Jochen Kuhn

List of Publications by Year
in descending order

124	2,480	30	45
papers	citations	h-index	g-index
		159585	233421

161	161	161	758
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Effects of augmented reality on learning and cognitive load in university physics laboratory courses. Computers in Human Behavior, 2020, 108, 106316.	8.5	153
2	Analyzing free fall with a smartphone acceleration sensor. Physics Teacher, 2012, 50, 182-183.	0.3	121
3	Using Smartphones as Experimental Toolsâ€"Effects on Interest, Curiosity, and Learning in Physics Education. Journal of Science Education and Technology, 2018, 27, 385-403.	3.9	113
4	Analyzing simple pendulum phenomena with a smartphone acceleration sensor. Physics Teacher, 2012, 50, 439-440.	0.3	90
5	The use of augmented reality to foster conceptual knowledge acquisition in STEM laboratory coursesâ€"Theoretical background and empirical results. British Journal of Educational Technology, 2020, 51, 611-628.	6.3	89
6	Analyzing spring pendulum phenomena with a smart-phone acceleration sensor. Physics Teacher, 2012, 50, 504-505.	0.3	81
7	Analyzing acoustic phenomena with a smartphone microphone. Physics Teacher, 2013, 51, 118-119.	0.3	69
8	Angular velocity and centripetal acceleration relationship. Physics Teacher, 2014, 52, 312-313.	0.3	65
9	Classical experiments revisited: smartphones and tablet PCs as experimental tools in acoustics and optics. Physics Education, 2014, 49, 412-418.	0.5	65
10	Physics holo.lab learning experience: using smartglasses for augmented reality labwork to foster the concepts of heat conduction. European Journal of Physics, 2018, 39, 035703.	0.6	65
11	Using mobile devices to enhance inquiry-based learning processes. Learning and Instruction, 2020, 69, 101350.	3.2	64
12	Measurement of sound velocity made easy using harmonic resonant frequencies with everyday mobile technology. Physics Teacher, 2015, 53, 120-121.	0.3	62
13	Analyzing radial acceleration with a smartphone acceleration sensor. Physics Teacher, 2013, 51, 182-183.	0.3	53
14	gPhysicsâ€"Using Smart Glasses for Head-Centered, Context-Aware Learning in Physics Experiments. IEEE Transactions on Learning Technologies, 2016, 9, 304-317.	3.2	53
15	Augmenting the thermal flux experiment: A mixed reality approach with the HoloLens. Physics Teacher, 2017, 55, 376-377.	0.3	52
16	Assessment of representational competence in kinematics. Physical Review Physics Education Research, 2017, 13, .	2.9	47
17	Using Smartphones as Experimental Toolsâ€"a Follow-up: Cognitive Effects by Video Analysis and Reduction of Cognitive Load by Multiple Representations. Journal of Science Education and Technology, 2020, 29, 303-317.	3.9	46
18	Experiments Using Cell Phones in Physics Classroom Education: The Computer-Aided <i>g</i> Determination. Physics Teacher, 2011, 49, 383-384.	0.3	44

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19	ARETT: Augmented Reality Eye Tracking Toolkit for Head Mounted Displays. Sensors, 2021, 21, 2234.	3.8	44
20	Instruction-based clinical eye-tracking study on the visual interpretation of divergence: How do students look at vector field plots?. Physical Review Physics Education Research, 2018, 14, .	2.9	41
21	Analyzing the acoustic beat with mobile devices. Physics Teacher, 2014, 52, 248-249.	0.3	40
22	The spinning disc: studying radial acceleration and its damping process with smartphone acceleration sensors. Physics Education, 2014, 49, 137-140.	0.5	40
23	Video analysis on tablet computers to investigate effects of air resistance. Physics Teacher, 2016, 54, 440-441.	0.3	40
24	Video analysis of projectile motion using tablet computers as experimental tools. Physics Education, 2014, 49, 37-40.	0.5	39
25	Augmenting Kirchhoffâ€™s laws: Using augmented reality and smartglasses to enhance conceptual electrical experiments for high school students. Physics Teacher, 2019, 57, 52-53.	0.3	37
26	iRadioactivity â€" Possibilities and Limitations for Using Smartphones and Tablet PCs as Radioactive Counters. Physics Teacher, 2014, 52, 351-356.	0.3	35
27	Context-based science education by newspaper story problems: A study on motivation and learning effects. Perspectives in Science, 2014, 2, 5-21.	0.6	35
28	Student understanding of graph slope and area under a curve: A replication study comparing first-year physics and economics students. Physical Review Physics Education Research, 2019, 15, .	2.9	35
29	Analyzing collision processes with the smartphone acceleration sensor. Physics Teacher, 2014, 52, 118-119.	0.3	33
30	Acoustic measurements of bouncing balls and the determination of gravitational acceleration. Physics Teacher, 2013, 51, 312-313.	0.3	31
31	RELEVANT INFORMATION ABOUT USING A MOBILE PHONE ACCELERATION SENSOR IN PHYSICS EXPERIMENTS. American Journal of Physics, 2014, 82, 94-94.	0.7	30
32	Diffraction experiments with infrared remote controls. Physics Teacher, 2012, 50, 118-119.	0.3	28
33	Analyzing elevator oscillation with the smartphone acceleration sensors. Physics Teacher, 2014, 52, 55-56.	0.3	28
34	Visual attention while solving the test of understanding graphs in kinematics: an eye-tracking analysis. European Journal of Physics, 2020, 41, 025701.	0.6	25
35	Authentische Aufgaben im theoretischen Rahmen von Instruktions- und Lehr-Lern-Forschung. , 2010, , .		23
36	Visual cues improve studentsâ€™ understanding of divergence and curl: Evidence from eye movements during reading and problem solving. Physical Review Physics Education Research, 2019, 15, .	2.9	23

