Robert L Dewar

List of Publications by Year
in descending order

133	3,617	126907	149698
papers	citations	33	56
		h-index	g-index

140	140	140	1564
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Relaxed magnetohydrodynamics with ideal Ohm's law constraint. Journal of Plasma Physics, 2022, 88, .	2.1	1
2	Computation of linear MHD instabilities with the multi-region relaxed MHD energy principle. Plasma Physics and Controlled Fusion, 2021, 63, 045006.	2.1	10
3	Theoretical description of chirping waves using phase-space waterbags. Plasma Physics and Controlled Fusion, 2021, 63, 065008.	2.1	2
4	On the non-existence of stepped-pressure equilibria far from symmetry. Plasma Physics and Controlled Fusion, 2021, 63, 125007.	2.1	5
5	Predicting nonresonant pressure-driven MHD modes in equilibria with low magnetic shear. Physics of Plasmas, 2021, 28, 012106.	1.9	1
6	Quasisymmetric magnetic fields in asymmetric toroidal domains. Physics of Plasmas, 2021, 28, .	1.9	2
7	Time-dependent relaxed magnetohydrodynamics: Inclusion of cross helicity constraint using phase-space action. Physics of Plasmas, 2020, 27, .	1.9	8
8	Stepped pressure equilibrium with relaxed flow and applications in reversed-field pinch plasmas. Plasma Physics and Controlled Fusion, 2020, 62, 054002.	2.1	13
9	Coordinate parameterisation and spectral method optimisation for Beltrami field solver in stellarator geometry. Plasma Physics and Controlled Fusion, 2020, 62, 124004.	2.1	19
10	Resistive stability of cylindrical MHD equilibria with radially localized pressure gradients. Physics of Plasmas, 2019, 26, .	1.9	2
11	Multi-region relaxed magnetohydrodynamics in plasmas with slowly changing boundaries—Resonant response of a plasma slab. Physics of Plasmas, 2017, 24, .	1.9	6
12	The spectrum of multi-region-relaxed magnetohydrodynamic modes in topologically toroidal geometry. Plasma Physics and Controlled Fusion, 2017, 59, 044009.	2.1	8
13	Fundamental Fluid Mechanics and Magnetohydrodynamics. , 2016, , .		11
14	Variational formulation of relaxed and multi-region relaxed magnetohydrodynamics. Journal of Plasma Physics, 2015, 81, .	2.1	25
15	Multi-region relaxed magnetohydrodynamics with anisotropy and flow. Physics of Plasmas, 2014, 21, 072512.	1.9	7
16	Multi-region relaxed magnetohydrodynamics with flow. Physics of Plasmas, 2014, 21, 042501.	1.9	10
17	Plasmoid solutions of the Hahm–Kulsrud–Taylor equilibrium model. Physics of Plasmas, 2013, 20, .	1.9	16
18	Generalized action-angle coordinates defined on island chains. Plasma Physics and Controlled Fusion, 2013, 55, 014004.	2.1	1

