

Charles Q Xie

List of Publications by Year in descending order

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Version: 2024-02-01

50
papers

1,089
citations

394421

19
h-index

454955

30
g-index

50
all docs

50
docs citations

50
times ranked

760
citing authors

#	ARTICLE	IF	CITATIONS
1	Using learning analytics to support students'™ engineering design: the angle of prediction. Interactive Learning Environments, 2023, 31, 2594-2611.	6.4	14
2	The role of self-regulated learning on science and design knowledge gains in engineering projects. Interactive Learning Environments, 2023, 31, 87-99.	6.4	6
3	Learning Analytics for Assessing Hands-on Laboratory Skills in Science Classrooms Using Bayesian Network Analysis. Research in Science Education, 2023, 53, 425-444.	2.3	4
4	Augmented Reality in Science Laboratories: Investigating High School Students'™ Navigation Patterns and Their Effects on Learning Performance. Journal of Educational Computing Research, 2022, 60, 777-803.	5.5	12
5	Using machine learning to predict engineering technology students'™ success with computer-aided design. Computer Applications in Engineering Education, 2022, 30, 852-862.	3.4	7
6	Engaging Students in Distance Learning of Science With Remote Labs 2.0. IEEE Transactions on Learning Technologies, 2022, 15, 15-31.	3.2	12
7	Self-regulated learning as a complex dynamical system: Examining students' STEM learning in a simulation environment. Learning and Individual Differences, 2022, 95, 102144.	2.7	9
8	Automatic Assessment of Students'™ Engineering Design Performance Using a Bayesian Network Model. Journal of Educational Computing Research, 2021, 59, 230-256.	5.5	22
9	How Does Augmented Observation Facilitate Multimodal Representational Thinking? Applying Deep Learning to Decode Complex Student Construct. Journal of Science Education and Technology, 2021, 30, 210-226.	3.9	20
10	Reciprocal Relations Between Students'™ Evaluation, Reformulation Behaviors, and Engineering Design Performance Over Time. Journal of Science Education and Technology, 2021, 30, 595-607.	3.9	3
11	Predicting Sequential Design Decisions Using the Function-Behavior-Structure Design Process Model and Recurrent Neural Networks. Journal of Mechanical Design, Transactions of the ASME, 2021, 143, .	2.9	15
12	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
13	MODELLING AND PROFILING STUDENT DESIGNERS'™ COGNITIVE COMPETENCIES IN COMPUTER-AIDED DESIGN. Proceedings of the Design Society, 2021, 1, 2157-2166.	0.8	1
14	Enhancing distance learning of science'™Impacts of remote labs 2.0 on students' behavioural and cognitive engagement. Journal of Computer Assisted Learning, 2021, 37, 1606-1621.	5.1	10
15	Chemistry on the Cloud: From Wet Labs to Web Labs. Journal of Chemical Education, 2021, 98, 2840-2847.	2.3	11
16	Profiling self-regulation behaviors in STEM learning of engineering design. Computers and Education, 2020, 143, 103669.	8.3	58
17	Invisibility Cloaks and Hot Reactions: Applying Infrared Thermography in the Chemistry Education Laboratory. Journal of Chemical Education, 2020, 97, 710-718.	2.3	10
18	Examining temporal dynamics of self-regulated learning behaviors in STEM learning: A network approach. Computers and Education, 2020, 158, 103987.	8.3	31

