

Stewart J Zweben

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3227628/publications.pdf>

Version: 2024-02-01

122
papers

4,633
citations

136950

32
h-index

102487

66
g-index

131
all docs

131
docs citations

131
times ranked

1802
citing authors

#	ARTICLE	IF	CITATIONS
1	Fluctuations and anomalous transport in tokamaks. <i>Physics of Fluids B</i> , 1990, 2, 2879-2903.	1.7	447
2	Convective transport by intermittent blob-filaments: Comparison of theory and experiment. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	417
3	Edge turbulence measurements in toroidal fusion devices. <i>Plasma Physics and Controlled Fusion</i> , 2007, 49, S1-S23.	2.1	283
4	Edge turbulence imaging in the Alcator C-Mod tokamak. <i>Physics of Plasmas</i> , 2002, 9, 1981-1989.	1.9	238
5	Particle transport in the scrape-off layer and its relationship to discharge density limit in Alcator C-Mod. <i>Physics of Plasmas</i> , 2001, 8, 2107-2117.	1.9	220
6	Observations of the turbulence in the scrape-off-layer of Alcator C-Mod and comparisons with simulation. <i>Physics of Plasmas</i> , 2003, 10, 1739-1747.	1.9	203
7	Enhancement of Tokamak Fusion Test Reactor performance by lithium conditioning. <i>Physics of Plasmas</i> , 1996, 3, 1892-1897.	1.9	181
8	Search for coherent structure within tokamak plasma turbulence. <i>Physics of Fluids</i> , 1985, 28, 974.	1.4	143
9	Radially propagating fluctuation structures in the scrape-off layer of Alcator C-Mod. <i>Physics of Plasmas</i> , 2006, 13, 012306.	1.9	124
10	Blob birth and transport in the tokamak edge plasma: Analysis of imaging data. <i>Physics of Plasmas</i> , 2006, 13, 092509.	1.9	122
11	Gas puff imaging of edge turbulence (invited). <i>Review of Scientific Instruments</i> , 2003, 74, 2020-2026.	1.3	108
12	Fusion plasma experiments on TFTR: A 20 year retrospective. <i>Physics of Plasmas</i> , 1998, 5, 1577-1589.	1.9	91
13	Review of deuterium-tritium results from the Tokamak Fusion Test Reactor. <i>Physics of Plasmas</i> , 1995, 2, 2176-2188.	1.9	89
14	Visible imaging of edge fluctuations in the TFTR tokamak. <i>Physics of Fluids B</i> , 1989, 1, 2058-2065.	1.7	83
15	Quiet periods in edge turbulence preceding the L-H transition in the National Spherical Torus Experiment. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	83
16	Invited Review Article: Gas puff imaging diagnostics of edge plasma turbulence in magnetic fusion devices. <i>Review of Scientific Instruments</i> , 2017, 88, 041101.	1.3	73
17	Blob structure and motion in the edge and SOL of NSTX. <i>Plasma Physics and Controlled Fusion</i> , 2016, 58, 044007.	2.1	68
18	Critical gradients and plasma flows in the edge plasma of Alcator C-Mod. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	67

