Rachelâ€E Scherr

List of Publications by Year
in descending order

72 papers	1,366 citations	430874 18 h-index	361022 35 g-index
74 all docs	74 docs citations	74 times ranked	691 citing authors

#	Article	IF	Citations
1	Recognizing mechanistic reasoning in student scientific inquiry: A framework for discourse analysis developed from philosophy of science. Science Education, 2008, 92, 499-525.	3.0	269
2	Student Behavior and Epistemological Framing: Examples from Collaborative Active-Learning Activities in Physics. Cognition and Instruction, 2009, 27, 147-174.	2.9	172
3	Representing energy. I. Representing a substance ontology for energy. Physical Review Physics Education Research, 2012, 8, .	1.7	65
4	Student understanding of time in special relativity: Simultaneity and reference frames. American Journal of Physics, 2001, 69, S24-S35.	0.7	59
5	The challenge of changing deeply held student beliefs about the relativity of simultaneity. American Journal of Physics, 2002, 70, 1238-1248.	0.7	51
6	Gesture analysis for physics education researchers. Physical Review Physics Education Research, 2008, 4, .	1.7	51
7	Negotiating energy dynamics through embodied action in a materially structured environment. Physical Review Physics Education Research, 2013, 9, .	1.7	46
8	Representing energy. II. Energy tracking representations. Physical Review Physics Education Research, 2012, 8, .	1.7	42
9	Accounting for tutorial teaching assistantsâ€™ buy-in to reform instruction. Physical Review Physics Education Research, 2009, 5, .	1.7	39
10	Enacting Conceptual Metaphor through Blending: Learning activities embodying the substance metaphor for energy. International Journal of Science Education, 2015, 37, 839-866.	1.9	34
11	Energy Theater. Physics Teacher, 2014, 52, 291-294.	0.3	32
12	Tutorial teaching assistants in the classroom: Similar teaching behaviors are supported by varied beliefs about teaching and learning. Physical Review Physics Education Research, 2010, 6, .	1.7	29
13	Energy Tracking Diagrams. Physics Teacher, 2016, 54, 96-102.	0.3	27
14	Reverse-Engineering the Solution of a â€œSimpleâ€•Physics Problem: Why Learning Physics Is Harder Than It Looks. Physics Teacher, 2006, 44, 293-300.	0.3	26
15	Fixed and growth mindsets in physics graduate admissions. Physical Review Physics Education Research, 2017, 13, .	2.9	24
16	Energy conservation in dissipative processes: Teacher expectations and strategies associated with imperceptible thermal energy. Physical Review Physics Education Research, 2015, 11, .	1.7	21
17	Goals for teacher learning about energy degradation and usefulness. Physical Review Physics Education Research, 2014, 10, .	1.7	18
18	Making Space to Sensemake: Epistemic Distancing in Small Group Physics Discussions. Cognition and Instruction, 2018, 36, 396-423.	2.9	18

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19	Productivity of â€œcollisions generate heatâ€•for reconciling an energy model with mechanistic reasoning: A case study. Physical Review Physics Education Research, 2015, 11, .	1.7	18
20	Student conceptual resources for understanding mechanical wave propagation. Physical Review Physics Education Research, 2019, 15, .	2.9	15
21	Video analysis for insight and coding: Examples from tutorials in introductory physics. Physical Review Physics Education Research, 2009, 5, .	1.7	14
22	Respecting tutorial instructors' beliefs and experiences: A case study of a physics teaching assistant. Physical Review Physics Education Research, 2010, 6, .	1.7	14
23	The pedagogical value of conceptual metaphor for secondary science teachers. Science Education, 2018, 102, 1051-1076.	3.0	14
24	An Implementation ofPhysics by Inquiryin a Large-Enrollment Class. Physics Teacher, 2003, 41, 113-118.	0.3	13
25	Enabling Informed Adaptation of Reformed Instructional Materials. AIP Conference Proceedings, 2007, , .	0.4	13
26	Interactional processes for stabilizing conceptual coherences in physics. Physical Review Physics Education Research, 2012, 8, .	1.7	13
27	Drawings of energy: Evidence of the Next Generation Science Standards model of energy in diagrams. Physical Review Physics Education Research, 2019, 15, .	2.9	12
28	Intuitive ontologies for energy in physics. AIP Conference Proceedings, 2012, , .	0.4	10
29	Editorial: Never mind the gap: Gender-related research in Physical Review Physics Education Research , 2005â€“2016. Physical Review Physics Education Research, 2016, 12, .	2.9	10
30	Using The Algebra Project Method To Regiment Discourse In An Energy Course for Teachers. , 2010, , .		9
31	Conserving energy in physics and society: Creating an integrated model of energy and the second law of thermodynamics. AIP Conference Proceedings, 2013, , .	0.4	9
32	Initiation of student-TA interactions in tutorials. Physical Review Physics Education Research, 2006, 2, .	1.7	8
33	Unveiling Privilege to Broaden Participation. Physics Teacher, 2017, 55, 394-397.	0.3	7
34	Isolation and connectedness among Black and Latinx physics graduate students. Physical Review Physics Education Research, 2020, 16, .	2.9	7
35	Newton's Zeroth Law: Learning from Listening to Our Students. Physics Teacher, 2005, 43, 41-45.	0.3	6
36	The Dynamics of Students' Behaviors and Reasoning during Collaborative Physics Tutorial Sessions. , 2007, , .		6

