

Andreas M Kempf

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Efficient Generation of Initial- and Inflow-Conditions for Transient Turbulent Flows in Arbitrary Geometries. <i>Flow, Turbulence and Combustion</i> , 2005, 74, 67-84.	2.6	171
2	Computed Tomography of Chemiluminescence (CTC): Instantaneous 3D measurements and Phantom studies of a turbulent opposed jet flame. <i>Combustion and Flame</i> , 2011, 158, 376-391.	5.2	170
3	Investigation of lengthscales, scalar dissipation, and flame orientation in a piloted diffusion flame by LES. <i>Proceedings of the Combustion Institute</i> , 2005, 30, 557-565.	3.9	118
4	Large-eddy simulation of a bluff-body stabilized nonpremixed flame. <i>Combustion and Flame</i> , 2006, 144, 170-189.	5.2	117
5	Towards Comprehensive Coal Combustion Modelling for LES. <i>Flow, Turbulence and Combustion</i> , 2013, 90, 859-884.	2.6	117
6	Large Eddy simulation of a pulverised coal jet flame. <i>Proceedings of the Combustion Institute</i> , 2013, 34, 2419-2426.	3.9	104
7	Numerical analysis of the Cambridge stratified flame series using artificial thickened flame LES with tabulated premixed flame chemistry. <i>Combustion and Flame</i> , 2014, 161, 2627-2646.	5.2	104
8	Simultaneous temperature, mixture fraction and velocity imaging in turbulent flows using thermographic phosphor tracer particles. <i>Optics Express</i> , 2012, 20, 22118.	3.4	98
9	Instantaneous 3D flame imaging by background-oriented schlieren tomography. <i>Combustion and Flame</i> , 2018, 196, 284-299.	5.2	96
10	An efficient, parallel low-storage implementation of Klein's turbulence generator for LES and DNS. <i>Computers and Fluids</i> , 2012, 60, 58-60.	2.5	90
11	SpraySyn – A standardized burner configuration for nanoparticle synthesis in spray flames. <i>Review of Scientific Instruments</i> , 2019, 90, 085108.	1.3	89
12	Turbulent opposed-jet flames: A critical benchmark experiment for combustion LES. <i>Combustion and Flame</i> , 2005, 143, 524-548.	5.2	80
13	Scalar dissipation rates in isothermal and reactive turbulent opposed-jets: 1-D-Raman/Rayleigh experiments supported by LES. <i>Proceedings of the Combustion Institute</i> , 2005, 30, 681-689.	3.9	79
14	Challenging modeling strategies for LES of non-adiabatic turbulent stratified combustion. <i>Combustion and Flame</i> , 2015, 162, 4264-4282.	5.2	79
15	Flamelet LES of a semi-industrial pulverized coal furnace. <i>Combustion and Flame</i> , 2016, 173, 39-56.	5.2	78
16	A posteriori testing of algebraic flame surface density models for LES. <i>Combustion Theory and Modelling</i> , 2013, 17, 431-482.	1.9	76
17	LES of the Sydney piloted spray flame series with the PFGM/ATF approach and different sub-filter models. <i>Combustion and Flame</i> , 2015, 162, 1575-1598.	5.2	71
18	Instantaneous 3D imaging of highly turbulent flames using computed tomography of chemiluminescence. <i>Applied Optics</i> , 2017, 56, 7385.	1.8	70

