

Allen H Boozer

List of Publications by Year in descending order

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145
papers

4,705
citations

136950

32
h-index

110387

64
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148
all docs

148
docs citations

148
times ranked

1670
citing authors

#	ARTICLE	IF	CITATIONS
1	Monte Carlo evaluation of transport coefficients. <i>Physics of Fluids</i> , 1981, 24, 851.	1.4	340
2	Plasma equilibrium with rational magnetic surfaces. <i>Physics of Fluids</i> , 1981, 24, 1999.	1.4	324
3	Guiding center drift equations. <i>Physics of Fluids</i> , 1980, 23, 904.	1.4	288
4	Physics of magnetically confined plasmas. <i>Reviews of Modern Physics</i> , 2005, 76, 1071-1141.	45.6	286
5	Error Field Amplification and Rotation Damping in Tokamak Plasmas. <i>Physical Review Letters</i> , 2001, 86, 5059-5061.	7.8	195
6	Modeling of active control of external magnetohydrodynamic instabilities. <i>Physics of Plasmas</i> , 2001, 8, 2170-2180.	1.9	175
7	Theory of mode-induced beam particle loss in tokamaks. <i>Physics of Fluids</i> , 1983, 26, 2958.	1.4	158
8	Evaluation of the structure of ergodic fields. <i>Physics of Fluids</i> , 1983, 26, 1288.	1.4	153
9	Transport and isomorphic equilibria. <i>Physics of Fluids</i> , 1983, 26, 496.	1.4	131
10	Control of Asymmetric Magnetic Perturbations in Tokamaks. <i>Physical Review Letters</i> , 2007, 99, 195003.	7.8	131
11	Enhanced transport in tokamaks due to toroidal ripple. <i>Physics of Fluids</i> , 1980, 23, 2283.	1.4	95
12	Stochastic broadening of the separatrix of a tokamak divertor. <i>Physical Review Letters</i> , 1992, 69, 3322-3325.	7.8	79
13	Equations for studies of feedback stabilization. <i>Physics of Plasmas</i> , 1998, 5, 3350-3357.	1.9	76
14	Importance of plasma response to nonaxisymmetric perturbations in tokamaks. <i>Physics of Plasmas</i> , 2009, 16, 056115.	1.9	74
15	Island formation and destruction of flux surfaces in three-dimensional MHD equilibria. <i>Physics of Fluids</i> , 1984, 27, 2446.	1.4	60
16	Confinement of Nonneutral Plasmas on Magnetic Surfaces. <i>Physical Review Letters</i> , 2002, 88, 205002.	7.8	59
17	Numerical evaluation of magnetic coordinates for particle transport studies in asymmetric plasmas. <i>Journal of Computational Physics</i> , 1983, 51, 261-272.	3.8	58
18	What is a stellarator?. <i>Physics of Plasmas</i> , 1998, 5, 1647-1655.	1.9	52

