N Sanjay Rebello

List of Publications by Year
in descending order

88 papers	1,190 citations	361413 20 h-index	434195 31 g-index
89 all docs	89 docs citations	89 times ranked	656 citing authors

#	Article	IF	Citations
1	Quantum mechanics for everyone: Hands-on activities integrated with technology. American Journal of Physics, 2002, 70, 252-259.	0.7	109
2	Differences in visual attention between those who correctly and incorrectly answer physics problems. Physical Review Physics Education Research, 2012, 8, .	1.7	70
3	Identifying studentsâ€™ mental models of sound propagation: The role of conceptual blending in understanding conceptual change. Physical Review Physics Education Research, 2010, 6, .	1.7	60
4	Exploration of factors that affect the comparative effectiveness of physical and virtual manipulatives in an undergraduate laboratory. Physical Review Physics Education Research, 2012, 8, .	1.7	53
5	Visualizing motion in potential wells. American Journal of Physics, 1998, 66, 57-63.	0.7	43
6	Representational task formats and problem solving strategies in kinematics and work. Physical Review Physics Education Research, 2012, 8, .	1.7	43
7	The effect of distracters on student performance on the force concept inventory. American Journal of Physics, 2004, 72, 116-125.	0.7	41
8	An Interactive and Intelligent Learning System for Physics Education. IEEE Transactions on Learning Technologies, 2013, 6, 228-239.	3.2	41
9	Using conceptual blending to describe how students use mathematical integrals in physics. Physical Review Physics Education Research, 2013, 9, .	1.7	39
10	Studentsâ€™ understanding and application of the area under the curve concept in physics problems. Physical Review Physics Education Research, 2011, 7, .	1.7	38
11	Comparing Studentsâ€™ and Expertsâ€™ Understanding of the Content of a Lecture. Journal of Science Education and Technology, 2007, 16, 213-224.	3.9	36
12	StudentsÂ models of NewtonÂs second law in mechanics and electromagnetism. European Journal of Physics, 2004, 25, 81-89.	0.6	35
13	Studentsâ€™ difficulties with integration in electricity. Physical Review Physics Education Research, 2011, 7, .	1.7	35
14	Understanding student use of differentials in physics integration problems. Physical Review Physics Education Research, 2013, 9, .	1.7	34
15	Can short duration visual cues influence studentsâ€™ reasoning and eye movements in physics problems?. Physical Review Physics Education Research, 2013, 9, .	1.7	30
16	The Vocabulary of Introductory Physics and Its Implications for Learning Physics. Physics Teacher, 2003, 41, 330-336.	0.3	27
17	Investigating studentsâ€™ mental models and knowledge construction of microscopic friction. I. Implications for curriculum design and development. Physical Review Physics Education Research, 2011, 7, .	1.7	25
18	Using eye movements to measure intrinsic, extraneous, and germane load in a multimedia learning environment.. Journal of Educational Psychology, 2020, 112, 1338-1352.	2.9	25

