Antonio Attili

List of Publications by Year
in descending order

59 papers	1,151 citations	361045 20 h-index	414034 32 g-index
61 all docs	61 docs citations	61 times ranked	609 citing authors

#	Article	IF	Citations
1	Formation, growth, and transport of soot in a three-dimensional turbulent non-premixed jet flame. Combustion and Flame, 2014, 161, 1849-1865.	2.8	124
2	Statistics and scaling of turbulence in a spatially developing mixing layer at ReÎ» = 250. Physics of Fluids, 2012, 24, .	1.6	65
3	Characteristic patterns of thermodiffusively unstable premixed lean hydrogen flames. Proceedings of the Combustion Institute, 2019, 37, 1879-1886.	2.4	60
4	On the statistics of flame stretch in turbulent premixed jet flames in the thin reaction zone regime at varying Reynolds number. Proceedings of the Combustion Institute, 2019, 37, 2451-2459.	2.4	53
5	Effects of non-unity Lewis number of gas-phase species in turbulent nonpremixed sooting flames. Combustion and Flame, 2016, 166, 192-202.	2.8	51
6	Statistics of the turbulent/non-turbulent interface in a spatially developing mixing layer. Journal of Turbulence, 2014, 15, 555-568.	0.5	47
7	DamkÃ¶hler number effects on soot formation and growth in turbulent nonpremixed flames. Proceedings of the Combustion Institute, 2015, 35, 1215-1223.	2.4	47
8	Synergistic interactions of thermodiffusive instabilities and turbulence in lean hydrogen flames. Combustion and Flame, 2022, 244, 112254.	2.8	43
9	Experimental and numerical study of soot formation in counterflow diffusion flames of gasoline surrogate components. Combustion and Flame, 2019, 210, 159-171.	2.8	40
10	Numerical study of coal particle ignition in air and oxy-atmosphere. Proceedings of the Combustion Institute, 2019, 37, 2867-2874.	2.4	34
11	Intrinsic instabilities in premixed hydrogen flames: parametric variation of pressure, equivalence ratio, and temperature. Part 2 â€" Nonâ€linear regime and flame speed enhancement. Combustion and Flame, 2022, 240, 111936.	2.8	33
12	Effects of hydrodynamics and mixing on soot formation and growth in laminar coflow diffusion flames at elevated pressures. Combustion and Flame, 2017, 181, 39-53.	2.8	31
13	The effect of pressure on the hydrodynamic stability limit of premixed flames. Proceedings of the Combustion Institute, 2021, 38, 1973-1981.	2.4	28
14	Advancing predictive models for particulate formation in turbulent flames via massively parallel direct numerical simulations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130324.	1.6	27
15	Simulation and analysis of the soot particle size distribution in a turbulent nonpremixed flame. Combustion and Flame, 2017, 178, 35-45.	2.8	26
16	Comprehensive Validation of Skeletal Mechanism for Turbulent Premixed Methaneâ€"Air Flame Simulations. Journal of Propulsion and Power, 2018, 34, 153-160.	1.3	25
17	Application of a robust and efficient Lagrangian particle scheme to soot transport in turbulent flames. Computers and Fluids, 2013, 84, 164-175.	1.3	24
18	Turbulent flame speed and reaction layer thickening in premixed jet flames at constant Karlovitz and increasing Reynolds numbers. Proceedings of the Combustion Institute, 2021, 38, 2939-2947.	2.4	23

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19	Fluctuations of a passive scalar in a turbulent mixing layer. Physical Review E, 2013, 88, 033013.	0.8	22
20	Homogeneous ignition and volatile combustion of single solid fuel particles in air and oxy-fuel conditions. Fuel, 2021, 291, 120101.	3.4	21
21	Numerical investigation of coal particle stream ignition in oxy-atmosphere. Fuel, 2019, 241, 477-487.	3.4	20
22	Simulation of aerosol nucleation and growth in a turbulent mixing layer. Physics of Fluids, 2014, 26, .	1.6	19
23	Experimental investigation of soot evolution in a turbulent non-premixed prevaporized toluene flame. Proceedings of the Combustion Institute, 2019, 37, 849-857.	2.4	19
24	Intrinsic instabilities in premixed hydrogen flames: Parametric variation of pressure, equivalence ratio, and temperature. Part 1 - Dispersion relations in the linear regime. Combustion and Flame, 2022, 240, 111935.	2.8	19
25	Which factors influence the extent of indoor transmission of SARS-CoV-2? A rapid evidence review. Journal of Global Health, 2021, 11, 10002.	1.2	18
26	Scale interactions in a mixing layer â€“ the role of the large-scale gradients. Journal of Fluid Mechanics, 2016, 791, 154-173.	1.4	17
27	A DNS study of the impact of gravity on spherically expanding laminar premixed flames. Combustion and Flame, 2020, 216, 412-425.	2.8	16
28	Numerically accurate computational techniques for optimal estimator analyses of multi-parameter models. Combustion Theory and Modelling, 2018, 22, 480-504.	1.0	15
29	DNS-driven analysis of the Flamelet/Progress Variable model assumptions on soot inception, growth, and oxidation in turbulent flames. Combustion and Flame, 2020, 214, 437-449.	2.8	14
30	Pressure-induced Hydrodynamic Instability in Premixed Methane-Air Slot Flames. Combustion Science and Technology, 2020, 192, 1998-2009.	1.2	14
31	Reynolds number scaling of burning rates in spherical turbulent premixed flames. Journal of Fluid Mechanics, 2021, 906, .	1.4	13
32	Ignition Transient Induced Loads Control Strategy for VEGA Launcher' Solid Rocket Motors: the "Zefiro9" Static Firing Test Predictions and Post Firing Analysis. Zefiro9 Static Firing Test Predictions and Post-firing Analysis. , 2006, , .		11
33	Numerical investigation and assessment of flamelet-based models for the prediction of pulverized solid fuel homogeneous ignition and combustion. Combustion and Flame, 2022, 235, 111693.	2.8	11
34	Scale dependence of the alignment between strain rate and rotation in turbulent shear flow. Physical Review Fluids, 2016, 1, .	1.0	11
35	Internal Ballistics and Dynamics of VEGA Launcher Solid Rocket Motors During Ignition Transient: Firing Test Predictions and Post Firing Analysis. , 2007, , .		10
36	A new modeling approach for mixture fraction statistics based on dissipation elements. Proceedings of the Combustion Institute, 2021, 38, 2681-2689.	2.4	10

