114	Sonification Discriminability and Perceived Urgency. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2012, 56, 1298-1302.	0.2	2
115	Designing for Interpersonal Trust – The Power of Trust Tokens. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2013, 57, 339-343.	0.2	2
116	Multimodal Displays for Enhancing Performance in a Supervisory Monitoring Task. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2013, 57, 1164-1168.	0.2	2
117	Prioritization. <i>Journal of Cognitive Engineering and Decision Making</i> , 2016, 10, 105-108.	0.9	2
118	Improved Monitoring Performance of Financial Trading Algorithms Using a Graphical Display. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2018, 62, 187-191.	0.2	2
119	How do I keep myself safe? Patient perspectives on including reason for use information on prescriptions and medication labels: a qualitative thematic analysis. <i>Journal of Pharmaceutical Policy and Practice</i> , 2020, 13, 63.	1.1	2
120	Understanding the Context for Health Behavior Change with Cognitive Work Analysis and Persuasive Design. , 2018, , .		2
121	Mental Models and the Abstraction Hierarchy: Assessing Ecological Compatibility. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2001, 45, 297-301.	0.2	1
122	Perceptions of Temporal Synchrony in Multimodal Displays. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2011, 55, 1165-1169.	0.2	1
123	Pathway to Innovation. <i>Industrial Biotechnology</i> , 2013, 9, 258-259.	0.5	1
124	Perceived Urgency of Tactile Warnings. , 2013, , .		1
125	Cognitive Engineering Across Domains. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2013, 57, 139-143.	0.2	1
126	Focused Learning. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2013, 57, 472-476.	0.2	1

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127	Can Message-Tailoring Based on Regulatory Fit Theory Improve the Efficacy of Persuasive Physical Activity Systems?. Information (Switzerland), 2019, 10, 347.	1.7	1
128	Designing for Risk Assessment Systems for Patient Triage in Primary Health Care: A Literature Review. JMIR Human Factors, 2016, 3, e21.	1.0	1
129	Understanding, Supporting, and Redesigning Cognitive Work. Communications in Computer and Information Science, 2019, , 3-12.	0.4	1
130	Transforming primary care for older Canadians living with frailty: mixed methods study protocol for a complex primary care intervention. BMJ Open, 2021, 11, e042911.	0.8	1
131	The Burden of Communication: Effects of Automation Support and Automation Transparency on Team Performance. , 2020, , .		1
132	Where did that sound come from? Comparing the ability to localise using audification and audition. Disability and Rehabilitation: Assistive Technology, 2012, 7, 130-138.	1.3	0
133	Music as an Auditory Display. Proceedings of the Human Factors and Ergonomics Society, 2013, 57, 1149-1153.	0.2	0
134	Bridging the Gap between Cognitive Systems Engineering Analysis, Design and Practice. Proceedings of the Human Factors and Ergonomics Society, 2013, 57, 334-338.	0.2	0
135	Guidelines and Caveats for Manipulating Expectancies in Experiments Involving Human Participants. Proceedings of the Human Factors and Ergonomics Society, 2015, 59, 1778-1782.	0.2	0
136	Increasing social connection through a community-of-practice-inspired design. , 0, , 185-204.		0
137	Does Predictability Play a Role in Task Management? An Experimental Study With a Financial Trading Simulation. IEEE Transactions on Human-Machine Systems, 2018, 48, 702-711.	2.5	0
138	Health Behavior Nudging Through Health Information Exposure and Information Search. Proceedings of the International Symposium of Human Factors and Ergonomics in Healthcare, 2019, 8, 126-126.	0.2	0
139	Team Cognitive Work Analysis as an Approach for Understanding Teamwork in Health Care. , 2014, , 27-42.		0
140	Cognitive Work Analysis: Lens on Work. , 2017, , 197-206.		0
141	Applying Persuasive Design Techniques to Influence Data-Entry Behaviors in Primary Care: Repeated Measures Evaluation Using Statistical Process Control. JMIR Human Factors, 2018, 5, e28.	1.0	0