#	Article	IF	Citations
19	The Teaching Experiment â€” What it is and what it isnâ€™t. AIP Conference Proceedings, 2004, , .	0.4	24
20	Linking attentional processes and conceptual problem solving: visual cues facilitate the automaticity of extracting relevant information from diagrams. Frontiers in Psychology, 2014, 5, 1094.	2.1	23
21	Supporting middle school studentsâ€™ science talk: A comparison of physical and virtual labs. Journal of Research in Science Teaching, 2021, 58, 392-419.	3.3	23
22	Student Explorations of Quantum Effects in LEDs and Luminescent Devices. Physics Teacher, 2004, 42, 173-179.	0.3	21
23	College Studentsâ€™ Transfer from Calculus to Physics. AIP Conference Proceedings, 2006, , .	0.4	19
24	A sequenced multimodal learning approach to support students' development of conceptual learning. Journal of Computer Assisted Learning, 2019, 35, 516-528.	5.1	18
25	Impact of a Classroom Interaction System on Student Learning. AIP Conference Proceedings, 2007, , .	0.4	17
26	Investigating studentsâ€™ mental models and knowledge construction of microscopic friction. II. Implications for curriculum design and development. Physical Review Physics Education Research, 2011, 7, .	1.7	16
27	Role of mental representations in problem solving: Studentsâ€™ approaches to nondirected tasks. Physical Review Physics Education Research, 2013, 9, .	1.7	16
28	Teaching integration with layers and representations: A case study. Physical Review Physics Education Research, 2012, 8, .	1.7	15
29	Simulating the spectra of light sources. Computers in Physics, 1998, 12, 28.	0.5	11
30	Studentsâ€™ Difficulties in Transfer of Problem Solving Across Representations. , 2009, , .		11
31	Computer simulation of pâ€“n junction devices. American Journal of Physics, 1997, 65, 765-773.	0.7	10
32	Studio optics: Adapting interactive engagement pedagogy to upper-division physics. American Journal of Physics, 2011, 79, 320-325.	0.7	10
33	Retention and Transfer from Trigonometry to Physics. AIP Conference Proceedings, 2005, , .	0.4	9
34	Comparing retrieval-based practice and peer instruction in physics learning. Physical Review Physics Education Research, 2019, 15, .	2.9	9
35	How Many Students Does It Take Before We See the Light?. Physics Teacher, 2004, 42, 216-221.	0.3	8
36	Facilitating Studentsâ€™ Problem Solving across Multiple Representations in Introductory Mechanics. AIP Conference Proceedings, 2010, , .	0.4	8

#	Article	IF	Citations
37	How Does Visual Attention Differ Between Experts and Novices on Physics Problems?. AIP Conference Proceedings, 2010, , .	0.4	8
38	How accurately can students estimate their performance on an exam and how does this relate to their actual performance on the exam?. AIP Conference Proceedings, 2012, , .	0.4	7
39	Shifting college studentsâ€™ epistemological framing using hypothetical debate problems. Physical Review Physics Education Research, 2014, 10, .	1.7	7
40	Classroom orchestration of computer simulations for science and engineering learning: a multiple-case study approach. International Journal of Science Education, 2021, 43, 1140-1171.	1.9	7
41	Emotional and cognitive effects of learning with computer simulations and computer videogames. Journal of Computer Assisted Learning, 2022, 38, 875-891.	5.1	7
42	Using ScanMatch scores to understand differences in eye movements between correct and incorrect solvers on physics problems. , 2012, , .		6
43	Fostering innovation through collaborative action research on the creation of shared instructional products by university science instructors. Educational Action Research, 2020, 28, 646-667.	1.5	6
44	Does the Teachingâˆ•Learning Interview Provide an Accurate Snapshot of Classroom Learning?. , 2009, , .		5
45	Can We Assess Efficiency and Innovation in Transfer?. , 2009, , .		5
46	Learning the physics of a scanning tunnelling microscope using a computer program. European Journal of Physics, 1997, 18, 456-461.	0.6	4
47	Studentsâ€™ understanding and perceptions of the content of a lecture. AIP Conference Proceedings, 2004, , .	0.4	4
48	Studentsâ€™ and Instructorâ€™s Impressions of Ill-structured Capstone Projects in an Advanced Electronics Lab. AIP Conference Proceedings, 2010, , .	0.4	4
49	Method for analyzing studentsâ€™ utilization of prior physics learning in new contexts. Physical Review Physics Education Research, 2010, 6, .	1.7	4
50	Simple Activities to Improve Students' Understanding of Microscopic Friction. Physics Teacher, 2012, 50, 293-295.	0.3	4
51	Designing hybrid physics labs: combining simulation and experiment for teaching computational thinking in first-year engineering. , 2019, , .		4
52	Transfer Between Paired Problems In An Interview. AIP Conference Proceedings, 2005, , .	0.4	3
53	Using Similarity Rating Tasks to Assess Case Reuse in Problem Solving. , 2009, , .		3
54	Investigating the Perceived Difficulty of Introductory Physics Problems. , 2010, , .		3

