

Neil T Heffernan

List of Publications by Year in descending order

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Version: 2024-02-01

101
papers

2,544
citations

304743

22
h-index

265206

42
g-index

114
all docs

114
docs citations

114
times ranked

1152
citing authors

#	ARTICLE	IF	CITATIONS
1	The ASSISTments Ecosystem: Building a Platform that Brings Scientists and Teachers Together for Minimally Invasive Research on Human Learning and Teaching. <i>International Journal of Artificial Intelligence in Education</i> , 2014, 24, 470-497.	5.5	263
2	Addressing the assessment challenge with an online system that tutors as it assesses. <i>User Modeling and User-Adapted Interaction</i> , 2009, 19, 243-266.	3.8	202
3	Modeling Individualization in a Bayesian Networks Implementation of Knowledge Tracing. <i>Lecture Notes in Computer Science</i> , 2010, , 255-266.	1.3	165
4	Context-Aware Attentive Knowledge Tracing. , 2020, , .		146
5	KT-IDEM: Introducing Item Difficulty to the Knowledge Tracing Model. <i>Lecture Notes in Computer Science</i> , 2011, , 243-254.	1.3	96
6	AXIS. , 2016, , .		96
7	Population validity for educational data mining models: A case study in affect detection. <i>British Journal of Educational Technology</i> , 2014, 45, 487-501.	6.3	88
8	A Comparison of Traditional Homework to Computer-Supported Homework. <i>Journal of Research on Technology in Education</i> , 2009, 41, 331-359.	6.5	73
9	A Quasi-Experimental Evaluation of An On-Line Formative Assessment and Tutoring System. <i>Journal of Educational Computing Research</i> , 2010, 43, 489-510.	5.5	73
10	Opening the Door to Non-programmers: Authoring Intelligent Tutor Behavior by Demonstration. <i>Lecture Notes in Computer Science</i> , 2004, , 162-174.	1.3	71
11	Detection and Analysis of Off-Task Gaming Behavior in Intelligent Tutoring Systems. <i>Lecture Notes in Computer Science</i> , 2006, , 382-391.	1.3	68
12	Incorporating Rich Features into Deep Knowledge Tracing. , 2017, , .		64
13	Comparing Knowledge Tracing and Performance Factor Analysis by Using Multiple Model Fitting Procedures. <i>Lecture Notes in Computer Science</i> , 2010, , 35-44.	1.3	61
14	The sum is greater than the parts. <i>SIGKDD Explorations: Newsletter of the Special Interest Group (SIG) on Knowledge Discovery & Data Mining</i> , 2012, 13, 37-44.	4.0	55
15	ElectronixTutor: an intelligent tutoring system with multiple learning resources for electronics. <i>International Journal of STEM Education</i> , 2018, 5, 15.	5.0	47
16	Improving Sensor-Free Affect Detection Using Deep Learning. <i>Lecture Notes in Computer Science</i> , 2017, , 40-51.	1.3	47
17	The ASSISTment Builder: Supporting the Life Cycle of Tutoring System Content Creation. <i>IEEE Transactions on Learning Technologies</i> , 2009, 2, 157-166.	3.2	35
18	Clustering Students to Generate an Ensemble to Improve Standard Test Score Predictions. <i>Lecture Notes in Computer Science</i> , 2011, , 377-384.	1.3	32

#	ARTICLE	IF	CITATIONS
19	The Future of Adaptive Learning: Does the Crowd Hold the Key?. International Journal of Artificial Intelligence in Education, 2016, 26, 615-644.	5.5	30
20	A Memory-Augmented Neural Model for Automated Grading. , 2017, , .		30
21	Towards an Understanding of Affect and Knowledge from Student Interaction with an Intelligent Tutoring System. Lecture Notes in Computer Science, 2013, , 41-50.	1.3	27
22	Extending Knowledge Tracing to Allow Partial Credit: Using Continuous versus Binary Nodes. Lecture Notes in Computer Science, 2013, , 181-188.	1.3	26
23	Addressing the testing challenge with a web-based e-assessment system that tutors as it assesses. , 2006, , .		24
24	Ethical issues in Computer-Assisted Language Learning: Perceptions of teachers and learners. British Journal of Educational Technology, 2010, 41, 796-813.	6.3	24
25	Learning Bayesian Knowledge Tracing Parameters with a Knowledge Heuristic and Empirical Probabilities. Lecture Notes in Computer Science, 2014, , 150-155.	1.3	23
26	Ensembling Predictions of Student Knowledge within Intelligent Tutoring Systems. Lecture Notes in Computer Science, 2011, , 13-24.	1.3	19
27	Towards better affect detectors. , 2015, , .		19
28	The Student Skill Model. Lecture Notes in Computer Science, 2012, , 399-404.	1.3	19
29	Estimating the Effect of Web-Based Homework. Lecture Notes in Computer Science, 2013, , 824-827.	1.3	19
30	Clustered Knowledge Tracing. Lecture Notes in Computer Science, 2012, , 405-410.	1.3	17
31	The Short Readings Project: A CALL reading activity utilizing vocabulary recycling. Computer Assisted Language Learning, 2006, 19, 63-77.	7.1	16
32	Using Mixed-Effects Modeling to Analyze Different Grain-Sized Skill Models in an Intelligent Tutoring System. IEEE Transactions on Learning Technologies, 2009, 2, 79-92.	3.2	16
33	An Integrated Look at Middle School Engagement and Learning in Digital Environments as Precursors to College Attendance. Technology, Knowledge and Learning, 2017, 22, 243-270.	4.9	16
34	The Fine-Grained Impact of Gaming (?) on Learning. Lecture Notes in Computer Science, 2010, , 194-203.	1.3	16
35	Hints: Is It Better to Give or Wait to Be Asked?. Lecture Notes in Computer Science, 2010, , 349-358.	1.3	16
36	The automated grading of student open responses in mathematics. , 2020, , .		16

