Andrew Elby

List of Publications by Year
in descending order

76 papers	2,422 citations	304743 22 h-index	223800 46 g-index
76 all docs	76 docs citations	76 times ranked	1200 citing authors

#	Article	IF	Citations
1	Tapping Epistemological Resources for Learning Physics. Journal of the Learning Sciences, 2003, 12, 53-90.	2.9	325
2	On the substance of a sophisticated epistemology. Science Education, 2001, 85, 554-567.	3.0	254
3	Helping physics students learn how to learn. American Journal of Physics, 2001, 69, S54-S64.	0.7	211
4	Epistemological Resources: Applying a New Epistemological Framework to Science Instruction. Educational Psychologist, 2004, 39, 57-68.	9.0	187
5	The impact of epistemology on learning: A case study from introductory physics. American Journal of Physics, 2005, 73, 372-382.	0.7	167
6	Epistemological resources and framing: a cognitive framework for helping teachers interpret and respond to their students' epistemologies. , 2010, , 409-434.		100
7	How students blend conceptual and formal mathematical reasoning in solving physics problems. Science Education, 2013, 97, 32-57.	3.0	99
8	What students' learning of representations tells us about constructivism. Journal of Mathematical Behavior, 2000, 19, 481-502.	0.9	93
9	Marginalized Identities of Senseâ€Makers: Reframing Engineering Student Retention. Journal of Engineering Education, 2014, 103, 8-44.	3.0	69
10	Another reason that physics students learn by rote. American Journal of Physics, 1999, 67, S52-S57.	0.7	64
11	The scientific method and scientific inquiry: Tensions in teaching and learning. Science Education, 2010, 94, 29-47.	3.0	63
12	Beyond Epistemological Deficits: Dynamic explanations of engineering studentsâ€™ difficulties with mathematical sense-making. International Journal of Science Education, 2011, 33, 2463-2488.	1.9	50
13	Triorthogonal uniqueness theorem and its relevance to the interpretation of quantum mechanics. Physical Review A, 1994, 49, 4213-4216.	2.5	47
14	Zooming Out from the Struggling Individual Student: An Account of the Cultural Construction of Engineering Ability in an Undergraduate Programming Class. Journal of Engineering Education, 2018, 107, 56-86.	3.0	47
15	Supporting the Narrative Agency of a Marginalized Engineering Student. Journal of Engineering Education, 2018, 107, 186-218.	3.0	47
16	Accounting for tutorial teaching assistantsâ€™ buy-in to reform instruction. Physical Review Physics Education Research, 2009, 5, .	1.7	39
17	Defining Personal Epistemology: A Response to Hofer & Pintrich (1997) and Sandoval (2005). Journal of the Learning Sciences, 2009, 18, 138-149.	2.9	38
18	Problem-solving rubrics revisited: Attending to the blending of informal conceptual and formal mathematical reasoning. Physical Review Physics Education Research, 2013, 9, .	1.7	34

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19	Why ?modal? interpretations of quantum mechanics don't solve the measurement problem. Foundations of Physics Letters, 1993, 6, 5-19.	0.6	31
20	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
21	Context Dependence of Studentsâ€™ Views about the Role of Equations in Understanding Biology. CBE Life Sciences Education, 2013, 12, 274-286.	2.3	29
22	Video tagging as a window into teacher noticing. Journal of Mathematics Teacher Education, 2020, 23, 385-405.	1.8	28
23	Mathematical sense-making in quantum mechanics: An initial peek. Physical Review Physics Education Research, 2017, 13, .	2.9	27
24	How substance-based ontologies for gravity can be productive: A case study. Physical Review Physics Education Research, 2014, 10, .	1.7	25
25	Beyond Empirical Adequacy: Learning Progressions as Models and Their Value for Teachers. Cognition and Instruction, 2019, 37, 1-37.	2.9	21
26	Exploring the entanglement of personal epistemologies and emotions in studentsâ€™ thinking. Physical Review Physics Education Research, 2018, 14, .	2.9	19
27	Reframing the Responsiveness Challenge: A Framing-Anchored Explanatory Framework to Account for Irregularity in Novice Teachersâ€™ Attention and Responsiveness to Student Thinking. Cognition and Instruction, 2020, 38, 116-152.	2.9	18
28	Nonlocality and Gleason's lemma. Part 2. Stochastic theories. Foundations of Physics, 1990, 20, 1389-1397.	1.3	17
29	A SQUID No-Go theorem without macrorealism: What SQUID's really tell us about nature. Foundations of Physics, 1991, 21, 773-785.	1.3	17
30	Cause and Effect in the Pilot-Wave Interpretation of Quantum Mechanics. Boston Studies in the Philosophy and History of Science, 1996, , 309-319.	0.9	17
31	Taking an escape hatch: Managing tension in group discourse. Science Education, 2018, 102, 883-916.	3.0	17
32	Assessing mathematical sensemaking in physics through calculation-concept crossover. Physical Review Physics Education Research, 2020, 16, .	2.9	16
33	Should We Explain the EPR Correlations Causally?. Philosophy of Science, 1992, 59, 16-25.	1.0	15
34	Respecting tutorial instructors' beliefs and experiences: A case study of a physics teaching assistant. Physical Review Physics Education Research, 2010, 6, .	1.7	14
35	Connecting self-efficacy and views about the nature of science in undergraduate research experiences. Physical Review Physics Education Research, 2016, 12, .	2.9	14
36	Enabling Informed Adaptation of Reformed Instructional Materials. AIP Conference Proceedings, 2007, , .	0.4	13