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19	Error analysis of large-eddy simulation of the turbulent non-premixed sydney bluff-body flame. <i>Combustion and Flame</i> , 2011, 158, 2408-2419.	5.2	63
20	Phosphorescent thermal history sensors. <i>Sensors and Actuators A: Physical</i> , 2011, 169, 18-26.	4.1	63
21	A simple model for the filtered density function for passive scalar combustion LES. <i>Combustion Theory and Modelling</i> , 2009, 13, 559-588.	1.9	60
22	LES of the Sydney swirl flame series: A study of vortex breakdown in isothermal and reacting flows. <i>Proceedings of the Combustion Institute</i> , 2007, 31, 1755-1763.	3.9	59
23	Resolved flow simulation of pulverized coal particle devolatilization and ignition in air- and O ₂ /CO ₂ -atmospheres. <i>Fuel</i> , 2016, 186, 285-292.	6.4	59
24	Large-eddy simulation of a counterflow configuration with and without combustion. <i>Proceedings of the Combustion Institute</i> , 2000, 28, 35-40.	3.9	54
25	Investigation of the sampling nozzle effect on laminar flat flames. <i>Combustion and Flame</i> , 2015, 162, 1737-1747.	5.2	51
26	Multi-directional 3D flame chemiluminescence tomography based on lens imaging. <i>Optics Letters</i> , 2015, 40, 1231.	3.3	50
27	Flame resolved simulation of a turbulent premixed bluff-body burner experiment. Part I: Analysis of the reaction zone dynamics with tabulated chemistry. <i>Combustion and Flame</i> , 2017, 180, 321-339.	5.2	50
28	Unsteady methods (URANS and LES) for simulation of combustion systems. <i>International Journal of Thermal Sciences</i> , 2006, 45, 760-773.	4.9	47
29	Large Eddy Simulations of Swirling Non-premixed Flames With Flamelet Models: A Comparison of Numerical Methods. <i>Flow, Turbulence and Combustion</i> , 2008, 81, 523-561.	2.6	46
30	Comparison of the Sigma and Smagorinsky LES models for grid generated turbulence and a channel flow. <i>Computers and Fluids</i> , 2014, 99, 172-181.	2.5	46
31	Carrier-phase DNS of pulverized coal particle ignition and volatile burning in a turbulent mixing layer. <i>Fuel</i> , 2018, 212, 364-374.	6.4	46
32	Initial reaction steps during flame synthesis of iron-oxide nanoparticles. <i>CrystEngComm</i> , 2015, 17, 6930-6939.	2.6	41
33	Prediction of finite chemistry effects using large eddy simulation. <i>Proceedings of the Combustion Institute</i> , 2002, 29, 1979-1985.	3.9	39
34	Validation and implementation of algebraic LES modelling of scalar dissipation rate for reaction rate closure in turbulent premixed combustion. <i>Combustion and Flame</i> , 2014, 161, 3134-3153.	5.2	39
35	On the Evolution of the Flow Field in a Spark Ignition Engine. <i>Flow, Turbulence and Combustion</i> , 2017, 98, 237-264.	2.6	38
36	LES of lifted flames in a gas turbine model combustor using top-hat filtered PFGM chemistry. <i>Fuel</i> , 2012, 96, 100-107.	6.4	37

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37	A Genetic Algorithm-Based Method for the Automatic Reduction of Reaction Mechanisms. <i>International Journal of Chemical Kinetics</i> , 2014, 46, 41-59.	1.6	37
38	Flame resolved simulation of a turbulent premixed bluff-body burner experiment. Part II: A-priori and a-posteriori investigation of sub-grid scale wrinkling closures in the context of artificially thickened flame modeling. <i>Combustion and Flame</i> , 2017, 180, 340-350.	5.2	37
39	A Genetic Algorithm-Based Method for the Optimization of Reduced Kinetics Mechanisms. <i>International Journal of Chemical Kinetics</i> , 2015, 47, 695-723.	1.6	36
40	Large Eddy Simulations of a turbulent premixed swirl flame using an algebraic scalar dissipation rate closure. <i>Combustion and Flame</i> , 2015, 162, 3180-3196.	5.2	36
41	Flame surface density based modelling of head-on quenching of turbulent premixed flames. <i>Proceedings of the Combustion Institute</i> , 2017, 36, 1817-1825.	3.9	35
42	Coal particle volatile combustion and flame interaction. Part I: Characterization of transient and group effects. <i>Fuel</i> , 2018, 229, 262-269.	6.4	33
43	Numerical investigation of the process steps in a spray flame reactor for nanoparticle synthesis. <i>Proceedings of the Combustion Institute</i> , 2015, 35, 2259-2266.	3.9	32
44	A flamelet/progress variable approach for modeling coal particle ignition. <i>Fuel</i> , 2017, 201, 29-38.	6.4	32
45	LES OF THE SYDNEY SWIRL FLAME SERIES: AN INITIAL INVESTIGATION OF THE FLUID DYNAMICS. <i>Combustion Science and Technology</i> , 2007, 179, 173-189.	2.3	31
46	Mechanism of Iron Oxide Formation from Iron Pentacarbonyl-Doped Low-Pressure Hydrogen/Oxygen Flames. <i>International Journal of Chemical Kinetics</i> , 2013, 45, 487-498.	1.6	31
47	Evaluation of a flamelet/progress variable approach for pulverized coal combustion in a turbulent mixing layer. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 2927-2934.	3.9	31
48	Highly-resolved LES and PIV Analysis of Isothermal Turbulent Opposed Jets for Combustion Applications. <i>Flow, Turbulence and Combustion</i> , 2011, 87, 425-447.	2.6	29
49	Energy loss in intergalactic pair beams: Particle-in-cell simulation. <i>Astronomy and Astrophysics</i> , 2016, 585, A132.	5.1	28
50	Analysis of flame curvature evolution in a turbulent premixed bluff body burner. <i>Physics of Fluids</i> , 2018, 30, 095101.	4.0	28
51	LES Validation from Experiments. <i>Flow, Turbulence and Combustion</i> , 2008, 80, 351-373.	2.6	26
52	Large Eddy Simulation of a 100 kWth swirling oxy-coal furnace. <i>Fuel</i> , 2016, 181, 491-502.	6.4	26
53	Comparison of OH time-series measurements and large-eddy simulations in hydrogen jet flames. <i>Combustion and Flame</i> , 2004, 139, 142-151.	5.2	25
54	In-Nozzle Measurements of a Turbulent Opposed Jet Using PIV. <i>Flow, Turbulence and Combustion</i> , 2010, 85, 73-93.	2.6	24

