Pascale Domingo

List of Publications by Year
in descending order

105 papers	3,937 citations	126708 33 h-index	123241 61 g-index
106 all docs	106 docs citations	106 times ranked	1532 citing authors

#	Article	IF	Citations
1	Large-eddy simulation of a lifted methane jet flame in a vitiated coflow. Combustion and Flame, 2008, 152, 415-432.	2.8	262
2	Three-dimensional boundary conditions for direct and large-eddy simulation of compressible viscous flows. Journal of Computational Physics, 2008, 227, 5105-5143.	1.9	229
3	From Large-Eddy Simulation to Direct Numerical Simulation of a lean premixed swirl flame: Filtered laminar flame-PDF modeling. Combustion and Flame, 2011, 158, 1340-1357.	2.8	205
4	Multidimensional flamelet-generated manifolds for partially premixed combustion. Combustion and Flame, 2010, 157, 43-61.	2.8	200
5	Design of a massively parallel CFD code for complex geometries. Comptes Rendus - Mecanique, 2011, 339, 141-148.	2.1	168
6	DNS of a premixed turbulent V flame and LES of a ducted flame using a FSD-PDF subgrid scale closure with FPI-tabulated chemistry. Combustion and Flame, 2005, 143, 566-586.	2.8	161
7	DNS analysis of partially premixed combustion in spray and gaseous turbulent flame-bases stabilized in hot air. Combustion and Flame, 2005, 140, 172-195.	2.8	152
8	Large-eddy simulation of a fuel-lean premixed turbulent swirl-burner. Combustion and Flame, 2008, 155, 247-266.	2.8	144
9	Partially premixed flamelets in LES of nonpremixed turbulent combustion. Combustion Theory and Modelling, 2002, 6, 529-551.	1.0	139
10	Role of the progress variable in models for partially premixed turbulent combustion. Combustion and Flame, 2005, 141, 431-437.	2.8	134
11	Modeling subgrid scale mixture fraction variance in LES of evaporating spray. Combustion and Flame, 2006, 146, 635-648.	2.8	110
12	Triple flames and partially premixed combustion in autoignition of non-premixed turbulent mixtures. Proceedings of the Combustion Institute, 1996, 26, 233-240.	0.3	101
13	Direct numerical simulation of the effect of an electric field on flame stability. Combustion and Flame, 2010, 157, 2286-2297.	2.8	95
14	Three facets of turbulent combustion modelling: DNS of premixed V-flame, LES of lifted nonpremixed flame and RANS of jet-flame. Journal of Turbulence, 2004, 5, .	0.5	84
15	Large-eddy simulation of supercritical fluid injection. Journal of Supercritical Fluids, 2013, 84, 61-73.	1.6	84
16	Large eddy simulation of forced ignition of an annular bluff-body burner. Combustion and Flame, 2010, 157, 579-601.	2.8	74
17	Chemistry reduction using machine learning trained from non-premixed micro-mixing modeling: Application to DNS of a syngas turbulent oxy-flame with side-wall effects. Combustion and Flame, 2020, 220, 119-129.	2.8	63
18	A filtered-laminar-flame PDF sub-grid scale closure for LES of premixed turbulent flames. Part I: Formalism and application to a bluff-body burner with differential diffusion. Combustion and Flame, 2014, 161, 1756-1774.	2.8	60