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19	Effect of magnetic perturbations on divertor scrape-off width. <i>Physics of Fluids</i> , 1978, 21, 682.	1.4	51
20	Kink instabilities of the post-disruption runaway electron beam at low safety factor. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 054001.	2.1	51
21	Runaway electrons and ITER. <i>Nuclear Fusion</i> , 2017, 57, 056018.	3.5	49
22	Resistive wall modes and error field amplification. <i>Physics of Plasmas</i> , 2003, 10, 1458-1467.	1.9	48
23	Non-axisymmetric magnetic fields and toroidal plasma confinement. <i>Nuclear Fusion</i> , 2015, 55, 025001.	3.5	48
24	The bootstrap current in stellarators. <i>Physics of Fluids B</i> , 1990, 2, 2408-2421.	1.7	42
25	Stabilization of resistive wall modes by slow plasma rotation. <i>Physics of Plasmas</i> , 1995, 2, 4521-4532.	1.9	42
26	Symmetric simple map for a single-null divertor tokamak. <i>Physics of Plasmas</i> , 1997, 4, 337-346.	1.9	42
27	Power requirements for current drive. <i>Physics of Fluids</i> , 1988, 31, 591.	1.4	39
28	Shielding of resonant magnetic perturbations by rotation. <i>Physics of Plasmas</i> , 1996, 3, 4620-4627.	1.9	39
29	Feedback equations for the wall modes of a rotating plasma. <i>Physics of Plasmas</i> , 1999, 6, 3180-3187.	1.9	34
30	Shielding of external magnetic perturbations by torque in rotating tokamak plasmas. <i>Physics of Plasmas</i> , 2009, 16, 082512.	1.9	33
31	Separation of magnetic field lines. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	33
32	Stellarator design. <i>Journal of Plasma Physics</i> , 2015, 81, .	2.1	33
33	Orthogonal conductivity of a toroidal plasma. <i>Physics of Fluids</i> , 1976, 19, 149.	1.4	32
34	Neoclassical transport in helically symmetric plasmas. <i>Physics of Fluids</i> , 1981, 24, 88.	1.4	32
35	Magnetic island growth. <i>Physics of Fluids</i> , 1984, 27, 2055.	1.4	32
36	Rapid guiding center calculations. <i>Physics of Plasmas</i> , 1995, 2, 2915-2919.	1.9	32

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37	Magnetic helicity and dynamos. <i>Physics of Fluids B</i> , 1993, 5, 2271-2277.	1.7	31
38	Pivotal issues on relativistic electrons in ITER. <i>Nuclear Fusion</i> , 2018, 58, 036006.	3.5	31
39	Tokamak divertor maps. <i>Journal of Plasma Physics</i> , 1994, 52, 91-111.	2.1	30
40	Perturbed plasma equilibria. <i>Physics of Plasmas</i> , 2006, 13, 102501.	1.9	27
41	Use of nonaxisymmetric shaping in magnetic fusion. <i>Physics of Plasmas</i> , 2009, 16, 058102.	1.9	27
42	Onsager symmetry of transport in toroidal plasmas. <i>Physics of Fluids B</i> , 1992, 4, 2845-2853.	1.7	26
43	The low MN map for single-null divertor tokamaks. <i>Physics of Plasmas</i> , 2004, 11, 1908-1919.	1.9	26
44	Magnetic surface loss and electron runaway. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 024002.	2.1	26
45	Perturbed plasma equilibria. <i>Physics of Plasmas</i> , 1999, 6, 831-836.	1.9	24
46	Magnetic reconnection in space. <i>Physics of Plasmas</i> , 2012, 19, 092902.	1.9	24
47	Magnetic islands and perturbed plasma equilibria. <i>Physics of Plasmas</i> , 2003, 10, 2840-2851.	1.9	23
48	Stellarators and the path from ITER to DEMO. <i>Plasma Physics and Controlled Fusion</i> , 2008, 50, 124005.	2.1	23
49	Current density and plasma displacement near perturbed rational surfaces. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	23
50	Numerical Verification of Bounce-Harmonic Resonances in Neoclassical Toroidal Viscosity for Tokamaks. <i>Physical Review Letters</i> , 2013, 110, 185004.	7.8	23
51	Particle Trapping in Magnetic Line Cusps. <i>Physical Review Letters</i> , 1973, 31, 1287-1291.	7.8	21
52	Loss of relativistic electrons when magnetic surfaces are broken. <i>Physics of Plasmas</i> , 2016, 23, 102513.	1.9	21
53	Three-dimensional stellarator equilibria by iteration. <i>Physics of Fluids</i> , 1984, 27, 2110.	1.4	20
54	Numerical investigation of three-dimensional single-species plasma equilibria on magnetic surfaces. <i>Physics of Plasmas</i> , 2005, 12, 072105.	1.9	20