#	ARTICLE	IF	CITATIONS
19	Diagnostic Systems on Alcator C-Mod. Fusion Science and Technology, 2007, 51, 476-507.	1.1	62
20	Reduced model simulations of the scrape-off-layer heat-flux width and comparison with experiment. Physics of Plasmas, 2011, 18, 012305.	1.9	49
21	Plasma mass separation. Physics of Plasmas, 2018, 25, .	1.9	49
22	Comparison of scrape-off layer turbulence in Alcator C-Mod with three dimensional gyrofluid computations. Physics of Plasmas, 2009, 16, .	1.9	48
23	Correlations of heat and momentum transport in the TFTR tokamak. Physics of Fluids B, 1990, 2, 1300-1305.	1.7	47
24	Impact of different confinement regimes on the two-dimensional structure of edge turbulence. Plasma Physics and Controlled Fusion, 2006, 48, B465-B473.	2.1	43
25	Study of statistical properties of edge turbulence in the National Spherical Torus Experiment with the gas puff imaging diagnostic. Physics of Plasmas, 2007, 14, .	1.9	42
26	Derivation of time-dependent two-dimensional velocity field maps for plasma turbulence studies. Review of Scientific Instruments, 2006, 77, 103501.	1.3	38
27	Enhanced performance of deuterium-tritium fueled supershots using extensive lithium conditioning in the Tokamak Fusion Test Reactor. Physics of Plasmas, 1995, 2, 4252-4256.	1.9	36
28	High-beta operation and magnetohydrodynamic activity on the TFTR tokamak. Physics of Fluids B, 1990, 2, 1287-1290.	1.7	35
29	Toroidal Alfvén eigenmodes in TFTR deuterium-tritium plasmas. Physics of Plasmas, 1998, 5, 1703-1711.	1.9	33
30	Characterization of small, Type V edge-localized modes in the National Spherical Torus Experiment. Physics of Plasmas, 2006, 13, 092510.	1.9	33
31	Effect of plasma shaping on performance in the National Spherical Torus Experiment. Physics of Plasmas, 2006, 13, 056122.	1.9	33
32	Comparison of scrape-off layer turbulence simulations with experiments using a synthetic gas puff imaging diagnostic. Physics of Plasmas, 2011, 18, .	1.9	32
33	Comparison of steady-state and perturbative transport coefficients in TFTR. Physics of Fluids B, 1991, 3, 2315-2323.	1.7	29
34	Anomalous losses of deuterium-deuterium fusion products in the Tokamak Fusion Test Reactor*. Physics of Plasmas, 1994, 1, 1469-1478.	1.9	29
35	Deuterium-tritium plasmas in novel regimes in the Tokamak Fusion Test Reactor. Physics of Plasmas, 1997, 4, 1714-1724.	1.9	27
36	H-mode threshold and dynamics in the National Spherical Torus Experiment. Physics of Plasmas, 2003, 10, 1755-1764.	1.9	27

#	ARTICLE	IF	CITATIONS
37	Flow and shear behavior in the edge and scrape-off layer of L-mode plasmas in National Spherical Torus Experiment. <i>Physics of Plasmas</i> , 2011, 18, 012502.	1.9	27
38	Deuterium–tritium high confinement (H-mode) studies in the Tokamak Fusion Test Reactor. <i>Physics of Plasmas</i> , 1995, 2, 2366-2374.	1.9	26
39	E ₀ configurations for high-throughput plasma mass separation: An outlook on possibilities and challenges. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	26
40	Alpha particle losses from Tokamak Fusion Test Reactor deuterium–tritium plasmas. <i>Physics of Plasmas</i> , 1996, 3, 1875-1880.	1.9	25
41	Alpha particle diagnostics using impurity pellet injection (invited). <i>Review of Scientific Instruments</i> , 1992, 63, 4499-4504.	1.3	24
42	New dual gas puff imaging system with up-down symmetry on experimental advanced superconducting tokamak. <i>Review of Scientific Instruments</i> , 2012, 83, 123506.	1.3	24
43	Initial experimental test of a helicon plasma based mass filter. <i>Plasma Sources Science and Technology</i> , 2016, 25, 035024.	3.1	24
44	Status and Plans for TFTR. <i>Fusion Science and Technology</i> , 1992, 21, 1324-1331.	0.6	23
45	Effect of a deuterium gas puff on the edge plasma in NSTX. <i>Plasma Physics and Controlled Fusion</i> , 2014, 56, 095010.	2.1	23
46	Effective temperatures, sawtooth mixing, and stochastic diffusion ripple loss of fast H ⁺ minority ions driven by ion cyclotron heating in the Tokamak Fusion Test Reactor. <i>Physics of Plasmas</i> , 1999, 6, 2430-2436.	1.9	21
47	Comparison of 3D flux-driven scrape-off layer turbulence simulations with gas-puff imaging of Alcator C-Mod inner-wall limited discharges. <i>Plasma Physics and Controlled Fusion</i> , 2015, 57, 054005.	2.1	20
48	Bispectral analysis of low- to high-confinement mode transitions in the National Spherical Torus Experiment. <i>Physics of Plasmas</i> , 2006, 13, 072301.	1.9	19
49	Comparison of edge turbulence imaging at two different poloidal locations in the scrape-off layer of Alcator C-Mod. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	19
50	Two-dimensional turbulence cross-correlation functions in the edge of NSTX. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	19
51	Approaches to the diagnostics of alpha particles in tokamaks (invited). <i>Review of Scientific Instruments</i> , 1986, 57, 1723-1728.	1.3	18
52	Harnessing mass differential confinement effects in magnetized rotating plasmas to address new separation needs. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 014018.	2.1	18
53	Divertor leg filaments in NSTX-U. <i>Nuclear Fusion</i> , 2018, 58, 126028.	3.5	18
54	Nuclear reaction diagnostics of fast confined and escaping alpha particles. <i>Review of Scientific Instruments</i> , 1986, 57, 1777-1779.	1.3	17