#	ARTICLE	IF	CITATIONS
37	Effectiveness of Crowd-Sourcing On-Demand Assistance from Teachers in Online Learning Platforms. , 2020, , .		16
38	Detecting the Moment of Learning. Lecture Notes in Computer Science, 2010, , 25-34.	1.3	15
39	Predicting student performance on post-requisite skills using prerequisite skill data. , 2016, , .		14
40	Why Are Algebra Word Problems Difficult? Using Tutorial Log Files and the Power Law of Learning to Select the Best Fitting Cognitive Model. Lecture Notes in Computer Science, 2004, , 240-250.	1.3	13
41	Web-Based Evaluations Showing Differential Learning for Tutorial Strategies Employed by the Ms. Lindquist Tutor. Lecture Notes in Computer Science, 2004, , 491-500.	1.3	13
42	The assessment of learning infrastructure (ALI). , 2016, , .		13
43	Blocking Vs. Interleaving: Examining Single-Session Effects Within Middle School Math Homework. Lecture Notes in Computer Science, 2015, , 338-347.	1.3	13
44	Improving Student Modeling Through Partial Credit and Problem Difficulty. , 2015, , .		12
45	Contextual factors affecting hint utility. International Journal of STEM Education, 2018, 5, 13.	5.0	12
46	ASSISTments Dataset from Multiple Randomized Controlled Experiments. , 2016, , .		11
47	A Web-based Authoring Tool for Intelligent Tutors: Blending Assessment and Instructional Assistance. Studies in Computational Intelligence, 2007, , 23-49.	0.9	10
48	Copyright and multimedia classroom material: a study from Japan. Computer Assisted Language Learning, 2008, 21, 167-180.	7.1	9
49	The Prediction of Student First Response Using Prerequisite Skills. , 2015, , .		9
50	Connecting Collaborative & Crowd Work with Online Education. , 2015, , .		9
51	Toward Personalizing Students' Education with Crowdsourced Tutoring. , 2021, , .		9
52	Towards designing a user-adaptive web-based e-learning system. , 2008, , .		8
53	The MOOClet Framework: Improving Online Education through Experimentation and Personalization of Modules. SSRN Electronic Journal, 0, , .	0.4	8
54	Tomorrow's EdTech Today: Establishing a Learning Platform as a Collaborative Research Tool for Sound Science. Teachers College Record, 2017, 119, 1-36.	0.9	8

#	ARTICLE	IF	CITATIONS
55	An analysis of the impact of action order on future performance. , 2015, , .		7
56	Using Past Data to Warm Start Active Machine Learning: Does Context Matter?. , 2021, , .		7
57	Examining Student Effort on Help through Response Time Decomposition. , 2021, , .		7
58	Implementation of an Intelligent Tutoring System for Online Homework Support in an Efficacy Trial. Lecture Notes in Computer Science, 2014, , 561-566.	1.3	7
59	Save Your Strokes: Chinese Handwriting Practice Makes for Ineffective Use of Instructional Time in Second Language Classrooms. AERA Open, 2019, 5, 233285841989032.	2.1	6
60	The Opportunity Count Model. , 2016, , .		6
61	Which Is More Responsible for Boredom in Intelligent Tutoring Systems: Students (Trait) or Problems (State)?. , 2013, , .		5
62	Guidance counselor reports of the ASSISTments college prediction model (ACPM). , 2017, , .		5
63	Reducing Student Hint Use by Creating Buggy Messages from Machine Learned Incorrect Processes. Lecture Notes in Computer Science, 2014, , 674-675.	1.3	5
64	Exploring college major choice and middle school student behavior, affect and learning. , 2015, , .		4
65	Generalizability of Methods for Imputing Mathematical Skills Needed to Solve Problems from Texts. Lecture Notes in Computer Science, 2019, , 396-405.	1.3	4
66	The Role of Student Choice Within Adaptive Tutoring. Lecture Notes in Computer Science, 2015, , 752-755.	1.3	4
67	Comparing Classroom Problem-Solving with No Feedback to Web-Based Homework Assistance. Lecture Notes in Computer Science, 2008, , 426-437.	1.3	4
68	Studying Learning at Scale with the ASSISTments TestBed. , 2016, , .		4
69	Student Modeling in an Intelligent Tutoring System. , 2011, , 208-236.		4
70	Developing Self-regulated Learners Through an Intelligent Tutoring System. Lecture Notes in Computer Science, 2015, , 840-843.	1.3	4
71	Learning, Moment-by-Moment and Over the Long Term. Lecture Notes in Computer Science, 2015, , 654-657.	1.3	3
72	Sequencing content in an adaptive testing system. , 2017, , .		3

