

# Kareem A Ahmed

## List of Publications by Year in descending order

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Version: 2024-02-01

61  
papers

719  
citations

567144

15  
h-index

552653

26  
g-index

62  
all docs

62  
docs citations

62  
times ranked

474  
citing authors

#	ARTICLE	IF	CITATIONS
1	A unified mechanism for unconfined deflagration-to-detonation transition in terrestrial chemical systems and type Ia supernovae. <i>Science</i> , 2019, 366, .	6.0	82
2	A study of fluid dynamics and human physiology factors driving droplet dispersion from a human sneeze. <i>Physics of Fluids</i> , 2020, 32, 111904.	1.6	65
3	Flame-turbulence interaction of laminar premixed deflagrated flames. <i>Combustion and Flame</i> , 2017, 176, 439-450.	2.8	58
4	Stabilized detonation for hypersonic propulsion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	42
5	Turbulent flame augmentation using a fluidic jet for Deflagration-to-Detonation. <i>Fuel</i> , 2017, 199, 616-626.	3.4	37
6	Mechanisms of flame extinction and lean blowout of bluff body stabilized flames. <i>Combustion and Flame</i> , 2019, 203, 31-45.	2.8	37
7	Supersonic driven detonation dynamics for rotating detonation engines. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 7596-7606.	3.8	32
8	Experimental evidence of H <sub>2</sub> /O <sub>2</sub> propellants powered rotating detonation waves. <i>Combustion and Flame</i> , 2020, 214, 136-138.	2.8	32
9	Pressure-gradient tailoring effects on the turbulent flame-vortex dynamics of bluff-body premixed flames. <i>Combustion and Flame</i> , 2018, 197, 227-242.	2.8	30
10	Lagrangian mechanisms of flame extinction for lean turbulent premixed flames. <i>Fuel</i> , 2017, 194, 239-256.	3.4	27
11	On the Flame-generated Vorticity Dynamics of Bluff-body-stabilized Premixed Flames. <i>Flow, Turbulence and Combustion</i> , 2017, 99, 487-509.	1.4	27
12	Compressible turbulent flame speeds of highly turbulent standing flames. <i>Proceedings of the Combustion Institute</i> , 2019, 37, 3495-3502.	2.4	23
13	The effect of premixed stratification on the wave dynamics of a rotating detonation combustor. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 27816-27826.	3.8	20
14	Pressure gradient tailoring effects on the mechanisms of bluff-body flame extinction. <i>Combustion and Flame</i> , 2020, 215, 224-237.	2.8	17
15	Turbulent flame-vortex dynamics of bluff-body premixed flames. <i>Combustion and Flame</i> , 2021, 223, 28-41.	2.8	16
16	Spontaneous runaway of fast turbulent flames for turbulence-induced deflagration-to-detonation transition. <i>Physics of Fluids</i> , 2022, 34, .	1.6	15
17	The effects of turbulence and pressure gradients on vorticity transport in premixed bluff-body flames. <i>Physics of Fluids</i> , 2021, 33, .	1.6	13
18	The evolution of pressure gain in turbulent fast flames. <i>Combustion and Flame</i> , 2021, 234, 111641.	2.8	13

#	ARTICLE	IF	CITATIONS
19	The effects of turbulence on the lean blowout mechanisms of bluff-body flames. Proceedings of the Combustion Institute, 2021, 38, 6317-6325.	2.4	10
20	Relationship between the Chemiluminescence Intensity Ratio of $C_2^*$ and $CH^*$ , Charge Pressure, and Equivalence Ratio for Gasoline. Energy & Fuels, 2018, 32, 10933-10940.	2.5	9
21	Numerical investigation of the accuracy of particle image velocimetry technique in gas-phase detonations. Proceedings of the Combustion Institute, 2021, 38, 3671-3681.	2.4	9
22	Optimization of flame kernel ignition and evolution induced by modulated nanosecond-pulsed high-frequency discharge. Proceedings of the Combustion Institute, 2021, 38, 6541-6550.	2.4	9
23	Turbulence-Driven Blowout Instabilities of Premixed Bluff-Body Flames. Flow, Turbulence and Combustion, 2022, 108, 213-236.	1.4	9
24	Design & Development of a Hypersonic Combustor for Oblique Detonation Wave Stabilization. , 2017, , .		8
25	The effect of relative air humidity on the evaporation timescales of a human sneeze. AIP Advances, 2022, 12, .	0.6	8
26	Controlled detonation initiation in hypersonic flow. Proceedings of the Combustion Institute, 2021, 38, 3513-3520.	2.4	7
27	Effect of saliva fluid properties on pathogen transmissibility. Scientific Reports, 2021, 11, 16051.	1.6	6
28	Single sensor fiber-based high-speed tomographic particle image velocimetry. Optics Letters, 2019, 44, 2748.	1.7	6
29	Structured light-field focusing for flowfield diagnostics. Experimental Thermal and Fluid Science, 2017, 89, 110-118.	1.5	5
30	Partial Premixing Effects on the Reacting Jet of a High-Pressure Axially Staged Combustor. Journal of Engineering for Gas Turbines and Power, 2021, 143, .	0.5	5
31	Wedge-Stabilized Oblique Detonation Waves in a Hypersonic Hydrogen-Air Premixed Freestream. , 2019, , .		4
32	Influence of Transverse Slot Jet on Premixed Flame Acceleration. Journal of Propulsion and Power, 2020, 36, 59-67.	1.3	4
33	Single-sensor filter-intensified fiber optic 4D tomographic $CH^*$ chemiluminescence flame measurements. Applied Optics, 2021, 60, 6337.	0.9	4
34	The role of flow confinement on turbulent kinetic energy transfer across premixed flames. Combustion and Flame, 2022, 241, 112103.	2.8	4
35	Ignition mechanisms of pulse detonator initiated scramjet cavity. Proceedings of the Combustion Institute, 2021, 38, 3853-3860.	2.4	3
36	Human Research Study of Particulate Propagation Distance From Human Respiratory Function. Journal of Infectious Diseases, 2022, 225, 1321-1329.	1.9	3