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37	Video-based problems in introductory mechanics physics courses. European Journal of Physics, 2014, 35, 055019.	0.6	22
38	Glass-physics. , 2015, , .		22
39	Investigating Dynamic Visualizations of Multiple Representations Using Mobile Video Analysis in Physics Lessons. Zeitschrift FÃ¼r Didaktik Der Naturwissenschaften, 2020, 26, 123-142.	0.6	20
40	FÃ¶rderung von ReprÃsentationskompetenz und Experimentbezug in den vorlesungsbegleitenden Ãœbungen zur Experimentalphysik. Zeitschrift FÃ¼r Didaktik Der Naturwissenschaften, 2018, 24, 17-34.	0.6	19
41	Studentsâ€™ understanding of non-inertial frames of reference. Physical Review Physics Education Research, 2020, 16, .	2.9	19
42	Integrated foreign exchange risk management: The role of import in medium-sized manufacturing firms. Journal of Multinational Financial Management, 2010, 20, 235-250.	2.3	16
43	Entropy based transition analysis of eye movement on physics representational competence. , 2016, , .		16
44	Changes in Studentsâ€™ Understanding of and Visual Attention on Digitally Represented Graphs Across Two Domains in Higher Education: A Postreplication Study. Frontiers in Psychology, 2020, 11, 2090.	2.1	16
45	Founder family influence and foreign exchange risk management. International Journal of Managerial Finance, 2011, 7, 38-67.	1.1	14
46	Determining ball velocities with smartphones. Physics Teacher, 2014, 52, 376-377.	0.3	13
47	Tunnel pressure waves â€“ A smartphone inquiry on rail travel. Physics Teacher, 2016, 54, 118-119.	0.3	13
48	Towards an intelligent textbook. , 2016, , .		13
49	Rotational and frictional dynamics of the slamming of a door. American Journal of Physics, 2017, 85, 30-37.	0.7	13
50	Cognitive State Measurement on Learning Materials by Utilizing Eye Tracker and Thermal Camera. , 2017, , .		12
51	Test of understanding graphs in kinematics: Item objectives confirmed by clustering eye movement transitions. Physical Review Physics Education Research, 2021, 17, .	2.9	12
52	Smartphones & Co. in Physics Education: Effects of Learning with New Media Experimental Tools in Acoustics. , 2015, , 253-269.		12
53	Physics education with Google Glass gPhysics experiment app. , 2014, , .		11
54	Cracking knuckles â€” A smartphone inquiry on bioacoustics. Physics Teacher, 2015, 53, 307-308.	0.3	11

