Eric N Wiebe

List of Publications by Year
in descending order

106 papers	3,562 citations	331259 21 h-index	182168 51 g-index
112 all docs	112 docs citations	112 times ranked	2844 citing authors

#	Article	IF	Citations
1	â€œI remember how to do itâ€: exploring upper elementary studentsâ€™ collaborative regulation while pair programming using epistemic network analysis. Computer Science Education, 2023, 33, 429-457.	2.7	1
2	Changes and Sources of Changes of Middle School Teachersâ€™ Self-efficacy for Teaching Science in A Computationally Rich Environment: A Mixed-Methods Study. Journal of Science Teacher Education, 2023, 34, 132-156.	1.4	1
3	The Role of Teachersâ€™ Self-efficacy Beliefs and Habits in Differentiating Types of Kâ€“12 Science Teachers. Research in Science Education, 2023, 53, 337-355.	1.4	2
4	Two-Computer Pair Programming: Exploring a Feedback Intervention to improve Collaborative Talk in Elementary Students. Computer Science Education, 2022, 32, 3-29.	2.7	10
5	Building a computational model of food webs: Impacts on middle school students' computational and systems thinking skills. Journal of Research in Science Teaching, 2022, 59, 585-618.	2.0	16
6	An alternative to STEBI-A: validation of the T-STEM science scale. International Journal of STEM Education, 2022, 9, .	2.7	8
7	Toward More Generalizable CS and CT Instruments. , 2022, , .		3
8	Modeling Secondary Studentsâ€™ Genetics Learning in a Game-Based Environment: Integrating the Expectancy-Value Theory of Achievement Motivation and Flow Theory. Journal of Science Education and Technology, 2021, 30, 511-528.	2.4	10
9	The effects of prior experience and gender on middle school students' computer science learning and monitoring accuracy in the Use-Modify-Create progression. Learning and Individual Differences, 2021, 86, 101983.	1.5	3
10	Measuring in-service teacher self-efficacy for teaching computational thinking: development and validation of the T-STEM CT. Education and Information Technologies, 2021, 26, 4663-4689.	3.5	14
11	The Code-Centric Nature of Computational Thinking Education: A Review of Trends and Issues in Computational Thinking Education Research. SAGE Open, 2021, 11, 215824402110164.	0.8	24
12	Co-teaching with an immersive digital game: supporting teacher-game instructional partnerships. Educational Technology Research and Development, 2021, 69, 1453-1475.	2.0	4
13	Supporting Students' Computer Science Learning with a Game-based Learning Environment that Integrates a Use-Modify-Create Scaffolding Framework. , 2021, , .		0
14	Progression Trajectory-Based Student Modeling for Novice Block-Based Programming. , 2021, , .		5
15	The Relationship of CS Attitudes, Perceptions of Collaboration, and Pair Programming Strategies on Upper Elementary Students' CS Learning. , 2021, , .		3
16	Prompting collaborative and exploratory discourse: An epistemic network analysis study. International Journal of Computer-Supported Collaborative Learning, 2021, 16, 339.	1.9	3
17	Interaction effects of race and gender in elementary CS attitudes: A validation and cross-sectional study. International Journal of Child-Computer Interaction, 2021, 29, 100293.	2.5	12
18	The Foundations of Collaborative Programming by Elementary-Aged Children. Educational Communications and Technology: Issues and Innovations, 2021, , 53-72.	0.2	0