#	ARTICLE	IF	CITATIONS
19	The infinite interface limit of multiple-region relaxed magnetohydrodynamics. Physics of Plasmas, 2013, 20, 032509.	1.9	26
20	Minimally Constrained Model of Self-Organized Helical States in Reversed-Field Pinches. Physical Review Letters, 2013, 111, 055003.	7.8	22
21	Non-axisymmetric, multi-region relaxed magnetohydrodynamic equilibrium solutions. Plasma Physics and Controlled Fusion, 2012, 54, 014005.	2.1	26
22	Diamagnetic drift stabilized ballooning modes in a 3D heliotron. Plasma Physics and Controlled Fusion, 2012, 54, 014006.	2.1	0
23	Action-gradient-minimizing pseudo-orbits and almost-invariant tori. Communications in Nonlinear Science and Numerical Simulation, 2012, 17, 2062-2073.	3.3	5
24	Helical bifurcation and tearing mode in a plasmaâ€"a description based on Casimir foliation. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 365502.	2.1	16
25	Computation of multi-region relaxed magnetohydrodynamic equilibria. Physics of Plasmas, 2012, 19, .	1.9	104
26	Dressed test particles, oscillation centres and pseudo-orbits. Plasma Physics and Controlled Fusion, 2012, 54, 014002.	2.1	18
27	A reduced global AlfvÃ©n eigenmodes model for Mirnov array data on the H-1NF heliac. Plasma Physics and Controlled Fusion, 2011, 53, 085023.	2.1	7
28	Hamiltonâ€"Jacobi theory for continuation of magnetic field across a toroidal surface supporting a plasma pressure discontinuity. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 374, 3308-3314.	2.1	13
29	Magnetohydrodynamic stability of plasmas with ideal and relaxed regions. Journal of Plasma Physics, 2009, 75, 637-659.	2.1	11
30	Relaxed MHD states of a multiple region plasma. Nuclear Fusion, 2009, 49, 065019.	3.5	14
31	Are ghost surfaces quadratic-flux-minimizing?. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 4409-4415.	2.1	7
32	MHD memes. Journal of Physics: Conference Series, 2009, 169, 012004.	0.4	0
33	Adiabatic Wave-Particle Interaction Revisited. Plasma and Fusion Research, 2009, 4, 001-001.	0.7	3
34	The Screened Field of a Test Particle. , 2009, , 47-73.		0
35	Relaxed Plasma Equilibria and Entropy-Related Plasma Self-Organization Principles. Entropy, 2008, 10, 621-634.	2.2	34
36	Equilibria and stability in partially relaxed plasmaâ€"vacuum systems. Nuclear Fusion, 2007, 47, 746-753.	3.5	34

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37	Eigenvalue problems for Beltrami fields arising in a three-dimensional toroidal magnetohydrodynamic equilibrium problem. Physics of Plasmas, 2007, 14, 052505.	1.9	38
38	Bifurcation in electrostatic resistive drift wave turbulence. Physics of Plasmas, 2007, 14, .	1.9	88
39	ZONAL FLOW GENERATION BY MODULATIONAL INSTABILITY. , 2007, , .		18
40	NONLINEAR SIMULATION OF DRIFT WAVE TURBULENCE. , 2007, , .		1
41	Quantum chaos analysis of the ideal interchange spectrum in a stellarator. Journal of Plasma Physics, 2006, 72, 1239.	2.1	0
42	Stepped pressure profile equilibria in cylindrical plasmas via partial Taylor relaxation. Journal of Plasma Physics, 2006, 72, 1167.	2.1	31
43	Stellarator stability with respect to global kinetic ballooning modes. Nuclear Fusion, 2006, 46, 477-486.	3.5	7
44	Charge to the Astro Brigade. Physics Today, 2005, 58, 15-15.	0.3	0
45	A comparison of incompressible limits for resistive plasmas. Plasma Physics and Controlled Fusion, 2004, 46, 1027-1038.	2.1	1
46	Statistical characterization of the interchange-instability spectrum of a separable ideal-magnetohydrodynamic model system. Physical Review E, 2004, 70, 066409.	2.1	6
47	Spectrum of global ideal-magnetohydrodynamic three-dimensional ballooning modes. Space Science Reviews, 2003, 107, 349-352.	8.1	0
48	Turbulent edge structure formation in complex configurations. Physics of Plasmas, 2003, 10, 3684-3691.	1.9	202
49	Bifurcation and Metamorphosis of Plasma Turbulence-Shear Flow Dynamics: the Path to the Top of the Hill. AIP Conference Proceedings, 2003, , .	0.4	0
50	Spectrum of Global Ideal-Magnetohydrodynamic Three-Dimensional Ballooning Modes. , 2003, , 349-352.		0
51	Metamorphosis of plasma turbulence–shear-flow dynamics through a transcritical bifurcation. Physical Review E, 2002, 66, 066408.	2.1	12
52	Anderson localization of ballooning modes, quantum chaos and the stability of compact quasiaxially symmetric stellarators. Physics of Plasmas, 2002, 9, 1990-1996.	1.9	5
53	Asymptotology—a cautionary tale. ANZIAM Journal, 2002, 44, 33-40.	0.2	7
54	Strong "Quantum" Chaos in the Global Ballooning Mode Spectrum of Three-Dimensional Plasmas. Physical Review Letters, 2001, 86, 2321-2324.	7.8	13