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55	A study on representational competence in physics using mobile eye tracking systems. , 2016, , .		11
56	Mobile Eye-Tracking Data Analysis Using Object Detection via YOLO v4. Sensors, 2021, 21, 7668.	3.8	11
57	Using smartphones and tablet PCs for <i>Î²</i> ^{âˆ’} -spectroscopy in an educational experimental setup. European Journal of Physics, 2014, 35, 065001.	0.6	10
58	Lernen im Kontext. , 2018, , 193-207.		10
59	Harmonic Resonances in Metal Rods â€“ Easy Experimentation with a Smartphone and Tablet PC. Physics Teacher, 2016, 54, 163-167.	0.3	9
60	Coupled pendulums on a clothesline. Physics Teacher, 2018, 56, 404-405.	0.3	9
61	FÃ¶rderung von KonzeptverstÃ¤ndnis und ReprÃ¤sentationskompetenz durch Tablet-PC-gestÃ¼tzte Videoanalyse. Zeitschrift FÃ¼r Didaktik Der Naturwissenschaften, 2019, 25, 1-24.	0.6	9
62	Comparing Two Subjective Rating Scales Assessing Cognitive Load During Technology-Enhanced STEM Laboratory Courses. Frontiers in Education, 2021, 6, .	2.1	9
63	Inventory for the assessment of representational competence of vector fields. Physical Review Physics Education Research, 2021, 17, .	2.9	9
64	The right frame of reference makes it simple: an example of introductory mechanics supported by video analysis of motion. European Journal of Physics, 2015, 36, 015004.	0.6	8
65	Augmented Learning on Anticipating Textbooks with Eye Tracking. , 2018, , 387-398.		8
66	Making the invisible visible: Visualization of the connection between magnetic field, electric current, and Lorentz force with the help of augmented reality. Physics Teacher, 2020, 58, 438-439.	0.3	8
67	The Effects of Augmented Reality: A Comparative Study in an Undergraduate Physics Laboratory Course. , 2020, , .		8
68	Augmented Reality for Presenting Real-Time Data During Studentsâ€™ Laboratory Work: Comparing a Head-Mounted Display With a Separate Display. Frontiers in Psychology, 2022, 13, 804742.	2.1	8
69	Determining the speed of sound with stereo headphones. Physics Teacher, 2012, 50, 308-309.	0.3	7
70	Going nuts: Measuring free-fall acceleration by analyzing the sound of falling metal pieces. Physics Teacher, 2016, 54, 182-183.	0.3	7
71	Erhebung von reprÃ¤sentationaler KohÃ¤renzfÃ¤higkeit von SchÃ¼lerinnen und SchÃ¼lern im Themenbereich Strahlenoptik. Zeitschrift FÃ¼r Didaktik Der Naturwissenschaften, 2017, 23, 181-203.	0.6	7
72	Physik mit Smartphones und Tabletâ€PCs. Physik in Unserer Zeit, 2013, 44, 44-45.	0.0	6

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73	Any problems? a wearable sensor-based platform for representational learning-analytics.. , 2016, , .		6
74	Science education with handheld devices: A comparison of Nintendo WiiMote and iPod touch for kinematics learning. Perspectives in Science, 2016, 10, 13-18.	0.6	6
75	The dynamics of the magnetic linear accelerator examined by video motion analysis. Physics Teacher, 2018, 56, 484-485.	0.3	6
76	Validation of Cognitive Load During Inquiry-Based Learning With Multimedia Scaffolds Using Subjective Measurement and Eye Movements. Frontiers in Psychology, 2021, 12, 703857.	2.1	6
77	Smart Sensors for Augmented Electrical Experiments. Sensors, 2022, 22, 256.	3.8	6
78	Einfluss visueller Hilfen und rÃumlicher FÃhigkeiten auf die graphische Interpretation von Vektorfeldern: Eine Eye-Tracking-Untersuchung. Zeitschrift FÃ¼r Didaktik Der Naturwissenschaften, 2021, 27, 181-201.	0.6	5
79	iMobilePhysics: Seamless Learning durch Experimente mit Smartphones & Tablets in Physik. Zeitschrift FÃ¼r Hochschulentwicklung, 2016, 11, .	0.1	5
80	Motivational outcomes of the science outreach lab S'Cool <scp>LAB</scp> at <scp>CERN</scp>: A multilevel analysis. Journal of Research in Science Teaching, 2022, 59, 930-968.	3.3	5
81	Acoustic tube models of the human vocal tract for the university classroom. European Journal of Physics, 2020, 41, 065804.	0.6	4
82	Experiments with mobile devices â€” A retrospective on 10 years of iPhysicsLabs. Physics Teacher, 2022, 60, 88-89.	0.3	4
83	Ton und Klang mit Audio Kit. Physik in Unserer Zeit, 2013, 44, 151-152.	0.0	3
84	Die App Oszilloskop analysiert Schall oder elektrische Signale. Physik in Unserer Zeit, 2014, 45, 150-151.	0.0	3
85	Adaptation of acoustic model experiments of STM via smartphones and tablets. Physics Teacher, 2017, 55, 436-437.	0.3	3
86	HyperMind Builder. , 2018, , .		3
87	Smartphone als GeigerzÃhler. Physik in Unserer Zeit, 2013, 44, 253-255.	0.0	2
88	Magnetfelder messen mit Teslameter 11th. Physik in Unserer Zeit, 2016, 47, 45-46.	0.0	2
89	Evaluating similarity measures for gaze patterns in the context of representational competence in physics education. , 2018, , .		2
90	Picture Bias in Upper-division Physics Education. , 2019, , 135-142.		2

