Charles R Henderson

List of Publications by Year
in descending order

133 papers	3,871 citations	172457 29 h-index	144013 57 g-index
137 all docs	137 docs citations	137 times ranked	1689 citing authors

#	Article	IF	Citations
1	Facilitating change in undergraduate STEM instructional practices: An analytic review of the literature. Journal of Research in Science Teaching, 2011, 48, 952-984.	3.3	631
2	Barriers to the use of research-based instructional strategies: The influence of both individual and situational characteristics. Physical Review Physics Education Research, 2007, 3, .	1.7	290
3	Increasing the Use of Evidenceâ€Based Teaching in STEM Higher Education: A Comparison of Eight Change Strategies. Journal of Engineering Education, 2014, 103, 220-252.	3.0	272
4	Pedagogical practices and instructional change of physics faculty. American Journal of Physics, 2010, 78, 1056-1063.	0.7	215
5	Use of research-based instructional strategies in introductory physics: Where do faculty leave the innovation-decision process?. Physical Review Physics Education Research, 2012, 8, .	1.7	186
6	Impact of physics education research on the teaching of introductory quantitative physics in the United States. Physical Review Physics Education Research, 2009, 5, .	1.7	156
7	Gender discrimination in physics and astronomy: Graduate student experiences of sexism and gender microaggressions. Physical Review Physics Education Research, 2016, 12, .	2.9	123
8	Estimates of Use of Research-Based Instructional Strategies in Core Electrical or Computer Engineering Courses. IEEE Transactions on Education, 2013, 56, 393-399.	2.4	98
9	Fidelity of Implementation of Researchâ€Based Instructional Strategies (RBIS) in Engineering Science Courses. Journal of Engineering Education, 2013, 102, 394-425.	3.0	92
10	Common Concerns About the Force Concept Inventory. Physics Teacher, 2002, 40, 542-547.	0.3	77
11	Promoting instructional change in new faculty: An evaluation of the physics and astronomy new faculty workshop. American Journal of Physics, 2008, 76, 179-187.	0.7	72
12	How faculty learn about and implement research-based instructional strategies: The case of Peer Instruction. Physical Review Physics Education Research, 2016, 12, .	2.9	72
13	Towards the STEM DBER Alliance: Why We Need a Disciplineâ€Based STEM Education Research Community. Journal of Engineering Education, 2017, 106, 349-355.	3.0	52
14	The challenges of instructional change under the best of circumstances: A case study of one college physics instructor. American Journal of Physics, 2005, 73, 778-786.	0.7	47
15	What really impacts the use of active learning in undergraduate STEM education? Results from a national survey of chemistry, mathematics, and physics instructors. PLoS ONE, 2021, 16, e0247544.	2.5	47
16	Promoting instructional change: using social network analysis to understand the informal structure of academic departments. Higher Education, 2015, 70, 315-335.	4.4	46
17	Physics faculty beliefs and values about the teaching and learning of problem solving. I. Mapping the common core. Physical Review Physics Education Research, 2007, 3, .	1.7	43
18	Facilitating Change in Undergraduate STEM Education. Change, 2012, 44, 52-59.	0.5	43

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19	Framework for articulating instructional practices and conceptions. Physical Review Physics Education Research, 2007, 3, .	1.7	41
20	Creating an Instrument to Measure Student Response to Instructional Practices. Journal of Engineering Education, 2017, 106, 273-298.	3.0	39
21	From Dissemination to Propagation: A New Paradigm for Education Developers. Change, 2017, 49, 35-42.	0.5	39
22	Enabling and challenging factors in institutional reform: The case of SCALE-UP. Physical Review Physics Education Research, 2016, 12, .	2.9	39
23	Perceived affordances and constraints regarding instructorsâ€™ use of Peer Instruction: Implications for promoting instructional change. Physical Review Physics Education Research, 2016, 12, .	2.9	39
24	Quiz Corrections: Improving Learning by Encouraging Students to Reflect on Their Mistakes. Physics Teacher, 2009, 47, 581-586.	0.3	37
25	Introducing the Postsecondary Instructional Practices Survey (PIPS): A Concise, Interdisciplinary, and Easy-to-Score Survey. CBE Life Sciences Education, 2016, 15, ar53.	2.3	36
26	Designing for sustained adoption: A model of developing educational innovations for successful propagation. Physical Review Physics Education Research, 2016, 12, .	2.9	36
27	Evaluating Discipline-Based Education Research for Promotion and Tenure. Innovative Higher Education, 2018, 43, 31-39.	2.5	34
28	Grading student problem solutions: The challenge of sending a consistent message. American Journal of Physics, 2004, 72, 164-169.	0.7	33
29	Is Education Getting Lost in University Mergers?. Tertiary Education and Management, 2010, 16, 327-340.	1.1	30
30	Get a room: the role of classroom space in sustained implementation of studio style instruction. International Journal of STEM Education, 2016, 3, .	5.0	30
31	Diffusion of research-based instructional strategies: the case of SCALE-UP. International Journal of STEM Education, 2014, 1, .	5.0	28
32	Describing undergraduate STEM teaching practices: a comparison of instructor self-report instruments. International Journal of STEM Education, 2015, 2, .	5.0	27
33	Finding the leaders: an examination of social network analysis and leadership identification in STEM education change. International Journal of STEM Education, 2018, 5, 26.	5.0	25
34	Assessment of teaching effectiveness: Lack of alignment between instructors, institutions, and research recommendations. Physical Review Physics Education Research, 2014, 10, .	1.7	23
35	How Western Michigan University is approaching its commitment to sustainability through sustainability-focused courses. Journal of Cleaner Production, 2020, 253, 119741.	9.3	23
36	Evaluating the impact of malleable factors on percent time lecturing in gateway chemistry, mathematics, and physics courses. International Journal of STEM Education, 2022, 9, .	5.0	22