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55	Non-linear dynamics. , 2000, , 167-248.		15
56	Anderson-localized ballooning modes in general toroidal plasmas. Physics of Plasmas, 2000, 7, 2302-2305.	1.9	14
57	Singularity Theory Study of Overdetermination in Models forLˆ'HTransitions. Physical Review Letters, 2000, 84, 3077-3080.	7.8	8
58	Analysis of perturbed magnetic fields via construction of nearby integrable fields. Physics of Plasmas, 1999, 6, 1532-1538.	1.9	15
59	Quasilinear theory of collisionless Fermi acceleration in a multicusp magnetic confinement geometry. Physical Review E, 1999, 60, 7400-7411.	2.1	2
60	Overview of Australian activities of fusion neutronics. Fusion Engineering and Design, 1999, 45, 117-126.	1.9	1
61	Construction of an integrable field close to any non-integrable toroidal magnetic field. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 247, 246-251.	2.1	16
62	Stellarator symmetry. Physica D: Nonlinear Phenomena, 1998, 112, 275-280.	2.8	57
63	Theory and simulation of rotational shear stabilization of turbulence. Physics of Plasmas, 1998, 5, 1784-1792.	1.9	127
64	Particle orbits and drift surfaces in a heliac. Nuclear Fusion, 1998, 38, 1001-1012.	3.5	7
65	Toroidally localized and nonlocalized ballooning instabilities in a stellarator. Physics of Plasmas, 1998, 5, 2921-2931.	1.9	19
66	Particle orbits and drift surfaces in a heliac. Nuclear Fusion, 1998, 38, 1577-1578.	3.5	0
67	Quasi-two-dimensional Waves in Three-dimensional Magnetic Confinement Systems. Physica Scripta, 1998, T75, 134.	2.5	0
68	Spectrum of the ballooning SchrÃ¶dinger equation. Plasma Physics and Controlled Fusion, 1997, 39, 453-470.	2.1	17
69	Manipulation of islands in a heliac vacuum field. Physics Letters, Section A: General, Atomic and Solid State Physics, 1997, 226, 85-92.	2.1	18
70	Almost-invariant surfaces for magnetic field-line flows. Journal of Plasma Physics, 1996, 56, 361-382.	2.1	13
71	Improved Particle Confinement Mode in the H-1 Heliac Plasma. Physical Review Letters, 1996, 77, 4190-4193.	7.8	43
72	Spectrum of ballooning instabilities in a stellarator. Physics of Plasmas, 1996, 3, 275-280.	1.9	39