#	ARTICLE	IF	CITATIONS
55	High- Q plasmas in the TFTR tokamak. <i>Physics of Fluids B</i> , 1991, 3, 2308-2314.	1.7	17
56	Alpha-driven magnetohydrodynamics (MHD) and MHD-induced alpha loss in the Tokamak Fusion Test Reactor. <i>Physics of Plasmas</i> , 1997, 4, 1610-1616.	1.9	16
57	Comparison of Gas Puff Imaging Data in NSTX with DEGAS 2 Simulations. <i>Fusion Science and Technology</i> , 2013, 64, 29-38.	1.1	16
58	Modeling the effect of lithium-induced pedestal profiles on scrape-off-layer turbulence and the heat flux width. <i>Physics of Plasmas</i> , 2015, 22, 092311.	1.9	16
59	Three-Dimensional Neutral Transport Simulations of Gas Puff Imaging Experiments. <i>Contributions To Plasma Physics</i> , 2004, 44, 294-300.	1.1	15
60	Scintillation detector for escaping alphas and tritons in TFTR. <i>Review of Scientific Instruments</i> , 1986, 57, 1774-1776.	1.3	14
61	Four-channel ZnS scintillator measurements of escaping tritons in TFTR. <i>Review of Scientific Instruments</i> , 1989, 60, 576-587.	1.3	14
62	MeV ion confinement in the TFTR tokamak. <i>Physics of Fluids B</i> , 1990, 2, 1411-1414.	1.7	14
63	Operating experiences with the TFTR escaping alpha detectors. <i>Review of Scientific Instruments</i> , 1992, 63, 4565-4567.	1.3	14
64	The Scrape-Off Layer in Alcator C-Mod: Transport, Turbulence, and Flows. <i>Fusion Science and Technology</i> , 2007, 51, 342-356.	1.1	14
65	Midplane measurements of charged fusion product diffusion in the Tokamak Fusion Test Reactor. <i>Physics of Fluids B</i> , 1993, 5, 1559-1566.	1.7	13
66	Comparison of velocimetry techniques for turbulent structures in gas-puff imaging data. <i>Review of Scientific Instruments</i> , 2016, 87, 023502.	1.3	13
67	Collisional considerations in axial-collection plasma mass filters. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	13
68	Model for collisional fast ion diffusion into Tokamak Fusion Test Reactor loss cone. <i>Physics of Plasmas</i> , 1994, 1, 3857-3870.	1.9	12
69	First Results with the NSTX Fast Divertor Camera.. <i>Journal of Plasma and Fusion Research</i> , 2002, 78, 1278-1279.	0.4	12
70	Observation of quasi-coherent edge fluctuations in Ohmic plasmas on National Spherical Torus Experiment. <i>Physics of Plasmas</i> , 2016, 23, 044502.	1.9	12
71	Theory based scaling of edge turbulence and implications for the scrape-off layer width. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	11
72	Disconnection of scrape off layer turbulence between the outer midplane and divertor target plate in NSTX. <i>Nuclear Fusion</i> , 2020, 60, 026004.	3.5	11

