

# Derek Mariscal

## List of Publications by Year in descending order

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Version: 2024-02-01

34  
papers

700  
citations

516710

16  
h-index

552781

26  
g-index

35  
all docs

35  
docs citations

35  
times ranked

637  
citing authors

#	ARTICLE	IF	CITATIONS
1	Design of inertial fusion implosions reaching the burning plasma regime. <i>Nature Physics</i> , 2022, 18, 251-258.	16.7	87
2	Demonstration of plasma mirror capability for the OMEGA Extended Performance laser system. <i>Review of Scientific Instruments</i> , 2022, 93, 043006.	1.3	1
3	Experimental verification of TNSA protons and deuterons in the multi-picosecond moderate intensity regime. <i>Physics of Plasmas</i> , 2022, 29, 063106.	1.9	2
4	Laser transport and backscatter in low-density SiO <sub>2</sub> and Ta <sub>2</sub> O <sub>5</sub> foams. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	6
5	Scaling of laser-driven electron and proton acceleration as a function of laser pulse duration, energy, and intensity in the multi-picosecond regime. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	18
6	Experimental and calculational investigation of laser-heated additive manufactured foams. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	9
7	Modeling laser-driven ion acceleration with deep learning. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	19
8	Simulation studies of the interaction of laser radiation with additively manufactured foams. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 055009.	2.1	5
9	The data-driven future of high-energy-density physics. <i>Nature</i> , 2021, 593, 351-361.	27.8	52
10	Development of a deep learning based automated data analysis for step-filter x-ray spectrometers in support of high-repetition rate short-pulse laser-driven acceleration experiments. <i>Review of Scientific Instruments</i> , 2021, 92, 075101.	1.3	10
11	Achieving record hot spot energies with large HDC implosions on NIF in HYBRID-E. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	55
12	Characterizing the acceleration time of laser-driven ion acceleration with data-informed neural networks. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 094005.	2.1	4
13	Design of flexible proton beam imaging energy spectrometers (PROBIES). <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 114003.	2.1	5
14	Accelerating the rate of discovery: toward high-repetition-rate HED science. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 104003.	2.1	15
15	Rapid retrieval of first-order spatiotemporal distortions for ultrashort laser pulses. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 124005.	2.1	2
16	Demonstration of TNSA proton radiography on the National Ignition Facility Advanced Radiographic Capability (NIF-ARC) laser. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 124006.	2.1	6
17	Application of cross-beam energy transfer to control drive symmetry in ICF implosions in low gas fill <i>Hohlraums</i> at the National Ignition Facility. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	18
18	Focussing Protons from a Kilojoule Laser for Intense Beam Heating using Proximal Target Structures. <i>Scientific Reports</i> , 2020, 10, 9415.	3.3	17

#	ARTICLE	IF	CITATIONS
19	Laser propagation in a subcritical foam: Subgrid model. Physics of Plasmas, 2020, 27, 112710.	1.9	13
20	Symmetric fielding of the largest diamond capsule implosions on the NIF. Physics of Plasmas, 2020, 27, .	1.9	28
21	Production of relativistic electrons at subrelativistic laser intensities. Physical Review E, 2020, 101, 031201.	2.1	18
22	Impact of Localized Radiative Loss on Inertial Confinement Fusion Implosions. Physical Review Letters, 2020, 124, 145001.	7.8	58
23	First demonstration of ARC-accelerated proton beams at the National Ignition Facility. Physics of Plasmas, 2019, 26, .	1.9	34
24	Exploring the limits of case-to-capsule ratio, pulse length, and picket energy for symmetric hohlraum drive on the National Ignition Facility Laser. Physics of Plasmas, 2018, 25, .	1.9	79
25	Energy transfer between lasers in low-gas-fill-density hohlraums. Physical Review E, 2018, 98, .	2.1	27
26	Laser propagation in a subcritical foam: Ion and electron heating. Physics of Plasmas, 2018, 25, .	1.9	17
27	Calibration of proton dispersion for the NIF electron positron proton spectrometer (NEPPS) for short-pulse laser experiments on the NIF ARC. Review of Scientific Instruments, 2018, 89, 101145.	1.3	8
28	Measurement of temperature and density using non-collective X-ray Thomson scattering in pulsed power produced warm dense plasmas. Scientific Reports, 2018, 8, 8432.	3.3	8
29	Computational modeling of proton acceleration with multi-picosecond and high energy, kilojoule, lasers. Physics of Plasmas, 2018, 25, 083109.	1.9	23
30	Study of instability formation and EUV emission in thin liners driven with a compact 250 kA, 150 ns linear transformer driver. Physics of Plasmas, 2014, 21, 031208.	1.9	6
31	K $\alpha$ and bremsstrahlung x-ray radiation backlighter sources from short pulse laser driven silver targets as a function of laser pre-pulse energy. Physics of Plasmas, 2014, 21, .	1.9	29
32	Measurement of pulsed-power-driven magnetic fields via proton deflectometry. Applied Physics Letters, 2014, 105, .	3.3	17
33	Study of instability formation in liners driven with a compact linear transformer driver. , 2013, , .		0
34	Experimental Analysis of the Acceleration Region in Tungsten Wire Arrays. IEEE Transactions on Plasma Science, 2012, 40, 3324-3328.	1.3	3