

Chris C Hegna

List of Publications by Year in descending order

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89
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citations

185998

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93
all docs

93
docs citations

93
times ranked

1330
citing authors

#	ARTICLE	IF	CITATIONS
1	Improving the stellarator through advances in plasma theory. Nuclear Fusion, 2022, 62, 042012.	1.6	5
2	Effect of triangularity on ion-temperature-gradient-driven turbulence. Physics of Plasmas, 2022, 29, .	0.7	9
3	Benchmarking NIMROD continuum kinetic formulations through the steady-state poloidal flow. Physics of Plasmas, 2021, 28, 082503.	0.7	2
4	Advancing the physics basis for quasi-helically symmetric stellarators. Journal of Plasma Physics, 2020, 86, .	0.7	17
5	A comparison of turbulent transport in a quasi-helical and a quasi-axisymmetric stellarator. Journal of Plasma Physics, 2019, 85, .	0.7	12
6	Electron thermal confinement in a partially stochastic magnetic structure. Physics of Plasmas, 2018, 25, .	0.7	2
7	Saturation scalings of toroidal ion temperature gradient turbulence. Physics of Plasmas, 2018, 25, .	0.7	26
8	Theory of ITG turbulent saturation in stellarators: Identifying mechanisms to reduce turbulent transport. Physics of Plasmas, 2018, 25, .	0.7	29
9	Stellarator microinstabilities and turbulence at low magnetic shear. Journal of Plasma Physics, 2018, 84, .	0.7	26
10	Mode penetration induced by transient magnetic perturbations. Physics of Plasmas, 2018, 25, 082507.	0.7	12
11	Nonlinear modeling of forced magnetic reconnection in slab geometry with NIMROD. Physics of Plasmas, 2017, 24, .	0.7	16
12	Stellarator Turbulence: Subdominant Eigenmodes and Quasilinear Modeling. Physical Review Letters, 2016, 116, 085001.	2.9	34
13	The effect of sheared toroidal rotation on pressure driven magnetic islands in toroidal plasmas. Physics of Plasmas, 2016, 23, .	0.7	4
14	Gyrokinetic studies of trapped electron mode turbulence in the Helically Symmetric eXperiment stellarator. Physics of Plasmas, 2015, 22, .	0.7	26
15	Forces and moments within layers of driven tearing modes with sheared rotation. Physics of Plasmas, 2015, 22, .	0.7	7
16	The effect of three-dimensional fields on bounce averaged particle drifts in a tokamak. Physics of Plasmas, 2015, 22, .	0.7	7
17	Analytical theory of the shear Alfvén continuum in the presence of a magnetic island. Physics of Plasmas, 2015, 22, .	0.7	14
18	Pedestal Bifurcation and Resonant Field Penetration at the Threshold of Edge-Localized Mode Suppression in the DIII-D Tokamak. Physical Review Letters, 2015, 114, 105002.	2.9	141

#	ARTICLE	IF	CITATIONS
19	Controlling tokamak geometry with three-dimensional magnetic perturbations. <i>Physics of Plasmas</i> , 2014, 21, 100702.	0.7	10
20	Effects of a weakly 3-D equilibrium on ideal magnetohydrodynamic instabilities. <i>Physics of Plasmas</i> , 2014, 21, .	0.7	14
21	Nature of axial tail instability and bubbleâ€blob formation in nearâ€Earth plasma sheet. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 653-663.	0.8	12
22	Self-consistent simulations of nonlinear magnetohydrodynamics and profile evolution in stellarator configurations. <i>Physics of Plasmas</i> , 2013, 20, .	0.7	7
23	A model for microinstability destabilization and enhanced transport in the presence of shielded 3D magnetic perturbations. <i>Nuclear Fusion</i> , 2013, 53, 013004.	1.6	21
24	Wall-locking of kink modes in a line-tied screw pinch with a rotating wall. <i>Physics of Plasmas</i> , 2012, 19, 056104.	0.7	4
25	Asymmetric error field interaction with rotating conducting walls. <i>Physics of Plasmas</i> , 2012, 19, 072511.	0.7	3
26	Stabilizing effects of edge current density on pedestal instabilities. <i>Physics of Plasmas</i> , 2012, 19, 032503.	0.7	15
27	The effect of anisotropic heat transport on magnetic islands in 3-D configurations. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	3
28	Resonant-magnetic-perturbation-induced plasma transport in H-mode pedestals. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	15
29	Determining the Bohm criterion in plasmas with two ion species. <i>Physics of Plasmas</i> , 2011, 18, .	0.7	44
30	Rotation Properties of Tokamak Plasmas. <i>Fusion Science and Technology</i> , 2011, 59, 623-624.	0.6	0
31	Peak neoclassical toroidal viscosity at low toroidal rotation in the DIII-D tokamak. <i>Physics of Plasmas</i> , 2011, 18, 055711.	0.7	17
32	Transport equations in tokamak plasmas. <i>Physics of Plasmas</i> , 2010, 17, 056113.	0.7	32
33	Drift-resistive-inertial ballooning modes in quasihelical stellarators. <i>Physics of Plasmas</i> , 2010, 17, .	0.7	6
34	Electron thermal transport within magnetic islands in the reversed-field pinch. <i>Physics of Plasmas</i> , 2010, 17, 056115.	0.7	16
35	Kinetic theory of instability-enhanced collisional effects. <i>Physics of Plasmas</i> , 2010, 17, .	0.7	23
36	Calculating electron cyclotron current drive stabilization of resistive tearing modes in a nonlinear magnetohydrodynamic model. <i>Physics of Plasmas</i> , 2010, 17, 012502.	0.7	20