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37	â€œEnergy Theaterâ€: Using The Body Symbolically To Understand Energy. , 2010, , .		6
38	Criteria for creating and categorizing forms of energy. , 2012, , .		6
39	Energy In Action: The Construction Of Physics Ideas In Multiple Modes. , 2010, , .		5
40	University student conceptual resources for understanding forces. Physical Review Physics Education Research, 2021, 17, .	2.9	5
41	Sustaining Physics Teacher Education Coalition programs in physics teacher education. Physical Review Physics Education Research, 2017, 13, .	2.9	5
42	Developing the Physics Teacher Education Program Analysis rubric: Measuring features of thriving programs. Physical Review Physics Education Research, 2020, 16, .	2.9	5
43	Initial findings of the Physics Teacher Education Program Analysis rubric: What do thriving programs do?. Physical Review Physics Education Research, 2020, 16, .	2.9	4
44	Place-Based Education in High School Science: Situating Energy and Climate Change in Students' Communities. Sustainability and Climate Change, 2022, 15, 58-67.	0.3	4
45	Differentiation of energy concepts through speech and gesture in interaction. AIP Conference Proceedings, 2012, , .	0.4	3
46	Promoting proximal formative assessment with relational discourse. AIP Conference Proceedings, 2012, , .	0.4	3
47	Elements of proximal formative assessment in learners' discourse about energy. , 2012, , .		3
48	Periscope: Looking into Learning in Best-Practices Physics Classrooms. Physics Teacher, 2018, 56, 100-103.	0.3	3
49	Studentsâ€™ context-sensitive use of conceptual resources: A pattern across different styles of question about mechanical waves. Physical Review Physics Education Research, 2021, 17, .	2.9	3
50	The challenge of listening: The effect of researcher agenda on data collection and interpretation. , 0, , .		3
51	Identifying content knowledge for teaching energy: Examples from high school physics. Physical Review Physics Education Research, 2017, 13, .	2.9	3
52	Gestures as evidence of student thinking about physics. AIP Conference Proceedings, 2004, , .	0.4	2
53	Development of proximal formative assessment skills in video-based teacher professional development. , 2012, , .		2
54	Impetus-Like Reasoning as Continuous with Newtonian Physics. Physics Teacher, 2021, 59, 185-188.	0.3	2

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55	Exclusively visual analysis of classroom group interactions. Physical Review Physics Education Research, 2016, 12, .	2.9	2
56	Physics teacher production: Patterns of institutional engagement and faculty theories. , 0, , .		2
57	Indicators of Understanding: What TAs Listen for in Student Responses. , 2008, , .		1
58	Pulses as not-objects: student responses to a new question about the superposition of mechanical waves. Physics Education, 2019, 54, 055023.	0.5	1
59	Drawing energy: Evidence of Next Generation Science Standards for energy in diagrams. , 0, , .		1
60	Student conceptual resources for understanding mechanical wave propagation. , 0, , .		1
61	Impetus-Force-Like Drawings May Be Less Common Than You Think. Physics Teacher, 2022, 60, 254-257.	0.3	1
62	An Evolving Model for Seeing Colored Objects: A Case Study Progression. , 2010, , .		0
63	Tackling energy head on. Physics World, 2014, 27, 17-17.	0.0	0
64	Scherr responds. Physics Teacher, 2018, 56, 4-5.	0.3	0
65	Responsiveness Among Peers Leads to Productive Disciplinary Engagement. , 0, , .		0
66	Content Knowledge for Teaching Energy: An Example From Middle-School Physical Science. , 0, , .		0
67	Editorial: Focused Collection: Preparing and Supporting University Physics Educators. Physical Review Physics Education Research, 2016, 12, .	2.9	0
68	Education Metaphors We Live By. , 0, , .		0
69	University Student Conceptual Resources for Understanding Forces. , 0, , .		0
70	Examining the productiveness of student resources in a problem-solving interview. , 0, , .		0
71	Belonging, Success, Access, and Disruption: Physics Faculty Goals for Inclusive Learning Environments. , 0, , .		0
72	Development and validation of the Physics Teacher Education Program Analysis (PTEPA) Rubric. , 0, , .		0