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73	Gravitational collapse of a magnetized vortex: application to the Galactic Centre. Monthly Notices of the Royal Astronomical Society, 1995, , .	4.4	2
74	Rational quadratic-flux minimizing circles for area-preserving twist maps. Physica D: Nonlinear Phenomena, 1995, 85, 66-78.	2.8	7
75	Comment on â€œRadial Structure of High-Mode-Number Toroidal Modes in General Equilibrium Profilesâ€. Physical Review Letters, 1995, 74, 4563-4563.	7.8	8
76	Anomalous transport barriers due to sheared radial electric fields in tokamaks. Plasma Physics and Controlled Fusion, 1995, 37, 1311-1336.	2.1	2
77	Chirality-dependent Plasma Density Profile Changes from Helicon Wave Ponderomotive Forces. Australian Journal of Physics, 1995, 48, 691.	0.6	3
78	Hamiltonian Maps for Heliac Magnetic Islands. Australian Journal of Physics, 1995, 48, 871.	0.6	12
79	Nonlinear destabilization of linearly stable tearing modes with multiple rational surfaces. Physics of Plasmas, 1994, 1, 1256-1263.	1.9	35
80	Linear Stability of Resistive MHD Modes: Axisymmetric Toroidal Computation of the Outer Region Matching Data. Journal of Computational Physics, 1994, 115, 530-549.	3.8	58
81	Almost invariant manifolds for divergence-free fields. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 194, 49-56.	2.1	27
82	A new formulation of the resistive tearing mode stability criterion. Physics of Fluids B, 1993, 5, 1593-1604.	1.7	12
83	Nonlinear selfâ€reinforced growth of tearing modes with multiple rational surfaces. Physics of Fluids B, 1993, 5, 3844-3846.	1.7	8
84	Coupled tearing modes in plasmas with differential rotation. Physics of Fluids B, 1993, 5, 4273-4286.	1.7	63
85	Flux-minimizing curves for reversible area-preserving maps. Physica D: Nonlinear Phenomena, 1992, 57, 476-506.	2.8	17
86	Non-ideal stability: variational method for the determination of the outer-region matching data. Journal of Plasma Physics, 1991, 45, 427-451.	2.1	45
87	Symmetry breaking bifurcations of a current sheet. Physics of Fluids B, 1990, 2, 508-515.	1.7	9
88	Two-dimensional generalizations of the Newcomb equation. Journal of Plasma Physics, 1990, 43, 291-310.	2.1	24
89	2-D, nonlinear spectral simulation of reconnective transitions on a periodic, planar current sheet with (1) smooth and (2) corrugated conducting wall boundary conditions with flow. Computer Physics Communications, 1990, 59, 1-12.	7.5	2
90	The free-boundary equilibrium problem for helically symmetric plasmas. Journal of Computational Physics, 1988, 74, 477-487.	3.8	8

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91	A harmonic expansion for the magnetic field of the helical solenoid. Journal of Computational Physics, 1988, 77, 485-500.	3.8	3
92	Comment on ''Simulations of the single-mode, bump-on-tail instability'' [Phys. Fluids 28, 2773 (1985)]. Physics of Fluids, 1986, 29, 1751.	1.4	0
93	Galerkin method for differential equations with regular singular points. Journal of Computational Physics, 1986, 66, 356-390.	3.8	9
94	Subdynamics of nonresonant wave-particle interactions. Physical Review A, 1986, 33, 3440-3445.	2.5	3
95	Oscillation-center autocorrelation time. Physics Letters, Section A: General, Atomic and Solid State Physics, 1985, 111, 391-395.	2.1	5
96	Optimal oscillation-center transformations. Physica D: Nonlinear Phenomena, 1985, 17, 37-53.	2.8	8
97	MHD stability properties of bean-shaped tokamaks. Nuclear Fusion, 1985, 25, 805-823.	3.5	36
98	Magnetic coordinates for equilibria with a continuous symmetry. Physics of Fluids, 1984, 27, 1723.	1.4	36
99	Heliac parameter study. Physics of Fluids, 1984, 27, 1248.	1.4	32
100	Variational method for three-dimensional toroidal equilibria. Computer Physics Communications, 1984, 31, 213-225.	7.5	28
101	Bifurcation of the resistive Alfvén wave spectrum. Journal of Plasma Physics, 1984, 32, 443-461.	2.1	22
102	Ideal MHD stability calculations in axisymmetric toroidal coordinate systems. Journal of Computational Physics, 1983, 49, 94-117.	3.8	167
103	Ballooning mode spectrum in general toroidal systems. Physics of Fluids, 1983, 26, 3038.	1.4	273
104	Energy principle with global invariants: Applications. Physics of Fluids, 1983, 26, 526.	1.4	12
105	Energy principle with global invariants. Physics of Fluids, 1982, 25, 887.	1.4	88
106	Renormalized Lie perturbation theory. Journal of Mathematical Physics, 1982, 23, 2328-2338.	1.1	7
107	Influence of diamagnetic drifts on critical beta in tokamaks. Nuclear Fusion, 1982, 22, 1079-1081.	3.5	48
108	The linear stability analysis of MHD models in axisymmetric toroidal geometry. Computer Physics Communications, 1981, 24, 355-361.	7.5	20