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37	Analysis of Propagation Plans in NSF-Funded Education Development Projects. Journal of Science Education and Technology, 2017, 26, 418-437.	3.9	21
38	Characteristics of well-propagated teaching innovations in undergraduate STEM. International Journal of STEM Education, 2017, 4, .	5.0	21
39	Faculty online learning communities: A model for sustained teaching transformation. Physical Review Physics Education Research, 2019, 15, .	2.9	21
40	Teaching about circuits at the introductory level: An emphasis on potential difference. American Journal of Physics, 2006, 74, 324-328.	0.7	20
41	WOMEN'S PERSISTENCE INTO GRADUATE ASTRONOMY PROGRAMS: THE ROLES OF SUPPORT, INTEREST, AND CAPITAL. Journal of Women and Minorities in Science and Engineering, 2014, 20, 317-340.	0.8	20
42	Beyond the Individual Instructor: Systemic Constraints in the Implementation of Research-Informed Practices. AIP Conference Proceedings, 2005, , .	0.4	17
43	Supporting sustained adoption of education innovations: The Designing for Sustained Adoption Assessment Instrument. International Journal of STEM Education, 2015, 3, .	5.0	17
44	Towards the STEM DBER Alliance: why we need a discipline-based STEM education research community. International Journal of STEM Education, 2017, 4, 14.	5.0	15
45	Supporting improvements to undergraduate STEM instruction: an emerging model for understanding instructional change teams. International Journal of STEM Education, 2019, 6, .	5.0	15
46	Contrasting grading approaches in introductory physics and quantum mechanics: The case of graduate teaching assistants. Physical Review Physics Education Research, 2017, 13, .	2.9	15
47	Instructorsâ€™ reasons for choosing problem features in a calculus-based introductory physics course. Physical Review Physics Education Research, 2010, 6, .	1.7	14
48	A comparison of electrical, computer, and chemical engineering facultys' progressions through the innovation-decision process. , 2012, , .		14
49	Teaching assistantsâ€™ beliefs regarding example solutions in introductory physics. Physical Review Physics Education Research, 2013, 9, .	1.7	14
50	Physics faculty beliefs and values about the teaching and learning of problem solving. II. Procedures for measurement and analysis. Physical Review Physics Education Research, 2007, 3, .	1.7	13
51	The challenges of changing teaching assistantsâ€™ grading practices: Requiring students to show evidence of understanding. Canadian Journal of Physics, 2018, 96, 420-437.	1.1	12
52	Design-Based Science with Communication Scaffolding Results in Productive Conversations and Improved Learning for Secondary Students. Research in Science Education, 2021, 51, 1123-1140.	2.3	12
53	How do they get here?: Paths into physics education research. Physical Review Physics Education Research, 2013, 9, .	1.7	11
54	Experiences of new faculty implementing research-based instructional strategies. AIP Conference Proceedings, 2012, , .	0.4	10