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19	Modelling of the effect of DC and AC electric fields on the stability of a lifted diffusion methane/air flame. Combustion Theory and Modelling, 2013, 17, 749-787.	1.0	56
20	A compressible wall-adapting similarity mixed model for large-eddy simulation of the impinging round jet. Physics of Fluids, 2009, 21, .	1.6	52
21	Flame resolved simulation of a turbulent premixed bluff-body burner experiment. Part I: Analysis of the reaction zone dynamics with tabulated chemistry. Combustion and Flame, 2017, 180, 321-339.	2.8	50
22	Laminar flamelet expressions for pressure fluctuation terms in second moment models of premixed turbulent combustion. Combustion and Flame, 2000, 121, 555-574.	2.8	49
23	Large-eddy simulation of a supersonic lifted jet flame: Analysis of the turbulent flame base. Combustion and Flame, 2017, 179, 199-218.	2.8	49
24	Direct mapping from LES resolved scales to filtered-flame generated manifolds using convolutional neural networks. Combustion and Flame, 2019, 210, 71-82.	2.8	49
25	Two-dimensional weak shock-vortex interaction in a mixing zone. AIAA Journal, 1995, 33, 1797-1802.	1.5	48
26	A filtered-laminar-flame PDF sub-grid-scale closure for LES of premixed turbulent flames: II. Application to a stratified bluff-body burner. Combustion and Flame, 2014, 161, 1775-1791.	2.8	48
27	Selective Non-catalytic Reduction (SNCR) of Nitrogen Oxide Emissions: A Perspective from Numerical Modeling. Flow, Turbulence and Combustion, 2018, 100, 301-340.	1.4	48
28	Tabulation of NOx chemistry for Large-Eddy Simulation of non-premixed turbulent flames. Proceedings of the Combustion Institute, 2009, 32, 1555-1561.	2.4	47
29	Estimation of three-dimensional flame surface densities from planar images in turbulent premixed combustion. Experiments in Fluids, 2010, 49, 267-278.	1.1	42
30	Composition-space premixed flamelet solution with differential diffusion for in situ flamelet-generated manifolds. Combustion and Flame, 2011, 158, 2009-2016.	2.8	39
31	Large Eddy Simulation of premixed turbulent combustion using approximate deconvolution and explicit flame filtering. Proceedings of the Combustion Institute, 2015, 35, 1349-1357.	2.4	37
32	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. Combustion and Flame, 2017, 180, 340-350.	2.8	37
33	Alkali metal emissions in an early-stage pulverized-coal flame: DNS analysis of reacting layers and chemistry tabulation. Proceedings of the Combustion Institute, 2019, 37, 2791-2799.	2.4	36
34	Framework for real-gas compressible reacting flows with tabulated thermochemistry. Journal of Supercritical Fluids, 2015, 101, 1-16.	1.6	33
35	Analysis of combustion modes in a cavity based scramjet. Combustion and Flame, 2020, 215, 238-251.	2.8	33
36	Scalar energy fluctuations in Large-Eddy Simulation of turbulent flames: Statistical budgets and mesh quality criterion. Combustion and Flame, 2010, 157, 778-789.	2.8	32

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37	Large Eddy Simulation of turbulent flames in a Trapped Vortex Combustor (TVC) â€“ A flamelet presumed-pdf closure preserving laminar flame speed. Comptes Rendus - Mecanique, 2012, 340, 917-932.	2.1	32
38	DNS and approximate deconvolution as a tool to analyse one-dimensional filtered flame sub-grid scale modelling. Combustion and Flame, 2017, 177, 109-122.	2.8	31
39	Automatic reduction and optimisation of chemistry for turbulent combustion modelling: Impact of the canonical problem. Combustion and Flame, 2017, 175, 60-79.	2.8	30
40	Immersed Boundaries in Large Eddy Simulation of Compressible Flows. Flow, Turbulence and Combustion, 2013, 90, 29-68.	1.4	29
41	Two approaches of chemistry downsizing for simulating selective non catalytic reduction DeNOx process. Fuel, 2014, 118, 291-299.	3.4	28
42	Combustion regime identification from machine learning trained by Raman/Rayleigh line measurements. Combustion and Flame, 2020, 219, 268-274.	2.8	26
43	Local volumetric dilatation rate and scalar geometries in a premixed methaneâ€“air turbulent jet flame. Proceedings of the Combustion Institute, 2015, 35, 1295-1303.	2.4	23
44	High-pressure methane-oxygen flames. Analysis of sub-grid scale contributions in filtered equations of state. Journal of Supercritical Fluids, 2017, 121, 78-88.	1.6	23
45	Machine learning for integrating combustion chemistry in numerical simulations. Energy and AI, 2021, 5, 100082.	5.8	23
46	Self-similar behavior and chemistry tabulation of burnt-gas diluted premixed flamelets including heat-loss. Combustion Theory and Modelling, 2010, 14, 541-570.	1.0	21
47	Mixing time-history effects in Large Eddy Simulation of non-premixed turbulent flames: Flow-Controlled Chemistry Tabulation. Combustion and Flame, 2012, 159, 336-352.	2.8	21
48	Optimized Reduced Chemistry and Molecular Transport for Large Eddy Simulation of Partially Premixed Combustion in a Gas Turbine. Combustion Science and Technology, 2016, 188, 21-39.	1.2	21
49	Self-ignition scenarios after rapid compression of a turbulent mixture weakly-stratified in temperature. Combustion and Flame, 2012, 159, 3358-3371.	2.8	20
50	Hybrid Transported-Tabulated Strategy to Downsize Detailed Chemistry for Numerical Simulation of Premixed Flames. Flow, Turbulence and Combustion, 2014, 92, 175-200.	1.4	20
51	A self-contained progress variable space solution method for thermochemical variables and flame speed in freely-propagating premixed flamelets. Proceedings of the Combustion Institute, 2019, 37, 1529-1536.	2.4	20
52	Large eddy simulation of selective non-catalytic reduction (SNCR): A downsizing procedure for simulating nitric-oxide reduction units. Chemical Engineering Science, 2016, 139, 285-303.	1.9	19
53	A self-contained composition space solution method for strained and curved premixed flamelets. Combustion and Flame, 2019, 207, 342-355.	2.8	19
54	Numerical study of HCl and SO2 impact on potassium emissions in pulverized-biomass combustion. Fuel Processing Technology, 2019, 193, 19-30.	3.7	19

