Ray W Grout

List of Publications by Year
in descending order

34 papers	749 citations	840776 11 h-index	839539 18 g-index
34 all docs	34 docs citations	34 times ranked	675 citing authors

#	Article	IF	Citations
1	Deep reinforcement learning for dynamic control of fuel injection timing in multi-pulse compression ignition engines. International Journal of Engine Research, 2022, 23, 1503-1521.	2.3	9
2	Energy Use in Quantum Data Centers: Scaling the Impact of Computer Architecture, Qubit Performance, Size, and Thermal Parameters. IEEE Transactions on Sustainable Computing, 2022, 7, 864-874.	3.1	6
3	An error-controlled adaptive time-stepping method for particle advancement in coupled CFD-DEM simulations. Powder Technology, 2021, 379, 203-216.	4.2	5
4	Visualization of Jet Impingement and Ignition in a Piston-cylinder Chamber. , 2021, , .		1
5	Adaptive mesh based combustion simulations of direct fuel injection effects in a supersonic cavity flame-holder. Combustion and Flame, 2021, 232, 111531.	5.2	31
6	Deep learning-based model for progress variable dissipation rate in turbulent premixed flames. Proceedings of the Combustion Institute, 2021, 38, 2929-2938.	3.9	16
7	Experimental and numerical investigation of the Advanced Fuel Ignition Delay Analyzer (AFIDA) constant-volume combustion chamber as a research platform for fuel chemical kinetic mechanism validation. Fuel, 2020, 265, 116929.	6.4	21
8	Deep learning for presumed probability density function models. Combustion and Flame, 2019, 208, 436-450.	5.2	45
9	A Bayesian approach to calibrating hydrogen flame kinetics using many experiments and parameters. Combustion and Flame, 2019, 205, 305-315.	5.2	14
10	Impingement of a Supercritical Carbon Dioxide Jet on a Planar Surface. , 2019, , .		1
11	Iterative Importance Sampling Algorithms for Parameter Estimation. SIAM Journal of Scientific Computing, 2018, 40, B329-B352.	2.8	13
12	Screening Fuels for Autoignition with Small-Volume Experiments and Gaussian Process Classification. Energy & Fuels, 2018, 32, 9581-9591.	5.1	8
13	An adaptive timestepping algorithm for particle time integration in coupled CFD-DEM simulations.. , 2018, , .		1
14	Achieving algorithmic resilience for temporal integration through spectral deferred corrections. Communications in Applied Mathematics and Computational Science, 2017, 12, 25-50.	1.8	4
15	Optimizing performance of combustion chemistry solvers on Intelâ€™s Many Integrated Core (MIC) architectures. , 2017, , .		3
16	Outcomes from the DOE Workshop on Turbulent Flow Simulation at the Exascale. , 2016, , .		1
17	Premixed combustion simulations with a self-consistent plasma model for initiation. , 2016, , .		2
18	Balancing conflicting requirements for grid and particle decomposition in continuum-Lagrangian solvers. Parallel Computing, 2016, 52, 1-21.	2.1	8

#	Article	IF	Citations
19	Effect of fuel composition and differential diffusion on flame stabilization in reacting syngas jets in turbulent cross-flow. Combustion and Flame, 2015, 162, 3569-3579.	5.2	32
20	Accelerated application development: The ORNL Titan experience. Computers and Electrical Engineering, 2015, 46, 123-138.	4.8	26
21	DynaM: Dynamic Multiresolution Data Representation for Large-Scale Scientific Analysis. , 2013, , .		5
22	Characterization and modeling of PIDX parallel I/O for performance optimization. , 2013, , .		18
23	Accelerating the Computation of Detailed Chemical Reaction Kinetics for Simulating Combustion of Complex Fuels. , 2012, , .		2
24	Hybridizing S3D into an Exascale application using OpenACC: An approach for moving to multi-petaflops and beyond. , 2012, , .		27
25	SMART-IO: SysteM-AwaRe Two-Level Data Organization for Efficient Scientific Analytics. , 2012, , .		9
26	Combining in-situ and in-transit processing to enable extreme-scale scientific analysis. , 2012, , .		104
27	Mechanisms of flame stabilization and blowout in a reacting turbulent hydrogen jet in cross-flow. Combustion and Flame, 2012, 159, 2755-2766.	5.2	75
28	Visual Analysis of Particle Behaviors to Understand Combustion Simulations. IEEE Computer Graphics and Applications, 2012, 32, 22-33.	1.2	10
29	Skel: Generative Software for Producing Skeletal I/O Applications. , 2011, , .		11
30	PIDX: Efficient Parallel I/O for Multi-resolution Multi-dimensional Scientific Datasets. , 2011, , .		23
31	EDO: Improving Read Performance for Scientific Applications through Elastic Data Organization. , 2011, , .		42
32	Dual space analysis of turbulent combustion particle data. , 2011, , .		15
33	Feature-Based Statistical Analysis of Combustion Simulation Data. IEEE Transactions on Visualization and Computer Graphics, 2011, 17, 1822-1831.	4.4	33
34	In Situ Visualization for Large-Scale Combustion Simulations. IEEE Computer Graphics and Applications, 2010, 30, 45-57.	1.2	128