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109	Fluctuations of the runaway electron flux to the PLT tokamak limiter. Physics Letters, Section A: General, Atomic and Solid State Physics, 1981, 81, 275-277.	2.1	5
110	Tilting and shifting modes in a spheromak. Nuclear Fusion, 1981, 21, 1203-1207.	3.5	40
111	n-dependence of ballooning instabilities. Nuclear Fusion, 1981, 21, 493-498.	3.5	87
112	Energy Principle with Global Invariants for Toroidal Plasmas. Physical Review Letters, 1980, 45, 347-350.	7.8	55
113	Energy Principle with Globial Invariants for Toroidal Plasmas. Physical Review Letters, 1980, 45, 1217-1217.	7.8	3
114	Energy loss due to binary collisions in a relativistic plasma. Physical Review A, 1979, 20, 2120-2129.	2.5	16
115	Hamilton's principle for a hydromagnetic fluid with a free boundary. Nuclear Fusion, 1978, 18, 1541-1553.	3.5	6
116	Exact oscillation-centre transformations. Journal of Physics A, 1978, 11, 9-26.	1.6	9
117	Random phase wave: A soluble non-Markovian system. Journal of Mathematical Physics, 1978, 19, 1946-1951.	1.1	2
118	Energy - Momentum Tensors for Dispersive Electromagnetic Waves. Australian Journal of Physics, 1977, 30, 533.	0.6	69
119	Renormalised canonical perturbation theory for stochastic propagators. Journal of Physics A, 1976, 9, 2043-2057.	1.6	57
120	Numerical study of the magnetohydrodynamic spectra in tokamaks using galerkin's method. Journal of Computational Physics, 1975, 18, 132-153.	3.8	15
121	Plasma progress. Physics in Technology, 1975, 6, 228-228.	0.2	0
122	Long-wavelength kink instabilities in low-pressure, uniform axial current, cylindrical plasmas with elliptic cross sections. Physics of Fluids, 1974, 17, 930.	1.4	75
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124	On the backscatter instability of solar wind Alfvén waves. Journal of Geophysical Research, 1974, 79, 4174-4178.	3.3	65
125	Saturation of kinetic plasma instabilities by particle trapping. Physics of Fluids, 1973, 16, 431.	1.4	37
126	Oscillation center quasilinear theory. Physics of Fluids, 1973, 16, 1102.	1.4	78

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127	Nonlinear Frequency Shift of a Plasma Wave. Physics of Fluids, 1972, 15, 820.	1.4	26
128	Frequency Shift Due to Trapped Particles. Physics of Fluids, 1972, 15, 712.	1.4	91
129	A Lagrangian theory for nonlinear wave packets in a collisionless plasma. Journal of Plasma Physics, 1972, 7, 267-284.	2.1	62
130	Modulational Instabilities Due to Trapped Electrons. Physical Review Letters, 1972, 28, 215-217.	7.8	62
131	A Lagrangian Derivation of the Action-Conservation Theorem for Density Waves. Astrophysical Journal, 1972, 174, 301.	4.5	27
132	Interaction between Hydromagnetic Waves and a Time-Dependent, Inhomogeneous Medium. Physics of Fluids, 1970, 13, 2710.	1.4	235
133	Statistical Mechanics of Ideal Fermions in a Thin Film. Physical Review, 1968, 165, 283-287.	2.7	8