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19	DeepStealth: Game-Based Learning Stealth Assessment With Deep Neural Networks. IEEE Transactions on Learning Technologies, 2020, 13, 312-325.	2.2	40
20	Exploring Force and Motion Concepts in Middle Grades Using Computational Modeling: a Classroom Intervention Study. Journal of Science Education and Technology, 2020, 29, 65-82.	2.4	31
21	Promoting Computer Science Learning with Block-Based Programming and Narrative-Centered Gameplay. , 2020, , .		10
22	Development and validation of the Computer Science Attitudes Scale for middle school students (MG-CS attitudes). Computers in Human Behavior Reports, 2020, 2, 100018.	2.3	12
23	Exploring Middle School Students' Reflections on the Infusion of CS into Science Classrooms. , 2020, , .		6
24	A Comparison of Two Pair Programming Configurations for Upper Elementary Students. , 2020, , .		15
25	The Relationship of Gender, Experiential, and Psychological Factors to Achievement in Computer Science. , 2020, , .		17
26	Elementary Studentsâ€™ Understanding of CS Terms. ACM Transactions on Computing Education, 2020, 20, 1-19.	2.9	7
27	Development and Validation of the Middle Grades Computer Science Concept Inventory (MG-CSCI) Assessment. Eurasia Journal of Mathematics, Science and Technology Education, 2020, 16, .	0.7	5
28	Generating Game Levels to Develop Computer Science Competencies in Game-Based Learning Environments. Lecture Notes in Computer Science, 2020, , 240-245.	1.0	5
29	A block-based modeling curriculum for teaching middle grade science students about Covid-19. , 2020, , .		0
30	Use, Modify, Create. , 2019, , .		46
31	CEO. , 2019, , .		5
32	From Doodles to Designs. , 2019, , .		4
33	From 'Use' to 'Choose'. , 2019, , .		5
34	Development of a Lean Computational Thinking Abilities Assessment for Middle Grades Students. , 2019, , .		32
35	Position: IntelliBlox: A Toolkit for Integrating Block-Based Programming into Game-Based Learning Environments. , 2019, , .		7
36	Generating Educational Game Levels with Multistep Deep Convolutional Generative Adversarial Networks. , 2019, , .		19

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37	The Interface Design of a Collaborative Computer Science Learning Environment for Elementary Aged Students. Proceedings of the Human Factors and Ergonomics Society, 2019, 63, 493-497.	0.2	5
38	A Multimodal Assessment Framework for Integrating Student Writing and Drawing in Elementary Science Learning. IEEE Transactions on Learning Technologies, 2019, 12, 3-15.	2.2	18
39	Predicting Dialogue Breakdown in Conversational Pedagogical Agents with Multimodal LSTMs. Lecture Notes in Computer Science, 2019, , 195-200.	1.0	4
40	Introducing the Computer Science Concept of Variables in Middle School Science Classrooms. , 2018, , .		8
41	The Role of Content Knowledge in Ill-Structured Problem Solving for High School Physics Students. Research in Science Education, 2018, 48, 165-179.	1.4	12
42	User Affect and No-Match Dialogue Scenarios. , 2018, , .		2
43	Infusing computational thinking into middle grade science classrooms. , 2018, , .		21
44	The Relationship of STEM Attitudes and Career Interest. Eurasia Journal of Mathematics, Science and Technology Education, 2018, 14, .	0.7	52
45	Do You Think You Can? The Influence of Student Self-Efficacy on the Effectiveness of Tutorial Dialogue for Computer Science. International Journal of Artificial Intelligence in Education, 2017, 27, 130-153.	3.9	18
46	Inducing Stealth Assessors from Game Interaction Data. Lecture Notes in Computer Science, 2017, , 212-223.	1.0	9
47	â€œThanks Alisha, Keep in Touchâ€ Gender Effects and Engagement with Virtual Learning Companions. Lecture Notes in Computer Science, 2017, , 299-310.	1.0	10
48	Gender Differences in Facial Expressions of Affect During Learning. , 2016, , .		10
49	Empowering All Students. , 2016, , .		44
50	Utility and usability as factors influencing teacher decisions about software integration. Educational Technology Research and Development, 2016, 64, 1227-1249.	2.0	18
51	Predicting Learning from Student Affective Response to Tutor Questions. Lecture Notes in Computer Science, 2016, , 154-164.	1.0	41
52	Drawing and Writing in Digital Science Notebooks: Sources of Formative Assessment Data. Journal of Science Education and Technology, 2016, 25, 474-488.	2.4	15
53	Collaboration and Gender Equity in Game-Based Learning for Middle School Computer Science. Computing in Science and Engineering, 2016, 18, 18-28.	1.2	16
54	eLearning. , 2016, , 53-79.		4