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91	Video analysis to examine Keplerâ€™s laws of planetary motion. Physics Teacher, 2021, 59, 660-661.	0.3	2
92	Comparison of Written and Spoken Instruction to Foster Coordination between Diagram and Equation in Undergraduate Physics Education. Human Behavior and Emerging Technologies, 2022, 2022, 1-13.	4.4	2
93	Beschleunigungen messen mit SPARKvue. Physik in Unserer Zeit, 2013, 44, 97-98.	0.0	1
94	Beschleunigungspfeile mit AccelVisu. Physik in Unserer Zeit, 2013, 44, 306-308.	0.0	1
95	Bewegungen mit der App Video Analysis analysieren. Physik in Unserer Zeit, 2015, 46, 98-99.	0.0	1
96	Die smarte Lupe. Physik in Unserer Zeit, 2016, 47, 307-308.	0.0	1
97	Noise Immission Analyzer - Eine App misst den Schalldruckpegel. Physik in Unserer Zeit, 2017, 48, 45-46.	0.0	1
98	The flashing light bulb: A quantitative introduction to the theory of alternating current. Physics Teacher, 2021, 59, 138-139.	0.3	1
99	Smarte Aufgaben zur Mechanik und WÃrme. , 2017, , .		1
100	Using Augmented Reality in an Inquiry-Based Physics Laboratory Course. Communications in Computer and Information Science, 2021, , 177-198.	0.5	1
101	Gaze-Based Prediction of Studentsâ€™ Understanding of Physics Line-Graphs: An Eye-Tracking-Data Based Machine-Learning Approach. Communications in Computer and Information Science, 2021, , 450-467.	0.5	1
102	Analyzing student understanding of vector field plots with respect to divergence. , 0, , .		1
103	Visual understanding of divergence and curl: Visual cues promote better learning. , 0, , .		1
104	The Sound of a Laser Blaster: Acoustic Dispersion in Metal Springs Analyzed with Mobile Devices and Open-Source PC Audio Software. Physics Teacher, 2022, 60, 28-33.	0.3	1
105	â€œParticlesâ€•simuliert ein ideales Gas. Physik in Unserer Zeit, 2014, 45, 46-47.	0.0	0
106	Empfangssignale untersuchen mit Network Signal Info. Physik in Unserer Zeit, 2014, 45, 99-100.	0.0	0
107	Die App Physics Toolbox Light Sensor. Physik in Unserer Zeit, 2015, 46, 201-203.	0.0	0
108	Resonanzen mit <i>Spectrum View Plus</i> messen. Physik in Unserer Zeit, 2015, 46, 252-253.	0.0	0

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109	HÃ¶henmessungen Ã¼ber Luftdruckmessungen. Physik in Unserer Zeit, 2015, 46, 307-308.	0.0	0
110	Ein Blick auf die Herzfrequenz mit Cardiio. Physik in Unserer Zeit, 2016, 47, 201-202.	0.0	0
111	LÃngen- und HÃ¶henmessungen per App. Physik in Unserer Zeit, 2016, 47, 150-151.	0.0	0
112	Exzellenzstrategie und Hochschuldidaktik - (neue) Chancen und Herausforderungen fÃ¼r Fachdidaktik?. Chemkon - Chemie Konkret, Forum Fuer Unterricht Und Didaktik, 2016, 23, 161-162.	0.4	0
113	Apps, die beim LÃ¼ften helfen. Physik in Unserer Zeit, 2016, 47, 98-99.	0.0	0
114	Quantifying Gaze-Based Strategic Patterns in Physics Vector Field Divergence. Lecture Notes in Computer Science, 2021, , 465-481.	1.3	0
115	Hands-on Experiment for Modeling the Baumgartner Jump Using Free-Fall Kinematics with Drag. Physics Teacher, 2021, 59, 111-113.	0.3	0
116	Shepard scale produced and analyzed with mobile devices. Physics Teacher, 2021, 59, 378-379.	0.3	0
117	Different approaches to helping students develop conceptual understanding in university physics. Journal of Physics: Conference Series, 2021, 1929, 012001.	0.4	0
118	Side window buffeting: a smartphone investigation on a car trip. European Journal of Physics, 2021, 42, 065803.	0.6	0
119	Studentsâ€™ Visual Attention While Solving Multiple Representation Problems in Upper-Division Physics. , 2018, , 67-87.		0
120	Akustik. , 2019, , 103-164.		0
121	Smartglasses as Assistive Tools for Undergraduate and Introductory STEM Laboratory Courses. , 2019, , 35-58.		0
122	Kinematik und Dynamik. , 2019, , 9-61.		0
123	Smartphone und Tablet-PC als mobiles Mini-Labor. , 2019, , 1-7.		0
124	Mechanische Schwingungen und Wellen. , 2019, , 83-102.		0