Olivier Gicquel

List of Publications by Year
in descending order

65 papers	2,562 citations	201674 27 h-index	189892 50 g-index
65 all docs	65 docs citations	65 times ranked	1104 citing authors

#	Article	IF	Citations
1	Liminar premixed hydrogen/air counterflow flame simulations using flame prolongation of ILDM with differential diffusion. Proceedings of the Combustion Institute, 2000, 28, 1901-1908.	3.9	478
2	Approximating the chemical structure of partially premixed and diffusion counterflow flames using FPI flamelet tabulation. Combustion and Flame, 2005, 140, 147-160.	5.2	213
3	Modelling non-adiabatic partially premixed flames using flame-prolongation of ILDM. Combustion Theory and Modelling, 2003, 7, 449-470.	1.9	197
4	A filtered tabulated chemistry model for LES of premixed combustion. Combustion and Flame, 2010, 157, 465-475.	5.2	192
5	Premixed turbulent combustion modeling using tabulated detailed chemistry and PDF. Proceedings of the Combustion Institute, 2005, 30, 867-874.	3.9	105
6	A reactor network model for predicting NOx emissions in gas turbines. Fuel, 2010, 89, 2202-2210.	6.4	81
7	Experimental and numerical determination of heat release in counterflow premixed laminar flames. Proceedings of the Combustion Institute, 2005, 30, 251-257.	3.9	80
8	Coupling an LES approach and a soot sectional model for the study of sooting turbulent non-premixed flames. Combustion and Flame, 2018, 190, 477-499.	5.2	65
9	A 3-D DNS and experimental study of the effect of the recirculating flow pattern inside a reactive kernel produced by nanosecond plasma discharges in a methane-air mixture. Proceedings of the Combustion Institute, 2017, 36, 4095-4103.	3.9	61
10	Modelling the impact of non-equilibrium discharges on reactive mixtures for simulations of plasma-assisted ignition in turbulent flows. Combustion and Flame, 2016, 166, 133-147.	5.2	60
11	Modeling nonadiabatic turbulent premixed reactive flows including tabulated chemistry. Combustion and Flame, 2005, 141, 271-280.	5.2	56
12	Application of reduced-order models based on PCA & Kriging for the development of digital twins of reacting flow applications. Computers and Chemical Engineering, 2019, 121, 422-441.	3.8	56
13	Tabulated chemistry approach for diluted combustion regimes with internal recirculation and heat losses. Combustion and Flame, 2014, 161, 2120-2136.	5.2	52
14	Coupled large eddy simulations of turbulent combustion and radiative heat transfer. Combustion and Flame, 2008, 152, 387-400.	5.2	47
15	Experimental and numerical investigation of the influence of thermal boundary conditions on premixed swirling flame stabilization. Combustion and Flame, 2016, 171, 42-58.	5.2	45
16	Two- versus three-dimensional direct simulations of turbulent methane flame kernels using realistic chemistry. Proceedings of the Combustion Institute, 2002, 29, 2031-2039.	3.9	44
17	Tabulation of complex chemistry based on self-similar behavior of laminar premixed flames. Combustion and Flame, 2006, 146, 649-664.	5.2	44
18	A Filtered Tabulated Chemistry model for LES of stratified flames. Combustion and Flame, 2012, 159, 2704-2717.	5.2	43

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19	MG-local-PCA method for reduced order combustion modeling. Proceedings of the Combustion Institute, 2013, 34, 1117-1123.	3.9	43
20	Reduced-order PCA models for chemical reacting flows. Combustion and Flame, 2014, 161, 2785-2800.	5.2	42
21	Coupling tabulated chemistry with compressible CFD solvers. Proceedings of the Combustion Institute, 2011, 33, 1481-1488.	3.9	41
22	Kernel density weighted principal component analysis of combustion processes. Combustion and Flame, 2012, 159, 2844-2855.	5.2	34
23	Direct numerical simulation of turbulent premixed flames using intrinsic low-dimensional manifolds. Combustion Theory and Modelling, 1999, 3, 479-502.	1.9	33
24	Assessment of different chemistry reduction methods based on principal component analysis: Comparison of the MG-PCA and score-PCA approaches. Combustion and Flame, 2016, 168, 83-97.	5.2	30
25	Modeling chemical flame structure and combustion dynamics in LES. Proceedings of the Combustion Institute, 2011, 33, 1331-1338.	3.9	28
26	Physical study of radiation effects on the boundary layer structure in a turbulent channel flow. International Journal of Heat and Mass Transfer, 2013, 61, 654-666.	4.8	28
27	LES Modeling of the Impact of Heat Losses and Differential Diffusion on Turbulent Stratified Flame Propagation: Application to the TU Darmstadt Stratified Flame. Flow, Turbulence and Combustion, 2014, 93, 349-381.	2.6	27
28	Assessment of randomized Quasi-Monte Carlo method efficiency in radiative heat transfer simulations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 236, 106570.	2.3	27
29	Large eddy simulation of a pulsed jet in cross-flow. Journal of Fluid Mechanics, 2012, 695, 1-34.	3.4	26
30	Combustion of residual steel gases: laminar flame analysis and turbulent flamelet modelingâ˜†. Fuel, 2003, 82, 983-991.	6.4	23
31	Self-adaptive coupling frequency for unsteady coupled conjugate heat transfer simulations. International Journal of Thermal Sciences, 2017, 118, 340-354.	4.9	21
32	Effects of radiation in turbulent channel flow: analysis of coupled direct numerical simulations. Journal of Fluid Mechanics, 2014, 753, 360-401.	3.4	19
33	Three-dimensional boundary conditions for numerical simulations of reactive compressible flows with complex thermochemistry. Journal of Computational Physics, 2012, 231, 5571-5611.	3.8	18
34	Modeling interactions between chemistry and turbulence for simulations of partial oxidation processes. Fuel Processing Technology, 2015, 134, 231-242.	7.2	17
35	Multiphysics Simulation Combining Large-Eddy Simulation, Wall Heat Conduction and Radiative Energy Transfer to Predict Wall Temperature Induced by a Confined Premixed Swirling Flame. Flow, Turbulence and Combustion, 2018, 101, 77-102.	2.6	17
36	VALIDATION OF THE FPI CHEMISTRY REDUCTION METHOD FOR DILUTED NONADIABATIC PREMIXED FLAMES. Combustion Science and Technology, 2004, 176, 785-797.	2.3	16