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55	Oxidation of divalent rare earth phosphors for thermal history sensing. <i>Sensors and Actuators B: Chemical</i> , 2013, 177, 124-130.	7.8	24
56	A posteriori testing of the flame surface density transport equation. <i>Combustion Theory and Modelling</i> , 2014, 18, 32-64.	1.9	24
57	Large Eddy Simulation of an Internal Combustion Engine Using an Efficient Immersed Boundary Technique. <i>Flow, Turbulence and Combustion</i> , 2016, 97, 191-230.	2.6	24
58	Statistics of strain rates and surface density function in a flame-resolved high-fidelity simulation of a turbulent premixed bluff body burner. <i>Physics of Fluids</i> , 2018, 30, .	4.0	22
59	Gas-phase aluminium acetylacetonate decomposition: revision of the current mechanism by VUV synchrotron radiation. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 15059-15075.	2.8	22
60	Detailed simulation of iron oxide nanoparticle forming flames: Buoyancy and probe effects. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 1241-1248.	3.9	20
61	Experimental and numerical investigation of iron-doped flames: FeO formation and impact on flame temperature. <i>Proceedings of the Combustion Institute</i> , 2021, 38, 1249-1257.	3.9	20
62	Robust dynamic adaptation of the Smagorinsky model based on a sub-grid activity sensor. <i>Physics of Fluids</i> , 2021, 33, .	4.0	19
63	Modelling heat loss effects in high temperature oxy-fuel flames with an efficient and robust non-premixed flamelet approach. <i>Fuel</i> , 2018, 216, 44-52.	6.4	18
64	3D Evolutionary Reconstruction of Scalar Fields in the Gas-Phase. <i>Energies</i> , 2019, 12, 2075.	3.1	18
65	Flamelet tabulation methods for solid fuel combustion with fuel-bound nitrogen. <i>Combustion and Flame</i> , 2019, 209, 155-166.	5.2	17
66	Numerical study of a pulsed auto-igniting jet flame with detailed tabulated chemistry. <i>Fuel</i> , 2019, 252, 408-416.	6.4	17
67	Direct numerical simulations of nanoparticle formation in premixed and non-premixed flame-vortex interactions. <i>Physics of Fluids</i> , 2020, 32, .	4.0	17
68	High-resolution LES of a starting jet. <i>Computers and Fluids</i> , 2016, 140, 435-449.	2.5	16
69	Response surface and group additivity methodology for estimation of thermodynamic properties of organosilanes. <i>International Journal of Chemical Kinetics</i> , 2018, 50, 681-690.	1.6	16
70	A comprehensive study of flamelet tabulation methods for pulverized coal combustion in a turbulent mixing layer. Part I: A priori and budget analyses. <i>Combustion and Flame</i> , 2020, 216, 439-452.	5.2	16
71	Buoyancy induced limits for nanoparticle synthesis experiments in horizontal premixed low-pressure flat-flame reactors. <i>Combustion Theory and Modelling</i> , 2013, 17, 504-521.	1.9	15
72	Large eddy simulation of particle aggregation in turbulent jets. <i>Journal of Aerosol Science</i> , 2017, 111, 1-17.	3.8	13