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37	The tension between patternâ€seeking and mechanistic reasoning in explanation construction: A case from Chinese elementary science classroom. Science Education, 2020, 104, 1071-1099.	3.0	12
38	Why SQUID experiments can rule out non-invasive measurability. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 166, 17-23.	2.1	11
39	Splits in studentsâ€™ beliefs about learning classical and quantum physics. International Journal of STEM Education, 2019, 6, .	5.0	9
40	Weakening the locality conditions in algebraic nonlocality proofs. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 171, 11-16.	2.1	8
41	What makes a theory physically ?complete??. Foundations of Physics, 1993, 23, 971-985.	1.3	8
42	Sophisticated epistemologies of physics versus high-stakes tests: How do elite high school students respond to competing influences about how to learn physics?. Physical Review Physics Education Research, 2016, 12, .	2.9	8
43	"Turning away" from the Struggling Individual Student: An Account of the Cultural Construction of Engineering Ability in an Undergraduate Programming Class. , 0, , .		7
44	Probing Studentsâ€™ Epistemologies Using Split Tasks. AIP Conference Proceedings, 2005, , .	0.4	5
45	Applying beliefs and resources frameworks to the psychometric analyses of an epistemology survey. Physical Review Physics Education Research, 2012, 8, .	1.7	5
46	Did the Framework for Kâ€12 Science Education trample itself? A reply to â€œAddressing the epistemic elephant in the room: Epistemic agency and the next generation science standardsâ€ Journal of Research in Science Teaching, 2019, 56, 518-520.	3.3	5
47	The 'Decoherence' Approach to the Measurement Problem in Quantum Mechanics. PSA Proceedings of the Biennial Meeting of the Philosophy of Science Association, 1994, 1994, 355-365.	0.1	5
48	Contentious Contents: For Inductive Probability. British Journal for the Philosophy of Science, 1994, 45, 193-200.	2.3	4
49	Understanding students' difficulties in terms of coupled epistemological and affective dynamics. , 2010, , .		4
50	The Dynamics of Perspective-taking in Discussions on Socio-technical Issues. , 0, , .		4
51	On the physical interpretation of Heywood and Redhead's algebraic impossibility theorem. Foundations of Physics Letters, 1990, 3, 239-247.	0.6	3
52	Narrative Co-construction of Stances Towards Engineersâ€™ Work in Socio-Technical Contexts. Advances in STEM Education, 2019, , 251-272.	0.5	3
53	â€œClassical-ishâ€ Negotiating the Boundary between Classical and Quantum Particles. , 0, , .		3
54	Rethinking the division of labor between tutorial writers and instructors with respect to fostering equitable team dynamics. Physical Review Physics Education Research, 2020, 16, .	2.9	3

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55	Critique of Home and Sengupta's derivation of a Bell inequality. Foundations of Physics Letters, 1990, 3, 317-324.	0.6	2
56	Why Local Realistic Theories Violate, Nontrivially, the Quantum Mechanical EPR Perfect Correlations. British Journal for the Philosophy of Science, 1993, 44, 213-230.	2.3	2
57	Evidence of epistemological framing in survey question misinterpretation. , 2013, , .		2
58	â€œBecause mathâ€: Epistemological stance or defusing social tension in quantum mechanics?. , 0, , .		2
59	Arguing about argument and evidence: Disagreements and ambiguities in science education research and practice. Science Education, 2022, 106, 285-311.	3.0	2
60	Indicators of Understanding: What TAs Listen for in Student Responses. , 2008, , .		1
61	Tensions and Trade-offs in Instructional Goals for Physics Courses Aimed at Engineers. , 0, , .		1
62	How curriculum developersâ€™ cognitive theories influence curriculum development. Physical Review Physics Education Research, 2020, 16, .	2.9	1
63	How Engineering Students Think About the Roles and Responsibilities of Engineers with Respect to Broader Social and Global Impact of Engineering and Technology. , 0, , .		1
64	Problematizing Best Practices for Pairing in K-12 Student Design Teams. , 2015, , 26.1256.1.		0
65	Theorizing Can Contribute to Marginalized Students' Agency in Engineering Persistence. , 2015, , 26.1582.1.		0
66	Reality and clumsiness. Physics World, 1989, 2, 45-45.	0.0	0
67	Reply: how is Home and Sengupta's noncontextuality condition related to locality?. Foundations of Physics Letters, 1991, 4, 455-457.	0.6	0
68	The marginalized identities of sense-makers: Reframing engineering student retention. , 2010, , .		0
69	A conceptual physics class where students found meaning in calculations. , 2013, , .		0
70	Coupling epistemology and identity in explaining student interest in science. , 2013, , .		0
71	Student Epistemology About Mathematical Integration In A Physics Context: A Case Study. , 0, , .		0
72	How Physics Teachers Model Student Thinking and Plan Instructional Responses When Using Learning-Progression-Based Assessment Information. , 0, , .		0

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73	Connecting Self-Efficacy and Nature of Science Shifts in Undergraduate Research Experiences. , 0, , .		0
74	Sense-making with Inscriptions in Quantum Mechanics. , 0, , .		0
75	Attending to Scientific Practices within Undergraduate Research Experiences. , 0, , .		0
76	Rethinking the relationship between instructors and physics education researchers. Physical Review Physics Education Research, 2020, 16, .	2.9	0