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55	Perturbation to the magnetic field strength. <i>Physics of Plasmas</i> , 2006, 13, 044501.	1.9	20
56	Two beneficial non-axisymmetric perturbations to tokamaks. <i>Plasma Physics and Controlled Fusion</i> , 2011, 53, 084002.	2.1	20
57	Efficient magnetic fields for supporting toroidal plasmas. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	20
58	A Monte Carlo method to calculate plasma currents. <i>Physics of Plasmas</i> , 1995, 2, 610-619.	1.9	19
59	Effects of dipole perturbation on the stochastic layer and magnetic footprint in single-null divertor tokamaks. <i>Physics of Plasmas</i> , 2003, 10, 3992-4003.	1.9	19
60	Spectral asymmetry due to magnetic coordinates. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	19
61	Runaway electrons and magnetic island confinement. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	19
62	The simple map for a single-null divertor tokamak. <i>Journal of Plasma Physics</i> , 1996, 56, 569-603.	2.1	18
63	Robust feedback systems for resistive wall modes. <i>Physics of Plasmas</i> , 2004, 11, 110-114.	1.9	18
64	Mathematics and Maxwell's equations. <i>Plasma Physics and Controlled Fusion</i> , 2010, 52, 124002.	2.1	18
65	Particle Loss in a Toroidally Symmetric Cusp. <i>Physical Review Letters</i> , 1972, 28, 1323-1326.	7.8	17
66	Classical diffusion in the presence of an X point. <i>Physics of Fluids</i> , 1980, 23, 2396.	1.4	17
67	Optimization of the current potential for stellarator coils. <i>Physics of Plasmas</i> , 2000, 7, 629-634.	1.9	17
68	Two-fluid theory of divertors without viscosity. <i>Physics of Fluids</i> , 1976, 19, 1210.	1.4	16
69	Force on a moving plasma by a finite conductivity wall. <i>Physics of Fluids</i> , 1981, 24, 1387.	1.4	16
70	Alternate transport. <i>Physics of Fluids B</i> , 1990, 2, 2870-2878.	1.7	16
71	Reconnection and the Ideal Evolution of Magnetic Fields. <i>Physical Review Letters</i> , 2002, 88, 215005.	7.8	16
72	Control of Nonaxisymmetric Magnetic Field Perturbations in Tokamaks. <i>Fusion Science and Technology</i> , 2011, 59, 561-571.	1.1	16

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73	Formation of current sheets in magnetic reconnection. <i>Physics of Plasmas</i> , 2014, 21, 072907.	1.9	16
74	RAPID CHANGE OF FIELD LINE CONNECTIVITY AND RECONNECTION IN STOCHASTIC MAGNETIC FIELDS. <i>Astrophysical Journal</i> , 2014, 793, 106.	4.5	16
75	Homoclinic tangle in tokamak divertors. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2014, 378, 2410-2416.	2.1	16
76	Effect of magnetic perturbations on tokamak divertors. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2007, 364, 140-145.	2.1	15
77	Stellarator coil design and plasma sensitivity. <i>Physics of Plasmas</i> , 2010, 17, 122503.	1.9	14
78	Particle acceleration and fast magnetic reconnection. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	14
79	Rotation of tokamak halo currents. <i>Physics of Plasmas</i> , 2012, 19, 052508.	1.9	13
80	Why fast magnetic reconnection is so prevalent. <i>Journal of Plasma Physics</i> , 2018, 84, .	2.1	13
81	Flattening of the tokamak current profile by a fast magnetic reconnection with implications for the solar corona. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	13
82	Why carbon dioxide makes stellarators so important. <i>Nuclear Fusion</i> , 2020, 60, 065001.	3.5	13
83	Dissipation of magnetic energy in the solar corona. <i>Astrophysical Journal</i> , 1992, 394, 357.	4.5	13
84	Local equilibrium of nonrotating plasmas. <i>Physics of Plasmas</i> , 2002, 9, 3762-3766.	1.9	12
85	The relativistic drift Hamiltonian. <i>Physics of Plasmas</i> , 1996, 3, 3297-3299.	1.9	11
86	Magnetic reconnection in nontoroidal plasmas. <i>Physics of Plasmas</i> , 2005, 12, 070706.	1.9	11
87	The evolution of magnetic fields and plasmas in open field line configurations. <i>Physics of Fluids B</i> , 1990, 2, 2300-2305.	1.7	10
88	Stellarator coil optimization by targeting the plasma configuration. <i>Physics of Plasmas</i> , 2000, 7, 3378-3387.	1.9	10
89	Monte Carlo collision operators for use with exact trajectory integrators. <i>Physics of Plasmas</i> , 2002, 9, 4389-4391.	1.9	10
90	Stability of pure electron plasmas on magnetic surfaces. <i>Physics of Plasmas</i> , 2004, 11, 4709-4712.	1.9	10

