Nâ€g Holmes

List of Publications by Year
in descending order

45 papers	984 citations	516215 16 h-index	454577 30 g-index
46 all docs	46 docs citations	46 times ranked	586 citing authors

#	Article	IF	Citations
1	Teaching critical thinking. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 11199-11204.	3.3	135
2	Evaluating metacognitive scaffolding in Guided Invention Activities. Instructional Science, 2012, 40, 691-710.	1.1	90
3	Value added or misattributed? A multi-institution study on the educational benefit of labs for reinforcing physics content. Physical Review Physics Education Research, 2017, 13, .	1.4	63
4	Making the failure more productive: scaffolding the invention process to improve inquiry behaviors and outcomes in invention activities. Instructional Science, 2014, 42, 523-538.	1.1	55
5	Ready student one: Exploring the predictors of student learning in virtual reality. PLoS ONE, 2020, 15, e0229788.	1.1	47
6	Gender gaps and gendered action in a first-year physics laboratory. Physical Review Physics Education Research, 2016, 12, .	1.4	43
7	Direct Measurement of the Impact of Teaching Experimentation in Physics Labs. Physical Review X, 2020, 10, .	2.8	41
8	Quantifying critical thinking: Development and validation of the physics lab inventory of critical thinking. Physical Review Physics Education Research, 2019, 15, .	1.4	41
9	Examining and contrasting the cognitive activities engaged in undergraduate research experiences and lab courses. Physical Review Physics Education Research, 2016, 12, .	1.4	38
10	Operationalizing the AAPT Learning Goals for the Lab. Physics Teacher, 2019, 57, 296-299.	0.2	30
11	Developing scientific decision making by structuring and supporting student agency. Physical Review Physics Education Research, 2020, 16, .	1.4	30
12	Group roles in unstructured labs show inequitable gender divide. Physical Review Physics Education Research, 2020, 16, .	1.4	30
13	Investigating the landscape of physics laboratory instruction across North America. Physical Review Physics Education Research, 2020, 16, .	1.4	30
14	Quantitative Comparisons to Promote Inquiry in the Introductory Physics Lab. Physics Teacher, 2015, 53, 352-355.	0.2	29
15	Best practice for instructional labs. Nature Physics, 2021, 17, 662-663.	6.5	18
16	Teaching Assistant Professional Development by and for TAs. Physics Teacher, 2013, 51, 218-219.	0.2	16
17	Restructuring physics labs to cultivate sense of student agency. Physical Review Physics Education Research, 2021, 17, .	1.4	16
18	How expectations of confirmation influence studentsâ€™ experimentation decisions in introductory labs. Physical Review Physics Education Research, 2020, 16, .	1.4	16

#	Article	IF	Citations
19	A fundamental parameters approach to calibration of the Mars Exploration Rover Alpha Particle Xâ€ray Spectrometer. Journal of Geophysical Research, 2009, 114, .	3.3	15
20	Tools for Change: Measuring Student Conceptual Understanding Across Undergraduate Biology Programs Using Bio-MAPS Assessments. Journal of Microbiology and Biology Education, 2019, 20, .	0.5	13
21	Not engaging with problems in the lab: Studentsâ€™ navigation of conflicting data and models. Physical Review Physics Education Research, 2021, 17, .	1.4	11
22	Examination of quantitative methods for analyzing data from concept inventories. Physical Review Physics Education Research, 2020, 16, .	1.4	11
23	Skills-focused lab instruction improves critical thinking skills and experimentation views for all students. Physical Review Physics Education Research, 2022, 18, .	1.4	11
24	Evaluating the role of student preference in physics lab group equity. Physical Review Physics Education Research, 2022, 18, .	1.4	10
25	Supporting decision-making in upper-level chemical engineering laboratories. Education for Chemical Engineers, 2021, 35, 69-80.	2.8	9
26	Examining the effects of lab instruction and gender composition on intergroup interaction networks in introductory physics labs. Physical Review Physics Education Research, 2022, 18, .	1.4	9
27	Evaluating instructional labsâ€™ use of deliberate practice to teach critical thinking skills. Physical Review Physics Education Research, 2020, 16, .	1.4	8
28	Exploring the effects of omitted variable bias in physics education research. Physical Review Physics Education Research, 2021, 17, .	1.4	7
29	A re-examination of the fundamental parameters approach to calibration of the Curiosity rover alpha particle X-ray spectrometer. Nuclear Instruments & Methods in Physics Research B, 2019, 447, 22-29.	0.6	5
30	Online administration of research-based assessments. American Journal of Physics, 2021, 89, 7-8.	0.3	5
31	Exploring bias in mechanical engineering students' perceptions of classmates. PLoS ONE, 2019, 14, e0212477.	1.1	4
32	Using the Ecology and Evolutionâ€Measuring Achievement and Progression in Science assessment to measure student thinking across the Fourâ€Dimensional Ecology Education framework. Ecosphere, 2019, 10, e02873.	1.0	3
33	Toolboxes and handing students a hammer: The effects of cueing and instruction on getting students to think critically. Physical Review Physics Education Research, 2017, 13, .	1.4	3
34	Instructor interactions in traditional and nontraditional labs. Physical Review Physics Education Research, 2022, 18, .	1.4	3
35	â€œLetâ€™s just pretendâ€: Studentsâ€™ shifts in frames during a content-reinforcement lab. , 0, , .		2
36	The Impact of Targeting Scientific Reasoning on Student Attitudes about Experimental Physics. , 0, , .		2

#	Article	IF	Citations
37	Why Traditional Labs Failâ€¦and What We Can Do About It. , 2020, , 271-290.		2
38	How do gender and inchargeness interact to affect equity in lab group interactions?. , 0, , .		2
39	Finding Evidence of Transfer with Invention Activities: Teaching the Concept of Weighted Average. , 0, , .		1
40	Student reasoning about sources of experimental measurement uncertainty in quantum versus classical mechanics. , 0, , .		1
41	Doing Science or Doing a Lab? Engaging Students with Scientific Reasoning during Physics Lab Experiments. , 0, , .		1
42	Problematizing in inquiry-based labs: how students respond to unexpected results. , 0, , .		1
43	Student evaluation of more or better experimental data in classical and quantum mechanics. , 0, , .		0
44	Sense of agency, gender, and studentsâ€™ perception in open-ended physics labs. , 0, , .		0
45	Connecting the dots: Student social networks in introductory physics labs. , 0, , .		0