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73	A hybrid flamelet finite-rate chemistry approach for efficient LES with a transported FDF. <i>Combustion and Flame</i> , 2019, 199, 183-193.	5.2	13
74	Analysis of mild ignition in a shock tube using a highly resolved 3D-LES and high-order shock-capturing schemes. <i>Shock Waves</i> , 2019, 29, 511-521.	1.9	13
75	Regularized, parameter free scale similarity type models for Large Eddy Simulation. <i>International Journal of Heat and Fluid Flow</i> , 2020, 81, 108496.	2.4	13
76	Inline coating of silicon nanoparticles in a plasma reactor: Reactor design, simulation and experiment. <i>Materials Today: Proceedings</i> , 2017, 4, S118-S127.	1.8	13
77	Combustion LES for premixed and diffusion flames. <i>Progress in Computational Fluid Dynamics</i> , 2005, 5, 363.	0.2	12
78	3D Instantaneous Reconstruction of Turbulent Industrial Flames Using Computed Tomography of Chemiluminescence (CTC). <i>Journal of Combustion</i> , 2018, 2018, 1-6.	1.0	12
79	Penetration of the Flame Into the Top-Land Crevice - Large-Eddy Simulation and Experimental High-Speed Visualization. , 0, , .		11
80	Multiscale Simulation of the Formation of Platinum-Particles on Alumina Nanoparticles in a Spray Flame Experiment. <i>Fluids</i> , 2020, 5, 201.	1.7	11
81	Fast Flow Field Estimation for Various Applications with A Universally Applicable Machine Learning Concept. <i>Flow, Turbulence and Combustion</i> , 2021, 107, 175-200.	2.6	11
82	LES of nanoparticle synthesis in the spraysyn burner: A comparison against experiments. <i>Powder Technology</i> , 2022, 404, 117466.	4.2	11
83	A dynamic model for the Lagrangian stochastic dispersion coefficient. <i>Physics of Fluids</i> , 2013, 25, 125108.	4.0	10
84	LES of Flow Processes in an SI Engine Using Two Approaches: OpenFoam and PsiPhi. , 2014, , .		10
85	Aerosol nucleation in a turbulent jet using Large Eddy Simulations. <i>Chemical Engineering Science</i> , 2014, 116, 383-397.	3.8	10
86	A Large Eddy Simulation Study on the Effect of Devolatilization Modelling and Char Combustion Mode Modelling on the Structure of a Large-Scale, Biomass and Coal Co-Fired Flame. <i>Journal of Combustion</i> , 2018, 2018, 1-15.	1.0	10
87	Local entrainment velocity in a premixed turbulent annular jet flame. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 2493-2501.	3.9	10
88	Numerical Analysis of a Turbulent Pulverized Coal Flame Using a Flamelet/Progress Variable Approach and Modeling Experimental Artifacts. <i>Energy & Fuels</i> , 2021, 35, 7133-7143.	5.1	10
89	Detailed analysis of early-stage NO formation in turbulent pulverized coal combustion with fuel-bound nitrogen. <i>Proceedings of the Combustion Institute</i> , 2021, 38, 4111-4119.	3.9	9
90	Stochastic modelling of particle aggregation. <i>International Journal of Multiphase Flow</i> , 2016, 80, 118-130.	3.4	8

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91	Determining the sintering kinetics of Fe and Fe _x O _y -Nanoparticles in a well-defined model flow reactor. <i>Aerosol Science and Technology</i> , 2022, 56, 833-846.	3.1	8
92	Thermal history sensing with thermographic phosphors. <i>AIP Conference Proceedings</i> , 2013, , .	0.4	7
93	PICPANTHER: A simple, concise implementation of the relativistic moment implicit particle-in-cell method. <i>Computer Physics Communications</i> , 2015, 188, 198-207.	7.5	7
94	Prediction of CO and NO _x Pollutants in a Stratified Bluff Body Burner. <i>Journal of Engineering for Gas Turbines and Power</i> , 2018, 140, .	1.1	7
95	Concept for a Phosphorescent Thermal History Sensor. , 2010, , .		6
96	Quality Issues in Combustion LES. <i>Journal of Scientific Computing</i> , 2011, 49, 51-64.	2.3	6
97	A-posteriori LES assessment of subgrid-scale closures for bounded passive scalars. <i>Computers and Fluids</i> , 2021, 218, 104840.	2.5	6
98	NUMERICAL SIMULATION OF FLOW INDUCED BY A CYLINDER ORBITING IN A LARGE VESSEL. <i>Journal of Fluids and Structures</i> , 2002, 16, 435-451.	3.4	5
99	A Simple Approach for Specifying Velocity Inflow Boundary Conditions in Simulations of Turbulent Opposed-Jet Flows. <i>Flow, Turbulence and Combustion</i> , 2017, 98, 131-153.	2.6	5
100	CoFlaVis: A Visualization System for Pulverized Coal Flames. <i>Computing in Science and Engineering</i> , 2017, 19, 72-78.	1.2	5
101	Particle history from massively parallel large eddy simulations of pulverised coal combustion in a large-scale laboratory furnace. <i>Fuel</i> , 2020, 271, 117587.	6.4	5
102	Effect of sub-grid wrinkling factor modelling on the large eddy simulation of turbulent stratified combustion. <i>Combustion Theory and Modelling</i> , 2021, 25, 911-939.	1.9	5
103	Investigation of Turbulent Pulverized Solid Fuel Combustion with Detailed Homogeneous and Heterogeneous Kinetics. <i>Energy & Fuels</i> , 2021, 35, 7077-7091.	5.1	5
104	Phosphor Based Temperature Indicating Paints. , 2012, , .		4
105	Evolutionary Camera Pose Estimation of a Multi-Camera Setup for Computed Tomography. , 2019, , .		4
106	Towards the Suitability of Information Entropy as an LES Quality Indicator. <i>Flow, Turbulence and Combustion</i> , 2022, 108, 353-385.	2.6	4
107	Numerical Investigation of Third-Body Behavior in Dry and Wet Environments under Plane Shearing. <i>Chemical Engineering and Technology</i> , 2016, 39, 1497-1508.	1.5	3
108	Investigation of a High Karlovitz, High Pressure Premixed Jet Flame with Heat Losses by LES. <i>Combustion Science and Technology</i> , 2020, 192, 2138-2170.	2.3	3

