Hemanth Kolla

List of Publications by Year
in descending order

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34	1,300	516710 16	713466 21
papers	citations	h-index	g-index

34	34	34	794
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Scalar Dissipation Rate Modeling and its Validation. Combustion Science and Technology, 2009, 181, 518-535.	2.3	170
2	A petascale direct numerical simulation study of the modelling of flame wrinkling for large-eddy simulations in intense turbulence. Combustion and Flame, 2012, 159, 2690-2703.	5.2	145
3	Combining in-situ and in-transit processing to enable extreme-scale scientific analysis. , 2012, , .		104
4	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
5	Validation of a Turbulent Flame Speed Model across Combustion Regimes. Combustion Science and Technology, 2010, 182, 284-308.	2.3	62
6	On the fractal characteristics of low DamkÃ¶hler number flames. Combustion and Flame, 2013, 160, 2422-2433.	5.2	60
7	Exploring Automatic, Online Failure Recovery for Scientific Applications at Extreme Scales. , 2014, , .		59
8	Strained flamelets for turbulent premixed flames, I: Formulation and planar flame results. Combustion and Flame, 2010, 157, 943-954.	5.2	57
9	LES of a premixed jet flame DNS using a strained flamelet model. Combustion and Flame, 2013, 160, 2911-2927.	5.2	54
10	A direct numerical simulation study of turbulence and flame structure in transverse jets analysed in jet-trajectory based coordinates. Journal of Fluid Mechanics, 2012, 706, 351-383.	3.4	52
11	In-Situ Feature Extraction of Large Scale Combustion Simulations Using Segmented Merge Trees. , 2014, , .		47
12	Strained flamelets for turbulent premixed flames II: Laboratory flame results. Combustion and Flame, 2010, 157, 1274-1289.	5.2	45
13	Determination of three-dimensional quantities related to scalar dissipation rate and its transport from two-dimensional measurements: Direct Numerical Simulation based validation. Proceedings of the Combustion Institute, 2013, 34, 1151-1162.	3.9	36
14	A multi-scale asymptotic scaling and regime analysis of flamelet equations including tangential diffusion effects for laminar and turbulent flames. Combustion and Flame, 2015, 162, 1507-1529.	5.2	36
15	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
16	Structure of hydrogen-rich transverse jets in a vitiated turbulent flow. Combustion and Flame, 2015, 162, 1234-1248.	5.2	32
17	Flame thickness and conditional scalar dissipation rate in a premixed temporal turbulent reacting jet. Combustion and Flame, 2017, 184, 273-285.	5.2	28
18	Exploring power behaviors and trade-offs of in-situ data analytics. , 2013, , .		27

#	Article	IF	Citations
19	A mixing timescale model for TPDF simulations of turbulent premixed flames. Combustion and Flame, 2017, 177, 171-183.	5.2	27
20	PIDX: Efficient Parallel I/O for Multi-resolution Multi-dimensional Scientific Datasets. , 2011, , .		23
21	Stacker: An Autonomic Data Movement Engine for Extreme-Scale Data Staging-Based In-Situ Workflows. , 2018, , .		23
22	Characterization and modeling of PIDX parallel I/O for performance optimization. , 2013, , .		18
23	Velocity and Reactive Scalar Dissipation Spectra in Turbulent Premixed Flames. Combustion Science and Technology, 2016, 188, 1424-1439.	2.3	17
24	Micromixing Models for PDF Simulations of Turbulent Premixed Flames. Combustion Science and Technology, 2019, 191, 1430-1455.	2.3	16
25	Multi-level Layout Optimization for Efficient Spatio-temporal Queries on ISABELA-compressed Data. , 2012, , .		12
26	Efficient data restructuring and aggregation for I/O acceleration in PIDX. , 2012, , .		11
27	Pulsating instability of externally forced premixed counterflow flame. Combustion and Flame, 2013, 160, 285-294.	5.2	8
28	A priori analysis of a power-law mixing model for transported PDF model based on high Karlovitz turbulent premixed DNS flames. Proceedings of the Combustion Institute, 2021, 38, 2917-2927.	3.9	7
29	Fast Multiresolution Reads of Massive Simulation Datasets. Lecture Notes in Computer Science, 2014, , 314-330.	1.3	6
30	Turbulent Combustion Simulations with High-Performance Computing. Energy, Environment, and Sustainability, 2018, , 73-97.	1.0	4
31	On the use of graph search techniques for the analysis of extreme-scale combustion simulation data. , 2012, , .		3
32	S-preconditioner for Multi-fold Data Reduction with Guaranteed User-Controlled Accuracy. , 2011, , .		2
33	Extreme-Scale Viability of Collective Communication for Resilient Task Scheduling and Work Stealing. , 2014, , .		2
34	Sensitivity Analysis for Time Dependent Problems: Optimal Checkpoint-Recompute HPC Workflows. , 2014, , .		0