#	ARTICLE	IF	CITATIONS
73	Calibration of scintillation detectors for MeV charged fusion products. Review of Scientific Instruments, 1992, 63, 4542-4544.	1.3	10
74	Scintillator studies with MeV charged particle beams. Review of Scientific Instruments, 1993, 64, 2459-2465.	1.3	10
75	Search for zonal flows in the edge turbulence of Alcator C-Mod. Plasma Physics and Controlled Fusion, 2012, 54, 025008.	2.1	10
76	Numerical investigation of edge plasma phenomena in an enhanced D-alpha discharge at Alcator C-Mod: Parallel heat flux and quasi-coherent edge oscillations. Physics of Plasmas, 2012, 19, .	1.9	10
77	Edge turbulence velocity preceding the L-H transition in NSTX. Physics of Plasmas, 2021, 28, .	1.9	10
78	Experiments utilizing ion cyclotron range of frequencies heating on the TFTR tokamak. Physics of Fluids B, 1991, 3, 2270-2276.	1.7	9
79	Experiments and modeling of an instability of an atmospheric pressure arc. Physics of Plasmas, 2000, 7, 4326.	1.9	9
80	Velocimetry of edge turbulence during the dithering L-H transition with dynamic programming based time-delay estimation technique in the EAST superconducting tokamak. Plasma Physics and Controlled Fusion, 2013, 55, 105006.	2.1	9
81	Correlation between the relative blob fraction and plasma parameters in NSTX. Physics of Plasmas, 2022, 29, .	1.9	9
82	Constraints on escaping alpha particle detectors for ignited tokamaks. Review of Scientific Instruments, 1990, 61, 3505-3508.	1.3	8
83	Collector probe measurement of fusion tritons in TFTR. Review of Scientific Instruments, 1990, 61, 3199-3201.	1.3	8
84	Calibration of the TFTR lost alpha diagnostic. Review of Scientific Instruments, 1992, 63, 4418-4426.	1.3	8
85	Diagnostics for the biased electrode experiment on NSTX. Review of Scientific Instruments, 2008, 79, 10F124.	1.3	8
86	Mean flows and blob velocities in scrape-off layer (SOLT) simulations of an L-mode discharge on Alcator C-Mod. Physics of Plasmas, 2016, 23, 062305.	1.9	8
87	Outer midplane neutral density measurements and H-mode fueling studies in NSTX-U. Nuclear Fusion, 2021, 61, 036002.	3.5	8
88	Experimental validation of universal plasma blob formation mechanism. Nuclear Fusion, 2022, 62, 026027.	3.5	8
89	Preparations for deuterium-tritium experiments on the Tokamak Fusion Test Reactor*. Physics of Plasmas, 1994, 1, 1560-1567.	1.9	7
90	Distributions of alpha particles escaping to the wall during sawtooth oscillations in the Tokamak Fusion Test Reactor. Physics of Plasmas, 1999, 6, 1117-1130.	1.9	7