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55	Machine learning for detailed chemistry reduction in DNS of a syngas turbulent oxy-flame with side-wall effects. Proceedings of the Combustion Institute, 2021, 38, 2825-2833.	2.4	17
56	Study of a low pressure nitrogen plasma jet. Physics of Plasmas, 1995, 2, 2853-2862.	0.7	16
57	Effects of the Local Flow Topologies Upon the Structure of a Premixed Methane-air Turbulent Jet Flame. Flow, Turbulence and Combustion, 2016, 96, 535-546.	1.4	15
58	Auto-thermal reforming (ATR) of natural gas: An automated derivation of optimised reduced chemical schemes. Proceedings of the Combustion Institute, 2017, 36, 3321-3330.	2.4	15
59	A hybrid stochastic/fixed-sectional method for solving the population balance equation. Chemical Engineering Science, 2019, 209, 115198.	1.9	15
60	Using self-similar properties of turbulent premixed flames to downsize chemical tables in high-performance numerical simulations. Combustion Theory and Modelling, 2008, 12, 1055-1088.	1.0	14
61	Solving the population balance equation for non-inertial particles dynamics using probability density function and neural networks: Application to a sooting flame. Physics of Fluids, 2021, 33, .	1.6	14
62	Prediction of ignition delay times of Jet A-1/hydrogen fuel mixture using machine learning. Aerospace Science and Technology, 2022, 127, 107675.	2.5	13
63	Analysis of sub-grid scale modeling of the ideal-gas equation of state in hydrogenâ€“oxygen premixed flames. Proceedings of the Combustion Institute, 2019, 37, 2345-2351.	2.4	12
64	Numerical study of HCl and SO2 impact on sodium emissions in pulverized-coal flames. Fuel, 2019, 250, 315-326.	3.4	12
65	Hybrid transported-tabulated chemistry for partially premixed combustion. Computers and Fluids, 2019, 179, 206-227.	1.3	12
66	DNS of partially premixed flame propagating in a turbulent rotating flow. Proceedings of the Combustion Institute, 2007, 31, 1657-1664.	2.4	11
67	Experiment-Modeling Comparison in a Nonequilibrium Supersonic Air Nozzle Flow. Journal of Thermophysics and Heat Transfer, 1999, 13, 68-75.	0.9	10
68	Evaluation of chemistry models on methane/air edge flame simulation. Proceedings of the Combustion Institute, 2019, 37, 1691-1698.	2.4	10
69	Analysis of the Soot Particle Size Distribution in a Laminar Premixed Flame: A Hybrid Stochastic/Fixed-Sectional Approach. Flow, Turbulence and Combustion, 2020, 104, 753-775.	1.4	10
70	Description of kerosene / air combustion with Hybrid Transported-Tabulated Chemistry. Fuel, 2018, 233, 146-158.	3.4	8
71	Derivation and analysis of two-dimensional composition space equations for multi-regime combustion using orthogonal coordinates. Combustion and Flame, 2020, 218, 205-217.	2.8	7
72	Reducedâ€•order modeling for the control of selective noncatalytic reduction of nitrogen monoxide. AICHE Journal, 2016, 62, 928-938.	1.8	6