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91	Modeling of stochastic broadening in a poloidally diverted discharge with piecewise analytic symplectic mapping flux functions. <i>Physics of Plasmas</i> , 2008, 15, 082507.	1.9	10
92	Kink modes and surface currents associated with vertical displacement events. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	10
93	Simulation of stellarator divertors. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	10
94	Fast magnetic reconnection and the ideal evolution of a magnetic field. <i>Physics of Plasmas</i> , 2019, 26, 042104.	1.9	10
95	Stellarators as a fast path to fusion. <i>Nuclear Fusion</i> , 2021, 61, 096024.	3.5	10
96	Helical axis stellarators with noninterlocking planar coils. <i>Physics of Fluids</i> , 1983, 26, 3167.	1.4	9
97	A Monte Carlo method to calculate plasma parameters. <i>Physics of Plasmas</i> , 1997, 4, 3509-3517.	1.9	8
98	Derivation of the dipole map. <i>Physics of Plasmas</i> , 2004, 11, 4527-4530.	1.9	8
99	Magnetic-Surface Quality in Nonaxisymmetric Plasma Equilibria. <i>Physical Review Letters</i> , 2009, 102, 235001.	7.8	8
100	Magnetic reconnection with null and X-points. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	8
101	Magnetic reconnection and thermal equilibration. <i>Physics of Plasmas</i> , 2021, 28, 032102.	1.9	8
102	The exact and drift Hamiltonian. <i>Physics of Fluids B</i> , 1992, 4, 2429-2440.	1.7	7
103	Control of non-axisymmetric toroidal plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2010, 52, 104001.	2.1	7
104	Debye screening and injection of positrons across the magnetic surfaces of a pure electron plasma in a stellarator. <i>Physics of Plasmas</i> , 2011, 18, 013508.	1.9	7
105	Characteristic time for halo current growth and rotation. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	7
106	Curl-free magnetic fields for stellarator optimization. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	7
107	Example of exponentially enhanced magnetic reconnection driven by a spatially bounded and laminar ideal flow. <i>Physics of Plasmas</i> , 2021, 28, 062303.	1.9	7
108	Confinement of plasmas of arbitrary neutrality in a stellarator. <i>Physics of Plasmas</i> , 2004, 11, 2377-2381.	1.9	6