#	ARTICLE	IF	CITATIONS
91	Outer midplane scrape-off layer profiles and turbulence in simulations of Alcator C-Mod inner-wall limited discharges. <i>Physics of Plasmas</i> , 2017, 24, 072502.	1.9	7
92	Dynamics of filaments during the edge-localized mode crash on NSTX. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	7
93	Tokamak Fusion Test Reactor Central Ignition Scenarios. <i>Fusion Science and Technology</i> , 1988, 13, 57-86.	0.6	6
94	Neoclassical simulations of fusion alpha particles in pellet charge exchange experiments on the Tokamak Fusion Test Reactor. <i>Physics of Plasmas</i> , 1999, 6, 2826-2833.	1.9	6
95	Two-Dimensional Turbulence Analysis Using High-Speed Visible Imaging in TJ-II Edge Plasmas. <i>Fusion Science and Technology</i> , 2006, 50, 301-306.	1.1	6
96	Measurements of the motion of filaments in a plasma ball. <i>Physics of Plasmas</i> , 2010, 17, 053507.	1.9	6
97	Edge turbulence velocity changes with lithium coating on NSTX. <i>Plasma Physics and Controlled Fusion</i> , 2012, 54, 112001.	2.1	6
98	On filament structure and propagation within a commercial plasma globe. <i>Physics of Plasmas</i> , 2015, 22, 053509.	1.9	6
99	MHD-blob correlations in NSTX. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	6
100	Novel 2D velocity estimation method for large transient events in plasmas. <i>Review of Scientific Instruments</i> , 2021, 92, 083508.	1.3	6
101	In-vessel tritium measurements using beta decay in the Tokamak Fusion Test Reactor. <i>Review of Scientific Instruments</i> , 1999, 70, 1119-1122.	1.3	5
102	Plasma turbulence imaging using high-power laser Thomson scattering. <i>Review of Scientific Instruments</i> , 2001, 72, 1151-1154.	1.3	5
103	Comparison of beam emission spectroscopy and gas puff imaging edge fluctuation measurements in National Spherical Torus Experiment. <i>Physics of Plasmas</i> , 2015, 22, 052310.	1.9	5
104	Measurement of limiter heating due to alpha particle losses during high fusion power deuterium-tritium operation of the TFTR tokamak. <i>Review of Scientific Instruments</i> , 1995, 66, 354-356.	1.3	4
105	Visible imaging of the diagnostic neutral beam on TFTR. <i>Review of Scientific Instruments</i> , 1990, 61, 2940-2942.	1.3	3
106	Extension of the energy range of the moveable fast ion probe on TFTR. <i>Review of Scientific Instruments</i> , 1992, 63, 4562-4564.	1.3	3
107	Influence of vacuum region between plasma and the first wall on the poloidal distribution of diffusive loss of charged fusion products in tokamaks. <i>European Physical Journal D</i> , 1998, 48, 177-182.	0.4	3
108	Blob wakes in NSTX. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	3

#	ARTICLE	IF	CITATIONS
109	10.1063/1.3476276.1., 2010, , .		3
110	Constraints on escaping alpha particle detectors for ignited tokamaks (abstract). Review of Scientific Instruments, 1990, 61, 3233-3233.	1.3	2
111	Rapidly Moving Divertor Plates in a Tokamak. Fusion Science and Technology, 2011, 60, 197-202.	1.1	2
112	Blob-hole correlation model for edge turbulence and comparisons with NSTX gas puff imaging data. Plasma Physics and Controlled Fusion, 2018, 60, 075015.	2.1	2
113	Alpha-Particle Experiments on the Tokamak Fusion Test Reactor and the Compact Ignition Tokamak. Fusion Science and Technology, 1990, 18, 573-577.	0.6	1
114	Modeling fast alpha particle distributions. Review of Scientific Instruments, 1992, 63, 4760-4762.	1.3	1
115	Fusion performance analysis of plasmas with reversed magnetic shear in the Tokamak Fusion Test Reactor. Physics of Plasmas, 1999, 6, 3247-3262.	1.9	1
116	Impact of edge harmonic oscillations on the divertor heat flux in NSTX. Physics of Plasmas, 2022, 29, 012503.	1.9	1
117	Diagnostics of alpha particles and their effects (abstract). Review of Scientific Instruments, 1990, 61, 3229-3229.	1.3	0
118	Deuterium-tritium experiments on TFTR. AIP Conference Proceedings, 1995, , .	0.4	0
119	Enhanced loss of fusion products during mode conversion heating in TFTR. , 1996, , .		0
120	Review of the Fusion Materials Research Program. Journal of Fusion Energy, 2000, 19, 45-64.	1.2	0
121	Announcement: The 2008 James Clerk Maxwell Prize for Plasma Physics. Physics of Plasmas, 2009, 16, 010201.	1.9	0
122	10.1063/5.0002876.1., 2020, , .		0