#	ARTICLE	IF	CITATIONS
55	Facilitating Strategies for Solving Work-Energy Problems in Graphical and Equational Representations. , 2010, , .		3
56	Assessing students' ability to solve introductory physics problems using integrals in symbolic and graphical representations. , 2012, , .		3
57	Characterizing student use of differential resources in physics integration problems. , 2013, , .		3
58	Refining Studentsâ€™ Explanations of an Unfamiliar Physical Phenomenon-Microscopic Friction. Research in Science Education, 2019, 49, 1177-1211.	2.3	3
59	Introductory College Physics Studentsâ€™ Explanations Of Friction And Related Phenomena At The Microscopic Level. AIP Conference Proceedings, 2005, , .	0.4	2
60	Hands-On and Minds-On Modeling Activities to Improve Students' Conceptions of Microscopic Friction. , 2007, , .		2
61	Comparing Student Learning in Mechanics Using Simulations and Hands-on Activities. , 2010, , .		2
62	Comparing the development of students' conceptions of pulleys using physical and virtual manipulatives. , 2012, , .		2
63	Do perceptually salient elements in physics problems influence students' eye movements and answer choices?. , 2013, , .		2
64	Influence of visual cueing on students' eye movements while solving physics problems. , 2014, , .		2
65	Designing Interactive Web Pages Using Activex. Computers in Physics, 1997, 11, 317.	0.5	1
66	Implications of a framework for student reasoning in an interview. AIP Conference Proceedings, 2004, , .	0.4	1
67	Learning and Dynamic Transfer Using the â€˜Constructing Physics Understandingâ€™ (CPU) Curriculum: A Case Study. AIP Conference Proceedings, 2007, , .	0.4	1
68	Students' Perceptions of Case-Reuse Based Problem Solving in Algebra-Based Physics. , 2007, , .		1
69	Preface: 2011 Physics Education Research Conference. , 2012, , .		1
70	Scaffolding students' application of the 'area under a curve' concept in physics problems. , 2012, , .		1
71	Scaffolding studentsâ€™ understanding of force in pulley systems. , 2013, , .		1
72	Using Demoshield to Create Interactive Demos on the Web. Computers in Physics, 1997, 11, 537.	0.5	0

#	Article	IF	Citations
73	A framework for student reasoning in an interview. AIP Conference Proceedings, 2004, , .	0.4	0
74	Student goals and expectations in a large-enrollment physical science class. AIP Conference Proceedings, 2004, , .	0.4	0
75	Teacher-Researcher Professional Development: Case Study at Kansas State University. AIP Conference Proceedings, 2006, , .	0.4	0
76	Use of Physical Models to Facilitate Transfer of Physics Learning to Understand Positron Emission Tomography. AIP Conference Proceedings, 2007, , .	0.4	0
77	Students' Ideas of a Blender and Perceptions of Scaffolding Activities. , 2007, , .		0
78	Studentsâ€™ Understanding of Inclined Planes Using the CoMPASS Curriculum. , 2008, , .		0
79	Use Of Structure Maps To Facilitate Problem Solving In Algebra-Based Physics. , 2008, , .		0
80	Online Data Collection and Analysis in Introductory Physics. , 2009, , .		0
81	Effects of a Prior Virtual Experience on Students' Interpretations of Real Data. , 2010, , .		0
82	Comparing students' performance on research-based conceptual assessments and traditional classroom assessments. , 2012, , .		0
83	Assessment of vertical transfer in problem solving: Mapping the problem design space. , 2012, , .		0
84	What do students learn about work in physical and virtual experiments with inclined planes?. , 2012, , .		0
85	Using Johnson-Laird's cognitive framework of sense-making to characterize engineering students' mental representations in kinematics. , 2012, , .		0
86	Adapting a theoretical framework for characterizing students' use of equations in physics problem solving. , 2012, , .		0
87	Transfer of argumentation skills in conceptual physics problem solving. , 2013, , .		0
88	Comparing the use of multimedia animations and written solutions in facilitating problem solving. , 2013, , .		0