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55	Investigating Real-time Predictors of Engagement. International Journal of Gaming and Computer-Mediated Simulations, 2015, 7, 20-37.	0.9	13
56	Multiple Perspectives on Elementary Teachersâ€™ Science Identities: A case study. International Journal of Science Education, 2015, 37, 391-410.	1.0	10
57	A Practical Guide to Developing and Validating Computer Science Knowledge Assessments with Application to Middle School. , 2015, , .		60
58	MOOCs From the Viewpoint of the Learner. Educational Researcher, 2015, 44, 252-254.	3.3	10
59	The Development and Validation of a Measure of Student Attitudes Toward Science, Technology, Engineering, and Math (S-STEM). Journal of Psychoeducational Assessment, 2015, 33, 622-639.	0.9	130
60	DeepStealth: Leveraging Deep Learning Models for Stealth Assessment in Game-Based Learning Environments. Lecture Notes in Computer Science, 2015, , 277-286.	1.0	15
61	Leveraging collaboration to improve gender equity in a game-based learning environment for middle school computer science. , 2015, , .		8
62	Two Modes are Better Than One: a Multimodal Assessment Framework Integrating Student Writing and Drawing. Lecture Notes in Computer Science, 2015, , 205-215.	1.0	4
63	Mind the Gap: Improving Gender Equity in Game-Based Learning Environments with Learning Companions. Lecture Notes in Computer Science, 2015, , 64-73.	1.0	7
64	The Mars and Venus Effect: The Influence of User Gender on the Effectiveness of Adaptive Task Support. Lecture Notes in Computer Science, 2015, , 265-276.	1.0	17
65	Measuring Video Game Engagement Through the Cognitive and Affective Dimensions. Simulation and Gaming, 2014, 45, 569-592.	1.2	47
66	The Additive Value of Multimodal Features for Predicting Engagement, Frustration, and Learning during Tutoring. , 2014, , .		44
67	CS principles goes to middle school. , 2014, , .		19
68	Measuring engagement in video game-based environments: Investigation of the User Engagement Scale. Computers in Human Behavior, 2014, 32, 123-132.	5.1	193
69	Memory and Science Learning. , 2014, , 1-5.		0
70	Curriculum as Experienced by Students: How Teacher Identity Shapes Science Notebook Use. Research in Science Education, 2013, 43, 2567-2592.	1.4	11
71	Physiological Responses to Events during Training. Proceedings of the Human Factors and Ergonomics Society, 2013, 57, 2101-2105.	0.2	18
72	Automatically Recognizing Facial Indicators of Frustration: A Learning-centric Analysis. , 2013, , .		65

