

Brian Haines

List of Publications by Year in descending order

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Version: 2024-02-01

55
papers

1,286
citations

361413

20
h-index

395702

33
g-index

62
all docs

62
docs citations

62
times ranked

788
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental quantification of the impact of heterogeneous mix on thermonuclear burn. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	7
2	A mechanism for reduced compression in indirectly driven layered capsule implosions. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	18
3	Mechanisms of shape transfer and preheating in indirect-drive double shell collisions. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	7
4	Pathways towards break even for low convergence ratio direct-drive inertial confinement fusion. <i>Journal of Plasma Physics</i> , 2022, 88, .	2.1	3
5	Use of computer vision for analysis of image datasets from high temperature plasma experiments. <i>Review of Scientific Instruments</i> , 2021, 92, 033532.	1.3	8
6	Constraining computational modeling of indirect drive double shell capsule implosions using experiments. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	17
7	Results from single-shock Marble experiments studying thermonuclear burn in the presence of heterogeneous mix on the National Ignition Facility. <i>High Energy Density Physics</i> , 2021, 38, 100929.	1.5	10
8	Detrimental effects and mitigation of the joint feature in double shell implosion simulations. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	12
9	Experimental validation of shock propagation through a foam with engineered macro-pores. <i>Physics of Plasmas</i> , 2021, 28, 012702.	1.9	5
10	Preparations for a European R&D roadmap for an inertial fusion demo reactor. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021, 379, 20200005.	3.4	6
11	One-dimensional hydrodynamic simulations of low convergence ratio direct-drive inertial confinement fusion implosions. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021, 379, 20200224.	3.4	10
12	Mitigating the Joint Feature in Double Shell Implosion Simulations *. , 2021, , .		0
13	A polar direct drive liquid deuteriumâ€“tritium wetted foam target concept for inertial confinement fusion. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	12
14	Coupling 1D xRAGE simulations with machine learning for graded inner shell design optimization in double shell capsules. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	10
15	Experimental measurement of two copropagating shocks interacting with an unstable interface. <i>Physical Review E</i> , 2020, 102, 043212.	2.1	8
16	The rate of development of atomic mixing and temperature equilibration in inertial confinement fusion implosions. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	17
17	Development of the Marble experimental platform at the National Ignition Facility. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	11
18	Magnetization around mix jets entering inertial confinement fusion fuel. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	10

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19	Cross-code comparison of the impact of the fill tube on high yield implosions on the National Ignition Facility. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	16
20	3D xRAGE simulation of inertial confinement fusion implosion with imposed mode 2 laser drive asymmetry. <i>High Energy Density Physics</i> , 2020, 36, 100825.	1.5	8
21	Coupling laser physics to radiation-hydrodynamics. <i>Computers and Fluids</i> , 2020, 201, 104478.	2.5	22
22	Observation of persistent species temperature separation in inertial confinement fusion mixtures. <i>Nature Communications</i> , 2020, 11, 544.	12.8	41
23	Impact of stalk on directly driven inertial confinement fusion implosions. <i>Physics of Plasmas</i> , 2020, 27, 032704.	1.9	15
24	Robustness to hydrodynamic instabilities in indirectly driven layered capsule implosions. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	35
25	Impact of imposed mode 2 laser drive asymmetry on inertial confinement fusion implosions. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	15
26	The modeling of delayed-onset Rayleigh-Taylor and transition to mixing in laser-driven HED experiments. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	7
27	Modeling of direct-drive cylindrical implosion experiments with an Eulerian radiation-hydrodynamics code. <i>Physics of Plasmas</i> , 2019, 26, 042701.	1.9	18
28	Progress of indirect drive inertial confinement fusion in the United States. <i>Nuclear Fusion</i> , 2019, 59, 112018.	3.5	38
29	Computational study of instability and fill tube mitigation strategies for double shell implosions. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	12
30	Effects of thermal conductivity of liquid layer in NIF wetted foam experiments. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	7
31	Variable convergence liquid layer implosions on the National Ignition Facility. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	15
32	Impact of asymmetries on fuel performance in inertial confinement fusion. <i>Physical Review E</i> , 2018, 98, .	2.1	16
33	Plasma transport in an Eulerian AMR code. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	27
34	The effects of convergence ratio on the implosion behavior of DT layered inertial confinement fusion capsules. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	33
35	Systematic Fuel Cavity Asymmetries in Directly Driven Inertial Confinement Fusion Implosions. <i>Physical Review Letters</i> , 2017, 118, 135001.	7.8	22
36	High-resolution modeling of indirectly driven high-convergence layered inertial confinement fusion capsule implosions. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	58

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37	Progress in the development of the MARBLE platform for studying thermonuclear burn in the presence of heterogeneous mix on OMEGA and the National Ignition Facility. <i>Journal of Physics: Conference Series</i> , 2016, 717, 012072.	0.4	24
38	First Liquid Layer Inertial Confinement Fusion Implosions at the National Ignition Facility. <i>Physical Review Letters</i> , 2016, 117, 245001.	7.8	53
39	Detailed high-resolution three-dimensional simulations of OMEGA separated reactants inertial confinement fusion experiments. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	47
40	Exponential yield sensitivity to long-wavelength asymmetries in three-dimensional simulations of inertial confinement fusion capsule implosions. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	7
41	Three-dimensional simulation strategy to determine the effects of turbulent mixing on inertial-confinement-fusion capsule performance. <i>Physical Review E</i> , 2014, 89, 053302.	2.1	40
42	Estimating the effective Reynolds number in implicit large-eddy simulation. <i>Physical Review E</i> , 2014, 89, 013303.	2.1	68
43	The effects of plasma diffusion and viscosity on turbulent instability growth. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	37
44	Reynolds-averaged Navier–Stokes initialization and benchmarking in shock-driven turbulent mixing. <i>Journal of Turbulence</i> , 2013, 14, 46-70.	1.4	40
45	A Kinetic Model for Semidilute Bacterial Suspensions. <i>Multiscale Modeling and Simulation</i> , 2013, 11, 1176-1196.	1.6	17
46	Two laser-driven mix experiments to study reshock and shear. <i>High Energy Density Physics</i> , 2013, 9, 496-499.	1.5	43
47	Analysis of the effects of energy deposition on shock-driven turbulent mixing. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	8
48	Simulation ensemble for a laser-driven shear experiment. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	13
49	Simulations of material mixing in laser-driven reshock experiments. <i>Physics of Plasmas</i> , 2013, 20, 022309.	1.9	22
50	A Proof of Einstein's Effective Viscosity for a Dilute Suspension of Spheres. <i>SIAM Journal on Mathematical Analysis</i> , 2012, 44, 2120-2145.	1.9	33
51	Effective viscosity of bacterial suspensions: a three-dimensional PDE model with stochastic torque. <i>Communications on Pure and Applied Analysis</i> , 2012, 11, 19-46.	0.8	13
52	Viscosity of bacterial suspensions: Hydrodynamic interactions and self-induced noise. <i>Physical Review E</i> , 2011, 83, 050904.	2.1	102
53	Three-dimensional model for the effective viscosity of bacterial suspensions. <i>Physical Review E</i> , 2009, 80, 041922.	2.1	84
54	Effective viscosity of dilute bacterial suspensions: a two-dimensional model. <i>Physical Biology</i> , 2008, 5, 046003.	1.8	57

#	ARTICLE	IF	CITATIONS
55	Laser Driven Turbulence in High Energy Density Physics and Inertial Confinement Fusion Experiments. , 0, , 232-281.		1