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37	A wall model for LES accounting for radiation effects. International Journal of Heat and Mass Transfer, 2013, 67, 712-723.	4.8	16
38	Optimized Emission-based Reciprocity Monte Carlo Method to speed up computation in complex systems. International Journal of Heat and Mass Transfer, 2012, 55, 8172-8177.	4.8	15
39	Analysis of radiative transfer in a turbulent sooting jet flame using a Monte Carlo method coupled to large eddy simulation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 235, 187-203.	2.3	15
40	Characteristic chemical time scales identification in reactive flows. Proceedings of the Combustion Institute, 2013, 34, 1357-1364.	3.9	13
41	Turbulent flame simulation taking advantage of tabulated chemistry self-similar properties. Proceedings of the Combustion Institute, 2009, 32, 1687-1694.	3.9	11
42	PCA and Kriging for the efficient exploration of consistency regions in Uncertainty Quantification. Proceedings of the Combustion Institute, 2019, 37, 4461-4469.	3.9	10
43	Coupling tabulated chemistry with Large Eddy Simulation of turbulent reactive flows. Comptes Rendus - Mecanique, 2009, 337, 329-339.	2.1	9
44	Monte Carlo method of radiative transfer applied to a turbulent flame modeling with LES. Comptes Rendus - Mecanique, 2009, 337, 539-549.	2.1	9
45	Multicomponent real gas 3-D-NSCBC for direct numerical simulation of reactive compressible viscous flows. Journal of Computational Physics, 2013, 245, 259-280.	3.8	9
46	A multi-spectral reordering technique for the full spectrum SLMB modeling of radiative heat transfer in nonuniform gaseous mixtures. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 394-411.	2.3	8
47	Influence of Differential Diffusion on Super-Equilibrium Temperature in Turbulent Non-Premixed Hydrogen/Air Flames. Flow, Turbulence and Combustion, 2005, 73, 307-321.	2.6	7
48	Scaling of heated plane jets with moderate radiative heat transfer in coupled DNS. International Journal of Heat and Mass Transfer, 2019, 139, 456-474.	4.8	7
49	A Quasi-Monte Carlo method to compute scattering effects in radiative heat transfer: Application to a sooted jet flame. International Journal of Heat and Mass Transfer, 2021, 168, 120915.	4.8	6
50	Numerical and experimental study of no emission in laminar partially premixed flames. Proceedings of the Combustion Institute, 2000, 28, 2419-2425.	3.9	5
51	Study of turbulence-radiation interactions in a heated jet using direct numerical simulation coupled to a non-gray Monte-Carlo solver. International Journal of Heat and Mass Transfer, 2020, 162, 120297.	4.8	3
52	Numerical investigation of a helicopter combustion chamber using LES and tabulated chemistry. Comptes Rendus - Mecanique, 2013, 341, 257-265.	2.1	2
53	A study of three-dimensional LES of turbulent combustion with radiative heat transfer. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2016, 38, 33-48.	1.6	1
54	High-Fidelity Multiphysics Simulation of a Confined Premixed Swirling Flame Combining Large-Eddy Simulation, Wall Heat Conduction and Radiative Energy Transfer. , 2017, , .		1

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55	Practical indicators for assessing the magnitudes of wall radiative flux and of coupling effects between radiation and other heat transfer modes on the temperature law-of-the wall in turbulent gaseous boundary layers. International Journal of Heat and Mass Transfer, 2018, 120, 76-85.	4.8	1
56	Assessment of External Heat Transfer Modeling of a Laboratory-Scale Combustor Inside a Pressure-Housing Environment. , 2018, , .		1
57	Assessment of External Heat Transfer Modeling of a Laboratory-Scale Combustor: Effects of Pressure-Housing Environment and Semi-Transparent Viewing Windows. Journal of Engineering for Gas Turbines and Power, 2019, 141, .	1.1	1
58	Three-Dimensional Direct Simulations of Turbulent Flames Using Realistic Chemistry Modeling. Fluid Mechanics and Its Applications, 2002, , 279-286.	0.2	1
59	Development of a 3D Parallel Multigrid Solver for Fast and Accurate Laminar Steady Flame Computations. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2003, , 115-128.	0.3	1
60	Assessment and numerical validation of a normal mode stability analysis for conjugate heat transfer. International Journal of Heat and Mass Transfer, 2022, 191, 122794.	4.8	1
61	Computations of NOx Emissions of Domestic Boilers. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2001, 81, 567-568.	1.6	0
62	A Filtered Tabulated Chemistry Model for Large Eddy Simulation of Reactive Flows. , 2010, , .		0
63	Comparison of Monte Carlo Methods Efficiency to Solve Radiative Energy Transfer in High Fidelity Unsteady 3D Simulations. , 2017, , .		0
64	Progress in Direct Simulations of 3D Turbulent Flames. ERCOFTAC Series, 2001, , 105-112.	0.1	0
65	Physical study of the non-equilibrium development of a turbulent thermal boundary layer. Journal of Fluid Mechanics, 2022, 934, .	3.4	0