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55	Successful propagation of educational innovations: Viewpoints from principal investigators and program. AIP Conference Proceedings, 2013, , .	0.4	10
56	Analysis of Former Learning Assistantsâ€™ Views on Cooperative Learning. , 2009, , .		9
57	A classroom observation instrument to assess student response to active learning. , 2014, , .		9
58	Cognitive Science Research Can Improve Undergraduate STEM Instruction. Policy Insights From the Behavioral and Brain Sciences, 2015, 2, 51-60.	2.4	9
59	Will my student evaluations decrease if I adopt an active learning instructional strategy?. American Journal of Physics, 2018, 86, 934-942.	0.7	9
60	Educational supports and career goals of five women in a graduate astronomy program. Physical Review Physics Education Research, 2020, 16, .	2.9	9
61	The Impact of Physics Education Research on the Teaching of Introductory Quantitative Physics. , 2009, , .		8
62	Faculty Perspectives On Using Peer Instruction: A National Study. AIP Conference Proceedings, 2010, , .	0.4	8
63	Physics education research: A research subfield of physics with gender parity. Physical Review Physics Education Research, 2015, 11, .	1.7	8
64	Experiences of postdocs and principal investigators in physics education research postdoc hiring. Physical Review Physics Education Research, 2018, 14, .	2.9	8
65	Facilitating Change in Undergraduate STEM: Initial Results from an Interdisciplinary Literature Review. , 2008, , .		7
66	Faculty Grading of Quantitative Problems: A Mismatch between Values and Practice. Research in Science Education, 2013, 43, 437-455.	2.3	7
67	Towards the STEM DBER Alliance: Why we Need a Discipline-Based STEM Education Research Community. International Journal of Research in Undergraduate Mathematics Education, 2017, 3, 247-254.	1.8	7
68	Towards the STEM DBER Alliance: Why We Need a Discipline-Based, STEM-Education Research Community. Journal of Geoscience Education, 2017, 65, 215-218.	1.4	7
69	Department-Level Instructional Change: Comparing Prescribed versus Emergent Strategies. CBE Life Sciences Education, 2018, 17, ar56.	2.3	7
70	Instructorsâ€™ Beliefs and Values about Learning Problem Solving. , 0, , .		7
71	Physics graduate teaching assistants' beliefs about a grading rubric: Lessons learned. , 0, , .		7
72	Instructorsâ€™ Ideas about Problem Solving â€“ Setting Goals. , 0, , .		7

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73	Rethinking Tools for Training Teaching Assistants. , 2009, , .		6
74	Understanding Conditions for Teaching Innovation in Postsecondary Education: Development and Validation of the Survey of Climate for Instructional Improvement (SCII). International Journal of Technology in Education, 2021, 4, 166-199.	1.7	6
75	Team-based instructional change in undergraduate STEM: characterizing effective faculty collaboration. International Journal of STEM Education, 2021, 8, .	5.0	6
76	Teaching, Learning and Physics Education Research: Views of Mainstream Physics Professors. AIP Conference Proceedings, 2005, , .	0.4	5
77	Analysis of Learning Assistantsâ€™ Views of Teaching and Learning. , 2008, , .		5
78	Improving educational change agentsâ€™ efficacy in science, engineering, and mathematics education. Research in Social Problems and Public Policy, 2008, , 227-255.	0.2	5
79	13: Co-Teaching as a Faculty Development Model. To Improve the Academy, 2008, 26, 199-216.	0.4	5
80	Why Do Faculty Try Research Based Instructional Strategies?. AIP Conference Proceedings, 2010, , .	0.4	5
81	The group administered interactive questionnaire: An alternative to individual interviews. , 2012, , .		5
82	The Variation of Nontraditional Teaching Methods Across 17 Undergraduate Engineering Classrooms. , 0, , .		5
83	Instructional Goals and Grading Practices of Graduate Students after One Semester of Teaching Experience. , 0, , .		5
84	Physics Faculty and Educational Researchers: Divergent Expectations as Barriers to the Diffusion of Innovations. AIP Conference Proceedings, 2006, , .	0.4	4
85	Faculty perspectives about instructor and institutional assessments of teaching effectiveness. AIP Conference Proceedings, 2012, , .	0.4	4
86	Educational trajectories of graduate students in physics education research. Physical Review Physics Education Research, 2014, 10, .	1.7	4
87	Try, Try Again: The Power of Timing and Perseverance in Higher Education Reform. Change, 2019, 51, 50-57.	0.5	4
88	Over One Hundred Million Simulations Delivered: A Case Study of the PhET Interactive Simulations. , 0, , .		4
89	Grading Practices and Considerations of Graduate Students at the Beginning of their Teaching Assignment. , 0, , .		4
90	Graduate teaching assistants use different criteria when grading introductory physics vs. quantum mechanics problems. , 0, , .		4