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109	The rapid destruction of toroidal magnetic surfaces. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	6
110	The drift Hamiltonian in a magnetic field with a separatrix. <i>Physics of Fluids B</i> , 1991, 3, 875-879.	1.7	5
111	The onset of dissipation in the kinematic dynamo. <i>Physics of Plasmas</i> , 2003, 10, 259-265.	1.9	5
112	Plasma effects on the location of the outermost magnetic surface. <i>Physics of Plasmas</i> , 2005, 12, 092504.	1.9	5
113	Density limit for electron plasmas confined by magnetic surfaces. <i>Physics of Plasmas</i> , 2005, 12, 104502.	1.9	5
114	The effect of the electric field on the confinement of electron plasmas on magnetic surfaces. <i>Physics of Plasmas</i> , 2007, 14, 104503.	1.9	5
115	Control of stellarator properties illustrated by a Wendelstein7-X equilibrium. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	5
116	Halo currents and vertical displacements after ITER disruptions. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	5
117	Plasma steering to avoid disruptions in ITER and tokamak power plants. <i>Nuclear Fusion</i> , 2021, 61, 054004.	3.5	5
118	Tokamak microturbulence and the second law of thermodynamics. <i>Physics of Fluids</i> , 1981, 24, 1382.	1.4	4
119	Monte Carlo calculations for transport due to MHD modes. <i>Journal of Plasma Physics</i> , 1990, 44, 405-430.	2.1	4
120	Arnold diffusion and adiabatic invariants. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1994, 185, 423-427.	2.1	4
121	Reduction of transport in stellarators by self-shielding. <i>Physics of Plasmas</i> , 1996, 3, 3375-3378.	1.9	4
122	Equilibrium of an electron plasma confined on magnetic surfaces. <i>Physics of Plasmas</i> , 2005, 12, 034502.	1.9	4
123	Numerical investigation of electron trajectories in the Columbia Non-neutral Torus. <i>Physics of Plasmas</i> , 2009, 16, 122502.	1.9	4
124	Stochastic layer scaling in the two-wire model for divertor tokamaks. <i>Journal of Plasma Physics</i> , 2009, 75, 303-318.	2.1	4
125	Enhanced control. <i>Nature Physics</i> , 2018, 14, 1157-1158.	16.7	4
126	Magnetic nulls in interacting dipolar fields. <i>Journal of Plasma Physics</i> , 2021, 87, .	2.1	4

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127	Dynamics of Electron-Rich Plasmas in the CNT Stellarator. Plasma and Fusion Research, 2008, 3, S1022-S1022.	0.7	4
128	Local analysis of fast magnetic reconnection. Physics of Plasmas, 2022, 29, .	1.9	4
129	Stable equilibria having arbitrary q profile. Physics of Fluids, 1983, 26, 1292.	1.4	3
130	The exact and drift Hamiltonian in a toroidal magnetic field. Physics of Fluids B, 1993, 5, 3852-3863.	1.7	3
131	Simulation of non-resonant stellarator divertor. Physics of Plasmas, 2020, 27, 012503.	1.9	3
132	Pfirsch-Schlueter currents in solar plasmas. Astrophysical Journal, 1988, 325, 891.	4.5	3
133	Discrete mappings and resonant ripple transport in a tokamak. Physics of Fluids, 1988, 31, 1811.	1.4	2
134	A generalized discrete mapping treatment of nonresonant ripple transport in a tokamak. Physics of Fluids B, 1989, 1, 1335-1336.	1.7	2
135	Effective plasma inductance computation. Physics of Plasmas, 2005, 12, 042108.	1.9	2
136	Comment on "Energy principle in the Boozer model" [Phys. Plasmas 12, 112504 (2005)]. Physics of Plasmas, 2006, 13, 024703.	1.9	2
137	Magnetic turnstiles in nonresonant stellarator divertor. Physics of Plasmas, 2022, 29, .	1.9	2
138	Nonsingular canonical coordinates for the drift Hamiltonian in a magnetic field with a separatrix. Physics of Plasmas, 1997, 4, 2962-2966.	1.9	1
139	Implications of Magnetic Helicity Conservation. Geophysical Monograph Series, 0, , 11-16.	0.1	1
140	The interaction of the ITER first wall with magnetic perturbations. Nuclear Fusion, 2021, 61, 046025.	3.5	1
141	Ion heating in a train of orthogonal magnetoacoustic shocks. Physics of Fluids, 1975, 18, 919.	1.4	0
142	Oscillating field current drive in spheromaks. Physics of Fluids, 1988, 31, 3338.	1.4	0
143	Finite beta effects in quasihelical stellarators. Physics of Plasmas, 1994, 1, 139-149.	1.9	0
144	Maintenance of a stable current profile in a reversed field pinch. Physics of Plasmas, 2007, 14, 044503.	1.9	0

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145	Homoclinic tangles in the DIII-D tokamak from the map equations in natural canonical coordinates*. Radiation Effects and Defects in Solids, 2017, 172, 150-158.	1.2	0