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37	Toroidal flow and radial particle flux in tokamak plasmas. <i>Physics of Plasmas</i> , 2009, 16, .	0.7	46
38	Nonlinear cyclotron harmonic absorption. <i>Physics of Plasmas</i> , 2009, 16, .	0.7	10
39	Unified theory of resistive and inertial ballooning modes in three-dimensional configurations. <i>Physics of Plasmas</i> , 2009, 16, 102505.	0.7	10
40	A closure scheme for modeling rf modifications to the fluid equations. <i>Physics of Plasmas</i> , 2009, 16, 112501.	0.7	18
41	Enhanced electron scattering due to the ion acoustic instability. , 2008, , .		0
42	Neoclassical toroidal viscosity and error-field penetration in tokamaks. <i>Physics of Plasmas</i> , 2008, 15, .	0.7	68
43	A kinetic equation for unstable plasmas in a finite space-time domain. <i>Physics of Plasmas</i> , 2008, 15, .	0.7	18
44	Effects of electron cyclotron resonance heating (ECRH)-induced direct loss flux on neoclassical transport in a bumpy stellarator. <i>Physics of Plasmas</i> , 2007, 14, 082505.	0.7	4
45	Effect of Neoclassical Toroidal Viscosity on Error-Field Penetration Thresholds in Tokamak Plasmas. <i>Physical Review Letters</i> , 2007, 99, 065001.	2.9	98
46	Properties of Ballooning Modes in the Planar Axis Heliotron Configurations with a Large Shafranov Shift. <i>Fusion Science and Technology</i> , 2007, 51, 79-91.	0.6	11
47	Computational modeling of fully ionized magnetized plasmas using the fluid approximation. <i>Physics of Plasmas</i> , 2006, 13, 058103.	0.7	48
48	Dissipative trapped-electron instability in quasihelically symmetric stellarators. <i>Physics of Plasmas</i> , 2006, 13, 062501.	0.7	4
49	Drift waves in helically symmetric stellarators. <i>Physics of Plasmas</i> , 2005, 12, 112505.	0.7	7
50	Compressibility effect on magnetic-shear-localized ideal magnetohydrodynamic interchange instability. <i>Physics of Plasmas</i> , 2005, 12, 082105.	0.7	1
51	Sheared flow effects on ballooning instabilities in three-dimensional equilibria. <i>Physics of Plasmas</i> , 2005, 12, 122502.	0.7	3
52	Time-dependent neoclassical viscosity. <i>Physics of Plasmas</i> , 2005, 12, 052516.	0.7	10
53	Marginal stability diagrams for infinite-n ballooning modes in quasi-symmetric stellarators. <i>Plasma Physics and Controlled Fusion</i> , 2004, 46, 869-876.	0.9	8
54	Role of bumpy fields on single particle orbit in near quasihelically symmetric stellarators. <i>Physics of Plasmas</i> , 2004, 11, 3672-3675.	0.7	1

