Andrew F Heckler

List of Publications by Year
in descending order

55	1,167	430874 18	395702 33
papers	citations	h-index	g-index

57	57	57	758
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Can Self-Efficacy and Task Values Buffer Perceived Costs? Exploring Introductory- and Upper-Level Physics Courses. Journal of Experimental Education, 2022, 90, 839-861.	2.6	13
2	Patterns in assignment submission times: Procrastination, gender, grades, and grade components. Physical Review Physics Education Research, 2021, 17, .	2.9	5
3	Intuitive or rational? Students and experts need to be both. Physics Today, 2021, 74, 28-34.	0.3	13
4	Grades, grade component weighting, and demographic disparities in introductory physics. Physical Review Physics Education Research, 2020, 16, .	2.9	18
5	Effectiveness of guided group work in graduate level quantum mechanics. Physical Review Physics Education Research, 2020, 16, .	2.9	0
6	Graduate student misunderstandings of wave functions in an asymmetric well. Physical Review Physics Education Research, 2019, 15, .	2.9	9
7	Observed hierarchy of student proficiency with period, frequency, and angular frequency. Physical Review Physics Education Research, 2018, 14, .	2.9	4
8	Mediating relationship of differential products in understanding integration in introductory physics. Physical Review Physics Education Research, 2018, 14, .	2.9	2
9	Reasoning with alternative explanations in physics: The cognitive accessibility rule. Physical Review Physics Education Research, 2018, 14, .	2.9	11
10	Framework and implementation for improving physics essential skills via computer-based practice: Vector math. Physical Review Physics Education Research, 2017, 13, .	2.9	28
11	Studentsâ€™ conceptual performance on synthesis physics problems with varying mathematical complexity. Physical Review Physics Education Research, 2017, 13, .	2.9	12
12	What works with worked examples: Extending self-explanation and analogical comparison to synthesis problems. Physical Review Physics Education Research, 2017, 13, .	2.9	8
13	How students process equations in solving quantitative synthesis problems? Role of mathematical complexity in studentsâ€™ mathematical performance. Physical Review Physics Education Research, 2017, 13, .	2.9	9
14	Factors affecting learning of vector math from computer-based practice: Feedback complexity and prior knowledge. Physical Review Physics Education Research, 2016, 12, .	2.9	11
15	Adding and subtracting vectors: The problem with the arrow representation. Physical Review Physics Education Research, 2015, 11, .	1.7	35
16	Patterns of Response Times and Response Choices to Science Questions: The Influence of Relative Processing Time. Cognitive Science, 2015, 39, 496-537.	1.7	16
17	The effectiveness of brief, spaced practice on student difficulties with basic and essential engineering skills. , 2013, , .		0
18	The dependence of instructional outcomes on individual differences: An example from DC circuits. , 2013, , .		0

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19	Student accuracy in reading logarithmic plots: The problem and how to fix it. , 2013, , .		3
20	The cost of concreteness: The effect of nonessential information on analogical transfer.. Journal of Experimental Psychology: Applied, 2013, 19, 14-29.	1.2	44
21	Student difficulties with basic concepts in introductory materials science engineering. , 2011, , .		7
22	Group-work tutorials for an introductory materials engineering course. , 2011, , .		2
23	The Role of Automatic, Bottom-Up Processes: In the Ubiquitous Patterns of Incorrect Answers to Science Questions. Psychology of Learning and Motivation - Advances in Research and Theory, 2011, , 227-267.	1.1	25
24	Interference between electric and magnetic concepts in introductory physics. Physical Review Physics Education Research, 2011, 7, .	1.7	16
25	Systematic study of student understanding of the relationships between the directions of force, velocity, and acceleration in one dimension. Physical Review Physics Education Research, 2011, 7, .	1.7	20
26	Sustained Effects of Solving Conceptually Scaffolded Synthesis Problems. , 2010, , .		8
27	Some Consequences of Prompting Novice Physics Students to Construct Force Diagrams. International Journal of Science Education, 2010, 32, 1829-1851.	1.9	43
28	Peaks and decays of student knowledge in an introductory E&M course. Physical Review Physics Education Research, 2009, 5, .	1.7	21
29	Modeling studentsâ€™ conceptual understanding of force, velocity, and acceleration. AIP Conference Proceedings, 2009, , .	0.4	4
30	Transfer of Mathematical Knowledge: The Portability of Generic Instantiations. Child Development Perspectives, 2009, 3, 151-155.	3.9	65
31	Toward a comprehensive picture of student understanding of force, velocity, and acceleration. , 2008, , .		3
32	The Advantage of Abstract Examples in Learning Math. Science, 2008, 320, 454-455.	12.6	202
33	Evolution of Student Knowledge in a Traditional Introductory Classroom. , 2008, , .		1
34	The Effect of Field Representation on Student Responses to Magnetic Force Questions. , 2007, , .		11
35	The advantage of simple symbols for learning and transfer. Psychonomic Bulletin and Review, 2005, 12, 508-513.	2.8	99
36	Precision Detection of the Cosmic Neutrino Background. Physical Review Letters, 1999, 82, 3952-3955.	7.8	67

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37	Calculation of the Emergent Spectrum and Observation of Primordial Black Holes. Physical Review Letters, 1997, 78, 3430-3433.	7.8	58
38	Formation of a Hawking-radiation photosphere around microscopic black holes. Physical Review D, 1997, 55, 480-488.	4.7	52
39	Modeling thermal fluctuations: phase mixing and percolation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 405, 121-125.	4.1	17
40	Searching for Stellar Mass Black Holes in the Solar Neighborhood. Astrophysical Journal, 1996, 472, L85-L88.	4.5	16
41	Nonperturbative Effects on Nucleation. Physical Review Letters, 1996, 76, 180-183.	7.8	24
42	Formation of a Photosphere Around Microscopic Black Holes. , 1996, , 273-282.		0
43	Effects of electroweak phase transition dynamics on baryogenesis and primordial nucleosynthesis. Physical Review D, 1995, 51, 405-428.	4.7	58
44	Astrophysical applications of quantum corrections to the equation of state of a plasma. Physical Review D, 1994, 49, 611-617.	4.7	59
45	Student Difficulties with Trigonometric Vector Components Persist in Multiple Student Populations. , 0, , .		1
46	Synthesis problems: role of mathematical complexity in students' problem solving strategies. , 0, , .		1
47	Effects of Training Examples on Student Understanding of Force and Motion. , 0, , .		0
48	Effects of Belief Bias on Student Reasoning from Data Tables. , 0, , .		1
49	Spatial Reasoning Ability and the Construction of Integrals in Physics. , 0, , .		0
50	Design and Evaluation of a Natural Language Tutor for Force and Motion. , 0, , .		0
51	Bottlenecks in Solving Synthesis Problems. , 0, , .		0
52	Student Understanding of Differentials in Introductory Physics. , 0, , .		3
53	Applying analogical reasoning to introductory-level synthesis problems. , 0, , .		0
54	Student understanding of potential, wavefunctions and the Jacobian in hydrogen in graduate-level quantum mechanics. , 0, , .		0

#	Article	IF	Citations
55	Prelecture Questions and Conceptual Testing in Undergraduate Condensed Matter Courses. , 0, , .		0