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73	Vitiated High Karlovitz n-decane/air Turbulent Flames: Scaling Laws and Micro-mixing Modeling Analysis. Flow, Turbulence and Combustion, 2019, 102, 235-252.	1.4	5
74	Flameless combustion of low calorific value gases, experiments, and simulations with advanced radiative heat transfer modeling. Physics of Fluids, 2022, 34, .	1.6	5
75	Large Eddy Simulation of Supercritical Fluid Injection. , 2012, , .		4
76	Direct Numerical Simulation and Modeling of a Nonequilibrium Turbulent Plasma. AIAA Journal, 2000, 38, 73-78.	1.5	4
77	DNS of premixed turbulent V-flame: coupling spectral and finite difference methods. Comptes Rendus - Mecanique, 2005, 333, 95-102.	2.1	3
78	Simulation of a Scramjet Combustor: A Priori Study of Thermochemistry Tabulation Techniques. Flow, Turbulence and Combustion, 2021, 106, 1241-1276.	1.4	3
79	Development of reduced and optimized reaction mechanism for potassium emissions during biomass combustion based on genetic algorithms. Energy, 2020, 211, 118565.	4.5	3
80	Modeling of an argon plasma in a boundary-layer flow. Journal of Thermophysics and Heat Transfer, 1992, 6, 217-223.	0.9	2
81	Two recent developments in numerical simulation of premixed and partially premixed turbulent flames. Comptes Rendus - Mecanique, 2006, 334, 523-530.	2.1	2
82	Turbulent flame spreading mechanisms after spark ignition. , 2009, , .		2
83	Quantification of the Pre-ignition Front Propagation in DNS of Rapidly Compressed Mixture. Flow, Turbulence and Combustion, 2015, 94, 219-235.	1.4	2
84	LOx/CH4 mixing and combustion under supercritical conditions. , 2013, , .		1
85	Large-Eddy Simulation of a Supersonic Burner. , 2014, , .		1
86	Reduced chemical reaction mechanisms for simulating sodium emissions by solid-fuel combustion. Applications in Energy and Combustion Science, 2020, 1-4, 100009.	0.9	1
87	Stabilisation and extinction mechanisms of flames in cavity flameholder scramjets. Combustion Theory and Modelling, 2021, 25, 193-207.	1.0	1
88	Revisiting the relation between premixed flame brush thickness and turbulent burning velocities from Ken Brayâ€™s notes. Combustion and Flame, 2022, 239, 111706.	2.8	1
89	Scalar sub-grid energy in large-eddy simulation of turbulent flames: mesh quality criterion. ERCOFTAC Series, 2011, , 201-210.	0.1	1
90	Large-Eddy Simulation of Flow and Heat Transfer Around a Low-Mach Number Turbine Blade. ERCOFTAC Series, 2015, , 361-366.	0.1	1

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91	From Discrete and Iterative Deconvolution Operators to Machine Learning for Premixed Turbulent Combustion Modeling. , 2020, , 215-232.		1
92	Modeling and Simulations of High-Pressure Practical Flows. , 2020, , 631-677.		1
93	A conservative Eulerian-Lagrangian decomposition principle for the solution of multi-scale flow problems at high Schmidt or Prandtl numbers. Journal of Computational Physics, 2022, , 111216.	1.9	1
94	Different levels of modeling of a flat plate boundary-layer in partially ionized nitrogen. , 1995, , .		0
95	Studying turbulent plasma using direct numerical simulation and probability density function. , 1998, , .		0
96	An hybrid transported-tabulated strategy to downsize detailed chemistry for Direct Numerical Simulation. , 2013, , .		0
97	Boundary conditions treatment for supercritical flows with tabulated thermochemistry. , 2015, , .		0
98	Large-Eddy Simulation of Chengâ€™s Supersonic Burner. , 2016, , .		0
99	Simulation of high-pressure methane flames. , 2016, , .		0
100	Direct numerical simulation and modeling of a nonequilibrium turbulent plasma. AIAA Journal, 2000, 38, 73-78.	1.5	0
101	LES of Partially Premixed Combustion. Fluid Mechanics and Its Applications, 2002, , 235-249.	0.1	0
102	A WALE-Similarity Mixed Model for Large-Eddy Simulation of Wall Bounded Compressible Turbulent Flows. ERCOFTAC Series, 2010, , 563-569.	0.1	0
103	Immersed Boundaries in Large-Eddy Simulation of a transonic cavity flow. ERCOFTAC Series, 2011, , 119-124.	0.1	0
104	Reliability of Large-Eddy Simulation of Nonpremixed Turbulent Flames: Scalar Dissipation Rate Modeling and 3D-Boundary Conditions. ERCOFTAC Series, 2008, , 227-237.	0.1	0
105	High-order polynomial approximations for solving non-inertial particle size density in flames. Proceedings of the Combustion Institute, 2022, , .	2.4	0