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91	Pedagogical Practices of Physics Faculty in the USA. , 2009, , .		3
92	TA-designed vs. research-oriented problem solutions. , 2012, , .		3
93	Physics Education Research funding census. , 2012, , .		3
94	The graduate research field choice of women in academic physics and astronomy: A pilot study. , 2013, , .		3
95	Physics postgraduate teaching assistantsâ€™ grading approaches: conflicting goals and practices. European Journal of Physics, 2020, 41, 055701.	0.6	3
96	Departmental support structures for physics graduate students: Development and psychometric evaluation of a self-report instrument. Physical Review Physics Education Research, 2021, 17, .	2.9	3
97	Integrating numerical modeling into an introductory physics laboratory. American Journal of Physics, 2021, 89, 713-720.	0.7	3
98	Instructors' Ideas about Problem Solving - Grading. , 0, , .		3
99	Faculty Online Learning Communities to support physics teaching. , 0, , .		3
100	Measuring the forces required for circular motion. Physics Teacher, 1998, 36, 118-121.	0.3	2
101	Modeling Success: Building Community for Reform. , 2007, , .		2
102	Promoting Instructional Change in New Faculty: An Evaluation of the Physics and Astronomy New Faculty Workshop. , 2007, , .		2
103	Publishing PER Articles in AJP and PRST-PER. American Journal of Physics, 2009, 77, 581-582.	0.7	2
104	Tracking Recitation Instructorsâ€™ Awareness of Student Conceptual Difficulties. AIP Conference Proceedings, 2009, , .	0.4	2
105	Editorial:Physical Reviewin Physics Education Research 2.0. Physical Review Physics Education Research, 2012, 8, .	1.7	2
106	Department-level change: Using social network analysis to map the hidden structure of academic departments. , 2013, , .		2
107	Editorial: Call for Papers Focused Collection ofPhysical Review Special Topics - Physics Education ResearchPreparing and Supporting University Physics Educators. Physical Review Physics Education Research, 2014, 10, .	1.7	2
108	Editorial: RenamingPhysical Review Special Topicsâ€”Physics Education Research. Physical Review Physics Education Research, 2016, 12, .	2.9	2

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109	Understanding Women's Gendered Experiences in Physics and Astronomy Through Microaggressions. , 0, , .		2
110	Characteristics of well-propagated undergraduate STEM teaching innovations. , 0, , .		2
111	Using asynchronous communication to support virtual faculty learning communities. , 0, , .		2
112	SCALE-UP Implementation and Intra-Institutional Dissemination: A Case Study of Two Institutions. , 0, , .		2
113	More Than Good Curricula: A Guide For Curricular Change Agents. , 0, , .		2
114	Easier Said Than Done: A Case Study of Instructional Change Under the Best of Circumstances. AIP Conference Proceedings, 2004, , .	0.4	1
115	Diffusion of Educational Innovations via Co-Teaching. AIP Conference Proceedings, 2007, , .	0.4	1
116	Editorial: Announcing PRST-PER Focused Collections. Physical Review Physics Education Research, 2014, 10, .	1.7	1
117	Learning About Educational Change Strategies: A Study of the Successful Propagation of Peer Instruction. , 0, , .		1
118	Four Perspectives for Interpreting Social Networks. , 2018, , 55-73.		1
119	Promoting High Quality Teaching Practices in Higher Education: Lessons Learned from the USA. , 2012, , 113-137.		1
120	Examining the Diffusion of Research-Based Instructional Strategies Using Social Network Analysis: A Case Study of SCALE-UP. , 0, , .		1
121	New Directions for Physics Education Research: A Broad Perspective Analysis. AIP Conference Proceedings, 2006, , .	0.4	0
122	Variables that Correlate with Faculty Use of Research-Based Instructional Strategies. , 2010, , .		0
123	Successes and constraints in the enactment of a reform. , 2012, , .		0
124	Understanding Educational Transformation: Findings from a Survey of Past Participants of the Physics and Astronomy New Faculty Workshop. , 0, , .		0
125	Supporting faculty and staff to make better use of learning analytics data. , 0, , .		0
126	Participants' perceptions of the Faculty Online Learning Community (FOLC) experience. , 0, , .		0

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127	Do learning communities encourage potential STEM majors?. , 0, , .		0
128	Managing teams for instructional change: Understanding three types of diversity. , 0, , .		0
129	An Analysis of Community Formation in Faculty Online Learning Communities. , 0, , .		0
130	Social Network Terminology. , 2018, , 22-29.		0
131	Institutionalizing Campus Innovation and Entrepreneurship Programming by Optimizing a Faculty Grantmaking Process: A Case Study. , 0, , .		0
132	A Systematic Literature Review on Improving Success of Women Engineering Students in the U.S.. , 0, , .		0
133	A Systematic Literature Review on Improving Success of Women Engineering Students in the United States. , 0, , .		0