

# Kyle E Niemeyer

## List of Publications by Year in descending order

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Version: 2024-02-01

57  
papers

1,508  
citations

516561

16  
h-index

377752

34  
g-index

70  
all docs

70  
docs citations

70  
times ranked

1749  
citing authors

#	ARTICLE	IF	CITATIONS
1	Assessing diffusion model impacts on enstrophy and flame structure in turbulent lean premixed flames. <i>Combustion Theory and Modelling</i> , 2022, 26, 712-727.	1.0	3
2	A systematic method for selecting molecular descriptors as features when training models for predicting physiochemical properties. <i>Fuel</i> , 2022, 321, 123836.	3.4	19
3	Accelerating reactive-flow simulations using vectorized chemistry integration. <i>Computer Physics Communications</i> , 2022, 278, 108409.	3.0	1
4	Smouldering combustion in cellulose and hemicellulose mixtures: Examining the roles of density, fuel composition, oxygen concentration, and moisture content. <i>Combustion Theory and Modelling</i> , 2022, 26, 831-855.	1.0	2
5	Applying the swept rule for solving explicit partial differential equations on heterogeneous computing systems. <i>Journal of Supercomputing</i> , 2021, 77, 1976-1997.	2.4	1
6	Assessing the impact of multicomponent diffusion in direct numerical simulations of premixed, high-Karlovitz, turbulent flames. <i>Combustion and Flame</i> , 2021, 223, 216-229.	2.8	6
7	BFM17 v1.0: a reduced biogeochemical flux model for upper-ocean biophysical simulations. <i>Geoscientific Model Development</i> , 2021, 14, 2419-2442.	1.3	1
8	Improved Chemical Kinetic Model Reduction in pyMARS for Liquid Propellants. , 2021, , .		0
9	Applying the Swept Rule for Solving Two-Dimensional Partial Differential Equations on Heterogeneous Architectures. <i>Mathematical and Computational Applications</i> , 2021, 26, 52.	0.7	1
10	A fast, low-memory, and stable algorithm for implementing multicomponent transport in direct numerical simulations. <i>Journal of Computational Physics</i> , 2020, 406, 109185.	1.9	5
11	Reduced Gas-Phase Kinetic Models for Burning of Douglas Fir. <i>Frontiers in Mechanical Engineering</i> , 2019, 5, .	0.8	5
12	Predicting fuel low-temperature combustion performance using Fourier-transform infrared absorption spectra of neat hydrocarbons. <i>Fuel</i> , 2019, 242, 343-344.	3.4	3
13	The community atmospheric chemistry box model CAABA/MECCA-4.0. <i>Geoscientific Model Development</i> , 2019, 12, 1365-1385.	1.3	54
14	A Project-Based Course on Software Development for (Engineering) Research. <i>Lecture Notes in Computer Science</i> , 2019, , 401-407.	1.0	1
15	Computational study of the effects of density, fuel content, and moisture content on smoldering propagation of cellulose and hemicellulose mixtures. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 4091-4098.	2.4	9
16	Effects of fuel content and density on the smoldering characteristics of cellulose and hemicellulose. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 4107-4116.	2.4	13
17	pyMARS: automatically reducing chemical kinetic models in Python. <i>Journal of Open Source Software</i> , 2019, 4, 1543.	2.0	11
18	ChemKED: A Human- and Machine-Readable Data Standard for Chemical Kinetics Experiments. <i>International Journal of Chemical Kinetics</i> , 2018, 50, 135-148.	1.0	17

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19	Assessing impacts of discrepancies in model parameters on autoignition model performance: A case study using butanol. <i>Combustion and Flame</i> , 2018, 190, 284-292.	2.8	5
20	Accelerating solutions of one-dimensional unsteady PDEs with GPU-based swept time-space decomposition. <i>Journal of Computational Physics</i> , 2018, 357, 338-352.	1.9	5
21	Accelerating finite-rate chemical kinetics with coprocessors: Comparing vectorization methods on GPUs, MICs, and CPUs. <i>Computer Physics Communications</i> , 2018, 226, 18-29.	3.0	14
22	Effects of Langmuir Turbulence on Upper Ocean Carbonate Chemistry. <i>Journal of Advances in Modeling Earth Systems</i> , 2018, 10, 3030-3048.	1.3	9
23	Using SIMD and SIMT vectorization to evaluate sparse chemical kinetic Jacobian matrices and thermochemical source terms. <i>Combustion and Flame</i> , 2018, 198, 186-204.	2.8	6
24	FACE Gasoline Surrogates Formulated by an Enhanced Multivariate Optimization Framework. <i>Energy &amp; Fuels</i> , 2018, 32, 7916-7932.	2.5	12
25	Analysis of an Approach for Detecting Arc Positions During Vacuum Arc Remelting Based on Magnetic Flux Density Measurements. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2018, 140, .	1.3	1
26	The case for openness in engineering research. <i>F1000Research</i> , 2018, 7, 501.	0.8	1
27	The principles of tomorrow's university. <i>F1000Research</i> , 2018, 7, 1926.	0.8	6
28	Fourth Workshop on Sustainable Software for Science: Practice and Experiences (WSSSPE4). <i>Journal of Open Research Software</i> , 2018, 6, 10.	2.7	9
29	Journal of Open Source Software (JOSS): design and first-year review. <i>PeerJ Computer Science</i> , 2018, 4, e147.	2.7	42
30	The case for openness in engineering research. <i>F1000Research</i> , 2018, 7, 501.	0.8	3
31	Reduced Chemistry for Butanol Isomers at Engine-Relevant Conditions. <i>Energy &amp; Fuels</i> , 2017, 31, 867-881.	2.5	12
32	pyJac: Analytical Jacobian generator for chemical kinetics. <i>Computer Physics Communications</i> , 2017, 215, 188-203.	3.0	55
33	Effects of oil and water contamination on natural gas engine combustion processes. <i>Journal of Natural Gas Science and Engineering</i> , 2017, 41, 30-39.	2.1	2
34	An investigation of GPU-based stiff chemical kinetics integration methods. <i>Combustion and Flame</i> , 2017, 179, 312-324.	2.8	15
35	A multi-disciplinary perspective on emergent and future innovations in peer review. <i>F1000Research</i> , 2017, 6, 1151.	0.8	62
36	A multi-disciplinary perspective on emergent and future innovations in peer review. <i>F1000Research</i> , 2017, 6, 1151.	0.8	134