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109	LES of a Non-Premixed Flame with an Assumed Top-hat PDF. Springer Proceedings in Physics, 2009, , 763-766.	0.2	3
110	LES as a Prediction Tool for Lifted Flames in a Model Gas Turbine Combustor. , 2010, , .		2
111	Compressible and Incompressible Large Eddy Simulation of a Premixed Dump Combustor. , 2011, , .		2
112	Note on the use of Yee-lattices in (semi-) implicit particle-in-cell codes. Journal of Computational Physics, 2013, 237, 56-60.	3.8	2
113	Large-Eddy Simulation of Sandia Flame D with Efficient Explicit Filtering. Flow, Turbulence and Combustion, 2019, 102, 887-907.	2.6	2
114	Large-Eddy Simulation of a Lifted High-Pressure Jet-Flame with Direct Chemistry. Combustion Science and Technology, 0, , 1-25.	2.3	2
115	Investigations on the Effect of Different Subgrid Models on the Quality of LES Results. ERCOFTAC Series, 2015, , 141-147.	0.1	2
116	A-posteriori assessment of Large-Eddy Simulation subgrid-closures for momentum and scalar fluxes in a turbulent premixed burner experiment. Computers and Fluids, 2022, 240, 105441.	2.5	2
117	Lagrangian filtered density function modeling of a turbulent stratified flame combined with flamelet approach. Physics of Fluids, 2022, 34, .	4.0	2
118	OxyCAP UK: Oxyfuel Combustion - academic Programme for the UK. Energy Procedia, 2014, 63, 504-510.	1.8	1
119	What can we learn from information-entropy about turbulence and Large-Eddy-Simulation?. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900253.	0.2	1
120	LES Analysis of CO Emissions from a High Pressure Siemens Gas Turbine Prototype Combustor at Part Load. Energies, 2020, 13, 5751.	3.1	1
121	Design and Testing of a High Frequency Thermoacoustic Combustion Experiment. AIAA Journal, 0, , 1-17.	2.6	1
122	Mixing and Combustion, Perspectives. Fluid Mechanics and Its Applications, 2002, , 387-403.	0.2	1
123	Insights into the decomposition of zirconium acetylacetonate using synchrotron radiation: Routes to the formation of volatile Zr-intermediates. Journal of Materials Research, 0, , 1.	2.6	1
124	Dilute suspensions in annular shear flow under gravity: simulation and experiment. EPJ Web of Conferences, 2017, 140, 09034.	0.3	0
125	Prediction of CO and NOx Pollutants in a Stratified Bluff Body Burner. , 2017, , .		0
126	Detailed simulations for flamelet modelling of SO _x formation from coal. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900367.	0.2	0

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127	Quality Issues of Combustion LES. ERCOFTAC Series, 2011, , 33-46.	0.1	0
128	Computational error-minimization for LES of non-premixed turbulent combustion. ERCOFTAC Series, 2011, , 351-360.	0.1	0
129	Studying Transient Jet Flames by High-Resolution LES Using Premixed Flamelet Chemistry. ERCOFTAC Series, 2019, , 237-243.	0.1	0