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73	Using natural language processing tools to develop complex models of student engagement. , 2017, , .		3
74	Refusing to Try. , 2019, , .		3
75	Classifying Math Knowledge Components via Task-Adaptive Pre-Trained BERT. Lecture Notes in Computer Science, 2021, , 408-419.	1.3	3
76	The Effect of Automatic Reassessment and Relearning on Assessing Student Long-Term Knowledge in Mathematics. Lecture Notes in Computer Science, 2014, , 490-495.	1.3	3
77	Personalizing Knowledge Tracing: Should We Individualize Slip, Guess, Prior or Learn Rate?. Lecture Notes in Computer Science, 2014, , 647-648.	1.3	3
78	Learning What Works in ITS from Non-traditional Randomized Controlled Trial Data. Lecture Notes in Computer Science, 2010, , 41-50.	1.3	3
79	Effect of Immediate Feedback on Math Achievement at the High School Level. Lecture Notes in Computer Science, 2020, , 263-267.	1.3	3
80	FM and Web Broadcasting Systems for Mobile Language Listening. , 2007, , .		2
81	Using and Designing Platforms for In Vivo Educational Experiments. , 2015, , .		2
82	Optimizing the Amount of Practice in an On-Line Platform. , 2016, , .		2
83	Using correlational topic modeling for automated topic identification in intelligent tutoring systems. , 2017, , .		2
84	Feedback Design Patterns for Math Online Learning Systems. , 2017, , .		2
85	Using Design Patterns for Math Preservice Teacher Education. , 2018, , .		2
86	Backtalk: Donâ€™t eliminate homework. Make it more effective. Phi Delta Kappan, 2019, 100, 80-80.	0.6	2
87	Observing Personalizations in Learning. , 2017, , .		2
88	A Methodology for Discovering How to Adaptively Personalize to Users Using Experimental Comparisons. SSRN Electronic Journal, 0, , .	0.4	1
89	Enhancing the efficiency and reliability of group differentiation through partial credit. , 2016, , .		1
90	Improving Learning Maps Using an Adaptive Testing System: PLACEments. Lecture Notes in Computer Science, 2015, , 517-520.	1.3	1

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91	Trying to Reduce Bottom-Out Hinting: Will Telling Student How Many Hints They Have Left Help?. Lecture Notes in Computer Science, 2008, , 774-778.	1.3	1
92	Using and Designing Platforms for In Vivo Educational Experiments. SSRN Electronic Journal, 0, ,	0.4	1
93	Performance Driven Database Design for Scalable Web Applications. Lecture Notes in Computer Science, 2009, , 43-58.	1.3	1
94	Using Data Mining Findings to Aid Searching for Better Cognitive Models. Lecture Notes in Computer Science, 2010, , 312-314.	1.3	1
95	A Comparison of Two Different Methods to Individualize Students and Skills. Lecture Notes in Computer Science, 2013, , 836-839.	1.3	1
96	Learning Curve Analysis Using Intensive Longitudinal and Cluster-Correlated Data. Procedia Computer Science, 2017, 114, 250-257.	2.0	0
97	Identifying Struggling Students by Comparing Online Tutor Clickstreams. Lecture Notes in Computer Science, 2021, , 290-295.	1.3	0
98	Milyâ€™s World: A Coordinate Geometry Learning Environment with Game-Like Properties. Lecture Notes in Computer Science, 2010, , 399-401.	1.3	0
99	Automatic Physical Database Tuning Middleware for Web-Based Applications. Lecture Notes in Computer Science, 2011, , 361-374.	1.3	0
100	Using and Designing Platforms for in Vivo Educational Experiments. SSRN Electronic Journal, 0, ,	0.4	0
101	Understanding the Complexities of Chinese Word Acquisition within an Online Learning Platform. , 2019, , .		0