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73	Embodied Affect in Tutorial Dialogue: Student Gesture and Posture. Lecture Notes in Computer Science, 2013, , 1-10.	1.0	27
74	Multimodal analysis of the implicit affective channel in computer-mediated textual communication. , 2012, , .		33
75	Embedding Secondary Tasks in Video Games to Measure Real-Time Cognitive Load: An Approach to Developing Adaptive Video Games. Proceedings of the Human Factors and Ergonomics Society, 2012, 56, 2147-2151.	0.2	3
76	Cloud computing adoption and usage in community colleges. Behaviour and Information Technology, 2011, 30, 231-240.	2.5	206
77	BioMusic in the Classroom: Interdisciplinary Elementary Science and Music Curriculum Development. School Science and Mathematics, 2011, 111, 425-434.	0.5	7
78	The viability of crowdsourcing for survey research. Behavior Research Methods, 2011, 43, 800-813.	2.3	814
79	Conceptualizing Magnification and Scale: The Roles of Spatial Visualization and Logical Thinking. Research in Science Education, 2011, 41, 357-368.	1.4	28
80	The Cross-Case Analyses of Elementary Studentsâ€™ Engagement in the Strands of Science Proficiency. Journal of Science Teacher Education, 2010, 21, 559-587.	1.4	13
81	An examination of two mental workload measurement approaches to understanding multimedia learning. Computers in Human Behavior, 2010, 26, 474-481.	5.1	53
82	Haptic feedback and studentsâ€™ learning about levers: Unraveling the effect of simulated touch. Computers and Education, 2009, 53, 667-676.	5.1	48
83	Theoretical and Instructional Aspects of Learning with Visualizations. , 2009, , 67-88.		15
84	The influence of prior knowledge on viewing and interpreting graphics with macroscopic and molecular representations. Science Education, 2008, 92, 848-867.	1.8	111
85	Middle Grade Students' Interpretations of Contour Maps. School Science and Mathematics, 2008, 108, 71-79.	0.5	3
86	The Interpretation of Cellular Transport Graphics by Students with Low and High Prior Knowledge. International Journal of Science Education, 2008, 30, 239-261.	1.0	55
87	Writing to Learn by Learning to Write in the Disciplines. Journal of Business and Technical Communication, 2007, 21, 278-302.	1.4	98
88	Evaluating the Effectiveness of Scientific Visualization In Two PowerPoint Delivery Strategies on Science Learning for Preservice Science Teachers. International Journal of Science and Mathematics Education, 2007, 5, 329-348.	1.5	8
89	Understanding Scale: Powers of Ten. Journal of Science Education and Technology, 2007, 16, 191-202.	2.4	48
90	Evaluating Gender Differences of Attitudes and Perceptions Toward PowerPoint for Preservice Science Teachers. Eurasia Journal of Mathematics, Science and Technology Education, 2007, 3, .	0.7	6

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91	Eye-Tracking Students' Attention to PowerPoint Photographs in a Science Education Setting. Journal of Science Education and Technology, 2005, 14, 509-520.	2.4	75
92	Visual Representations of DNA Replication: Middle Grades Studentsâ€™ Perceptions and Interpretations. Journal of Science Education and Technology, 2005, 14, 353-365.	2.4	52
93	On understanding compatibility of student pair programmers. , 2004, , .		54
94	Educators Working Smarter: A Closer Look at a Local Community of Practice. Action in Teacher Education, 2004, 26, 44-51.	0.4	0
95	Improving the CS1 experience with pair programming. SIGCSE Bulletin, 2003, 35, 359-362.	0.1	104
96	Improving the CS1 experience with pair programming. , 2003, , .		128
97	Pair Learning: With an Eye Toward Future Success. Lecture Notes in Computer Science, 2003, , 185-198.	1.0	12
98	In Support of Pair Programming in the Introductory Computer Science Course. Computer Science Education, 2002, 12, 197-212.	2.7	182
99	Attitudes about the Internet: Implications for Use in Education. Journal of Educational Technology Systems, 2002, 31, 143-156.	3.6	3
100	Comparing Computer Usage by Students in Education Programs to Technology Education Majors. Journal of Technology Education, 2002, 13, .	0.7	2
101	Understanding the Diversity of Student Computing Activity. Journal of Educational Technology Systems, 2001, 29, 291-311.	3.6	1
102	Deep realities. ACM Journal of Computer Documentation, 2000, 24, 220-226.	0.1	1
103	Integration of Electronic Mail into Schools. Journal of Educational Computing Research, 1999, 21, 55-73.	3.6	2
104	Using Site-Based Techniques to Evolve the Product Development Process in Manufacturing Industries. Proceedings of the Human Factors and Ergonomics Society, 1998, 42, 994-998.	0.2	0
105	Adding agility to CAD: Integrating product data management tools into an organization. Human Factors and Ergonomics in Manufacturing, 1997, 7, 21-35.	1.4	2
106	Evaluation of Alternative Methods of Representing Three-Dimensional Objects on Computer Displays. Proceedings of the Human Factors and Ergonomics Society, 1994, 38, 1326-1330.	0.2	1