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37	Dissipation element analysis of non-premixed jet flames. Journal of Fluid Mechanics, 2020, 905, .	1.4	8
38	Modeling subfilter soot-turbulence interactions in Large Eddy Simulation: An a priori study. Proceedings of the Combustion Institute, 2021, 38, 2783-2790.	2.4	8
39	Adjoint-based sensitivity analysis of steady char burnout. Combustion Theory and Modelling, 2021, 25, 96-120.	1.0	8
40	Data-driven subfilter modelling of thermo-diffusively unstable hydrogenâ€“air premixed flames. Combustion Theory and Modelling, 2021, 25, 1064-1085.	1.0	8
41	Numerical Simulation of Multiphase Flows in Solid Rocket Motors. , 2009, , .		7
42	Dissipation Element Analysis of Turbulent Premixed Jet Flames. Combustion Science and Technology, 2019, 191, 1677-1692.	1.2	7
43	Internal layers in turbulent free-shear flows. Physical Review Fluids, 2021, 6, .	1.0	6
44	Self-similar scaling of pressurised sooting methane/air coflow flames at constant Reynolds and Grashof numbers. Combustion and Flame, 2018, 196, 300-313.	2.8	5
45	Comparison Between Different Pressurant Gases for Ignition Transient of P80 SRM. , 2009, , .		4
46	Post-Firing Analysis of Z23 SRM Ignition Transient. , 2009, , .		4
47	A-priori and a-posteriori studies of a direct moment closure approach for turbulent combustion using DNS data of a premixed flame. Proceedings of the Combustion Institute, 2021, 38, 3003-3011.	2.4	4
48	Structure function scaling in a Re_{Î»}= 250 turbulent mixing layer. Journal of Physics: Conference Series, 2011, 318, 042001.	0.3	3
49	Statistics of Scalar Dissipation and Strain/Vorticity/Scalar Gradient Alignment in Turbulent Nonpremixed Jet Flames. Flow, Turbulence and Combustion, 2019, 103, 625-642.	1.4	3
50	Direct Numerical Simulation of Turbulent Lean Methane-Air Bunsen Flames with Mixture Inhomogeneities. , 2016, , .		2
51	Direct Numerical Simulations of NOx formation in spatially developing turbulent premixed Bunsen flames with mixture inhomogeneity. , 2017, , .		2
52	Numerical Simulations and Experiments of Ignition of Solid Particles in a Laminar Burner: Effects of Slip Velocity and Particle Swelling. Flow, Turbulence and Combustion, 2021, 106, 515-531.	1.4	2
53	Numerical analysis of very rich propagating spherical flames: Soot formation and its impact on the determination of laminar flame speed. Combustion and Flame, 2022, 237, 111860.	2.8	2
54	Predictive Data-Driven Model Based on Generative Adversarial Network for Premixed Turbulence-Combustion Regimes. Combustion Science and Technology, 0, , 1-24.	1.2	2

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55	Gradient Trajectory Analysis of the Burning Rate in Turbulent Premixed Jet Flames. Combustion Science and Technology, 2020, 192, 2189-2207.	1.2	1
56	Sensitivity analysis of an unsteady char particle combustion. Fuel, 2021, 287, 119738.	3.4	1
57	Lagrangian Analysis of Mixing and Soot Transport in a Turbulent Jet Flame. ERCOFTAC Series, 2015, , 503-509.	0.1	1
58	Unsupervised Data Analysis of Direct Numerical Simulation of a Turbulent Flame via Local Principal Component Analysis and Procustes Analysis. Advances in Intelligent Systems and Computing, 2021, , 460-469.	0.5	1
59	Two Approaches for Condensed-Phase Modeling in Solid Rocket Motor Flows. , 2008, , .		0