#	ARTICLE	IF	CITATIONS
19	Predicting human design decisions with deep recurrent neural network combining static and dynamic data. <i>Design Science</i> , 2020, 6, .	2.1	13
20	Longitudinal clustering of students' self-regulated learning behaviors in engineering design. <i>Computers and Education</i> , 2020, 153, 103899.	8.3	32
21	Going through a phase: Infrared cameras in a teaching sequence on evaporation and condensation. <i>American Journal of Physics</i> , 2019, 87, 577-582.	0.7	7
22	The relationship between design reflectivity and conceptions of informed design among high school students. <i>European Journal of Engineering Education</i> , 2019, 44, 123-136.	2.3	2
23	A Computer-Aided Design Based Research Platform for Design Thinking Studies. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2019, 141, .	2.9	22
24	Are their designs iterative or fixated? Investigating design patterns from student digital footprints in computer-aided design software. <i>International Journal of Technology and Design Education</i> , 2018, 28, 819-841.	2.6	11
25	Learning and teaching engineering design through modeling and simulation on a CAD platform. <i>Computer Applications in Engineering Education</i> , 2018, 26, 824-840.	3.4	75
26	Bridging the design-science gap with tools: Science learning and design behaviors in a simulated environment for engineering design. <i>Journal of Research in Science Teaching</i> , 2017, 54, 1049-1096.	3.3	65
27	Infrared cameras in science education. <i>Infrared Physics and Technology</i> , 2016, 75, 150-152.	2.9	30
28	An exploratory study of informed engineering design behaviors associated with scientific explanations. <i>International Journal of STEM Education</i> , 2015, 2, .	5.0	66
29	PUPILS' EARLY EXPLORATIONS OF THERMOIMAGING TO INTERPRET HEAT AND TEMPERATURE. <i>Journal of Baltic Science Education</i> , 2014, 13, 118-132.	1.0	19
30	Interactive Heat Transfer Simulations for Everyone. <i>Physics Teacher</i> , 2012, 50, 237-240.	0.3	50
31	Computational Experiments for Science Education. <i>Science</i> , 2011, 332, 1516-1517.	12.6	33
32	Visualizing Chemistry with Infrared Imaging. <i>Journal of Chemical Education</i> , 2011, 88, 881-885.	2.3	42
33	Infrared Imaging for Inquiry-Based Learning. <i>Physics Teacher</i> , 2011, 49, 368-372.	0.3	50
34	Applying Computational Science to Education: The Molecular Workbench Paradigm. <i>Computing in Science and Engineering</i> , 2008, 10, 24-27.	1.2	24
35	Molecular Dynamics Simulations of Chemical Reactions for Use in Education. <i>Journal of Chemical Education</i> , 2006, 83, 77.	2.3	74
36	Glycogen phosphorylase inhibitors: A free energy perturbation analysis of glucopyranose spirohydantoin analogues. <i>Proteins: Structure, Function and Bioinformatics</i> , 2005, 61, 984-998.	2.6	25

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37	Electron transfer through fluctuating bridges: On the validity of the superexchange mechanism and time-dependent tunneling matrix elements. <i>Journal of Chemical Physics</i> , 2001, 115, 9444-9462.	3.0	38
38	Protein electron transfer: a numerical study of tunneling through fluctuating bridges. <i>Chemical Physics Letters</i> , 1999, 312, 237-246.	2.6	45
39	Dynamics of Adatom Self-Diffusion and Island Morphology Evolution at a Cu(100) Surface. <i>Physica Status Solidi (B): Basic Research</i> , 1998, 207, 153-170.	1.5	4
40	Semiempirical tight-binding interatomic potentials based on the Hubbard model. <i>Physical Review B</i> , 1997, 56, 5235-5242.	3.2	8
41	Interatomic potentials between distinct atoms from first-principles calculation and lattice-inversion method. <i>Journal of Applied Physics</i> , 1997, 82, 578-582.	2.5	49
42	Matrix-inversion method: Applications to MÃ¶bius inversion and deconvolution. <i>Physical Review E</i> , 1995, 52, 6055-6065.	2.1	5
43	Unified inversion technique for fermion and boson integral equations. <i>Physical Review E</i> , 1995, 52, 351-355.	2.1	4
44	Recovery of an N-body potential from a universal cohesion equation. <i>Physical Review B</i> , 1995, 51, 15856-15860.	3.2	9
45	A lattice inversion method to construct the alloy pair potential for the embedded-atom method. <i>Journal of Physics Condensed Matter</i> , 1994, 6, 11015-11025.	1.8	12
46	Elastic Constants and Phonon Dispersion of Amorphous Copper with Embedded-Atom Force. <i>Physica Status Solidi (B): Basic Research</i> , 1994, 186, 383-391.	1.5	2
47	Application of Lattice Inversion Method to Embedded-Atom Method. <i>Physica Status Solidi (B): Basic Research</i> , 1994, 186, 393-402.	1.5	11
48	Chen-MÃ¶bius inversion theorem and a structural representation of crystallographic direction families. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1993, 184, 119-126.	2.1	7
49	Work in Progress: Visualizing Design Team Analytics for Representing and Understanding Design Teams' Process. , 0, , .		1
50	Developing Instructional Design Agents to Support Novice and K-12 Design Education. , 0, , .		2