#	ARTICLE	IF	CITATIONS
37	Dynamic gas flow effects on the ESD of aerospace vehicle surfaces. Journal of Electrostatics, 2018, 91, 21-27.	1.0	2
38	Energy deposition characteristics of a pulsed detonation igniter through geometric manipulation. Combustion and Flame, 2021, 229, 111384.	2.8	2
39	Heat Transfer Measurements in an Elevated Pressure RDRE Combustor. , 2021, , .		2
40	Modal Analysis of Breakup Mechanisms for a Liquid Jet in Crossflow. Journal of Energy Resources Technology, Transactions of the ASME, 2022, 144, .	1.4	2
41	Flow-Independent Liquid Jet-in-Crossflow Injection Using Physical Obstructions. Journal of Energy Resources Technology, Transactions of the ASME, 2022, 144, .	1.4	2
42	Experimental Investigation of Injector Sizing In The Rotating Detonation Rocket Engine. , 2022, , .		2
43	Lagrangian Flame-Vorticity Characterization of Bluff-Body Flame Blowout. , 2019, , .		1
44	The Influence of Vorticity on Turbulent Premixed Flames. , 2020, , .		1
45	Characteristics of a Single Sensor Fiber-Coupled Three-Dimensional Particle Image Velocimetry for Reacting Flow-Fields. Journal of Fluids Engineering, Transactions of the ASME, 2022, 144, .	0.8	1
46	Validation of Experimental Evidence for $H_2/O_2$ Powered Rotating Detonation Rocket Engine. , 2021, , .		1
47	Description and Application of a Software Tool for Simulation of Tomographic PIV Data. , 2021, , .		1
48	Carbon and Hydrocarbon Particle Seeding in Air-breathing Rotating Detonation Engine. Journal of Engineering for Gas Turbines and Power, 2021, , .	0.5	1
49	Experimental Study of Oblique Detonation Waves with Varied Ramp Geometries. , 2022, , .		1
50	Development of an Automatic-Calibrating Small-Scale Thrust Stand for Rotating Detonation Rocket Engines. , 2022, , .		1
51	Turbulence Induced Deflagration-to-Detonation Transition. , 2017, , .		0
52	Investigation of Hydrocarbon Fast-Flame Regimes for Flame Acceleration to Detonation. , 2020, , .		0
53	Insights of Bluff-Body Extinction and Blowout from 4D Measurements. , 2020, , .		0
54	High-Speed 4D Flame-Flow Measurements of a Bluff-Body Stabilized Premixed Flame. , 2020, , .		0

#	ARTICLE	IF	CITATIONS
55	Efficacy and Viability of Tomographic Imaging in Combustion Applications. , 2021, , .		0
56	Design and Characterization of Mach 5 Flow for Highly Turbulent Hypersonic Test Facility. , 2021, , .		0
57	The Dynamics of Turbulent Hydrocarbon Fast-Flames. , 2021, , .		0
58	Investigation of Compressible Turbulent Hydrocarbon Fast Flames to DDT. , 2021, , .		0
59	A Parametric Study of Hydrocarbon Fast Flames. , 2022, , .		0
60	C <sub>2</sub> */CH* Intensity Ratios of Bluff Body Stabilized Flames Approaching Lean Blowout at Elevated Pressures. , 2022, , .		0
61	Stability and Extinction of Premixed Flames at High-Altitude Pressures. , 2022, , .		0