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37	Predicting fuel research octane number using Fourier-transform infrared absorption spectra of neat hydrocarbons. <i>Fuel</i> , 2016, 183, 359-365.	3.4	46
38	The Challenge and Promise of Software Citation for Credit, Identification, Discovery, and Reuse. <i>Journal of Data and Information Quality</i> , 2016, 7, 1-5.	1.5	11
39	Report on the Third Workshop on Sustainable Software for Science: Practice and Experiences (WSSPE3). <i>Journal of Open Research Software</i> , 2016, 4, 37.	2.7	15
40	A Novel Fuel Performance Index for Low-Temperature Combustion Engines Based on Operating Envelopes in Light-Duty Driving Cycle Simulations. <i>Journal of Engineering for Gas Turbines and Power</i> , 2015, 137, .	0.5	10
41	Reduced Chemistry for a Gasoline Surrogate Valid at Engine-Relevant Conditions. <i>Energy &amp; Fuels</i> , 2015, 29, 1172-1185.	2.5	31
42	An automated target species selection method for dynamic adaptive chemistry simulations. <i>Combustion and Flame</i> , 2015, 162, 1358-1374.	2.8	19
43	Investigation of the LTC fuel performance index for oxygenated reference fuel blends. <i>Fuel</i> , 2015, 155, 14-24.	3.4	16
44	Development of efficient and accurate skeletal mechanisms for hydrocarbon fuels and kerosene surrogate. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2015, 31, 732-740.	1.5	6
45	Counterflow ignition of n-butanol at atmospheric and elevated pressures. <i>Combustion and Flame</i> , 2015, 162, 3596-3611.	2.8	14
46	Recent progress and challenges in exploiting graphics processors in computational fluid dynamics. <i>Journal of Supercomputing</i> , 2014, 67, 528-564.	2.4	74
47	Accelerating moderately stiff chemical kinetics in reactive-flow simulations using GPUs. <i>Journal of Computational Physics</i> , 2014, 256, 854-871.	1.9	55
48	Mechanism reduction for multicomponent surrogates: A case study using toluene reference fuels. <i>Combustion and Flame</i> , 2014, 161, 2752-2764.	2.8	59
49	GPU-Based Parallel Integration of Large Numbers of Independent ODE Systems. , 2014, , 159-182.		2
50	DRGEP-based mechanism reduction strategies: graph search algorithms and skeletal primary reference fuel mechanisms. , 2011, , .		5
51	On the importance of graph search algorithms for DRGEP-based mechanism reduction methods. <i>Combustion and Flame</i> , 2011, 158, 1439-1443.	2.8	88
52	Skeletal Mechanism Generation of Surrogate Jet Fuels for Aero propulsion Modeling. , 2010, , .		1
53	Skeletal mechanism generation for surrogate fuels using directed relation graph with error propagation and sensitivity analysis. <i>Combustion and Flame</i> , 2010, 157, 1760-1770.	2.8	281
54	Three-dimensional surface texture visualization of bone tissue through epifluorescence-based serial block face imaging. <i>Journal of Microscopy</i> , 2009, 236, 52-59.	0.8	26

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55	Skeletal Mechanism Generation of Surrogate Fuels Using Directed Relation Graph with Error Propagation and Sensitivity Analysis. , 2009, , .		5
56	A multi-disciplinary perspective on emergent and future innovations in peer review. F1000Research, 0, 6, 1151.	0.8	14
57	Software citation principles. PeerJ Computer Science, 0, 2, e86.	2.7	150