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55	Magnetic island effects on axisymmetric equilibria. <i>Physics of Plasmas</i> , 2004, 11, 4824-4829.	0.7	1
56	Criteria for second stability for ballooning modes in stellarators. <i>Physics of Plasmas</i> , 2004, 11, L53-L56.	0.7	4
57	Conductive electron heat flow along an inhomogeneous magnetic field. <i>Physics of Plasmas</i> , 2003, 10, 3933-3938.	0.7	16
58	Marginal stability boundaries for infinite-n ballooning modes in a quasiaxisymmetric stellarator. <i>Physics of Plasmas</i> , 2003, 10, 4716-4727.	0.7	12
59	Ideal magnetohydrodynamic ballooning stability boundaries in three-dimensional equilibria. <i>Physics of Plasmas</i> , 2002, 9, 2014-2019.	0.7	11
60	Violating Suydam criterion produces feeble instabilities. <i>Physics of Plasmas</i> , 2002, 9, 3395-3401.	0.7	14
61	Loss of Second-Ballooning Stability in Three-Dimensional Equilibria. <i>Physical Review Letters</i> , 2001, 87, 035001.	2.9	15
62	Title is missing!. <i>Journal of Fusion Energy</i> , 2000, 19, 229-244.	0.5	2
63	Momentum Transport from Nonlinear Mode Coupling of Magnetic Fluctuations. <i>Physical Review Letters</i> , 2000, 85, 3408-3411.	2.9	37
64	Local three-dimensional magnetostatic equilibria. <i>Physics of Plasmas</i> , 2000, 7, 3921.	0.7	38
65	Dynamics of seed magnetic island formation due to geometrically coupled perturbations. <i>Physics of Plasmas</i> , 1999, 6, 130-136.	0.7	56
66	Effect of a resistive vacuum vessel on dynamo mode rotation in reversed field pinches. <i>Physics of Plasmas</i> , 1999, 6, 3878-3889.	0.7	58
67	Nonlinear dynamics of pressure driven magnetic islands in low aspect ratio tokamaks. <i>Physics of Plasmas</i> , 1999, 6, 3980-3989.	0.7	42
68	Onset of high-n ballooning modes during tokamak sawtooth crashes. <i>Physics of Plasmas</i> , 1999, 6, 4685-4692.	0.7	28
69	Momentum transport and flow damping in the reversed-field pinch plasma. <i>Physics of Plasmas</i> , 1998, 5, 3982-3985.	0.7	44
70	Self-consistent mean-field forces in turbulent plasmas: Current and momentum relaxation. <i>Physics of Plasmas</i> , 1998, 5, 2257-2263.	0.7	12
71	On the stability of Mercier and ballooning modes in stellarator configurations. <i>Physics of Plasmas</i> , 1998, 5, 1336-1344.	0.7	32
72	Tearing mode analysis in tokamaks, revisited. <i>Physics of Plasmas</i> , 1998, 5, 4292-4299.	0.7	25

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73	The physics of neoclassical magnetohydrodynamic tearing modes. <i>Physics of Plasmas</i> , 1998, 5, 1767-1774.	0.7	54
74	Geometrical influences on neoclassical magnetohydrodynamic tearing modes. <i>Physics of Plasmas</i> , 1998, 5, 455-460.	0.7	28
75	Beta limits in long-pulse tokamak discharges. <i>Physics of Plasmas</i> , 1997, 4, 1654-1664.	0.7	423
76	On the stabilization of neoclassical magnetohydrodynamic tearing modes using localized current drive or heating. <i>Physics of Plasmas</i> , 1997, 4, 2940-2946.	0.7	202
77	Threshold for neoclassical magnetic islands in a low collision frequency tokamak. <i>Physics of Plasmas</i> , 1996, 3, 248-265.	0.7	278
78	Nonlinear tearing mode interactions and mode locking in reversed-field pinches. <i>Physics of Plasmas</i> , 1996, 3, 4646-4657.	0.7	46
79	Computational modeling of neoclassical and resistive magnetohydrodynamic tearing modes in tokamaks. <i>Physics of Plasmas</i> , 1996, 3, 4637-4645.	0.7	34
80	Fast flow phenomena in a toroidal plasma. <i>Physics of Plasmas</i> , 1995, 2, 2281-2285.	0.7	44
81	Observation of Nonlinear Neoclassical Pressure-Gradient-Driven Tearing Modes in TFTR. <i>Physical Review Letters</i> , 1995, 74, 4663-4666.	2.9	361
82	Stability of tearing modes in tokamak plasmas. <i>Physics of Plasmas</i> , 1994, 1, 2308-2318.	0.7	73
83	Stability of bootstrap current-driven magnetic islands in stellarators. <i>Physics of Plasmas</i> , 1994, 1, 3135-3137.	0.7	29
84	Plasma transport in mixed magnetic topologies. <i>Physics of Fluids B</i> , 1993, 5, 1804-1808.	1.7	32
85	Pressure profiles, resonant Pfirsch-Schlüter currents, thermal instabilities, and magnetic island formation. <i>Physics of Fluids B</i> , 1992, 4, 4072-4079.	1.7	20
86	Ideal ballooning stability near an equilibrium magnetic island. <i>Physics of Fluids B</i> , 1992, 4, 3031-3037.	1.7	17
87	Interaction of bootstrap current-driven magnetic islands. <i>Physics of Fluids B</i> , 1992, 4, 1855-1866.	1.7	65
88	Bootstrap current and Ware pinch in drift-wave turbulent transport. <i>Physics of Fluids B</i> , 1991, 3, 3263-3270.	1.7	2
89	Disruptive neoclassical tearing mode seeding in DIII-D with implications for ITER. <i>Nuclear Fusion</i> , 0, , .	1.6	11