

# R D Hazeltine

## List of Publications by Year in descending order

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124  
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127  
docs citations

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times ranked

1778  
citing authors

#	ARTICLE	IF	CITATIONS
1	A survey of pedestal magnetic fluctuations using gyrokinetics and a global reduced model for microtearing stability. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	7
2	Global Theory of Microtearing Modes in the Tokamak Pedestal. <i>Physical Review Letters</i> , 2021, 126, 225001.	7.8	15
3	A comprehensive conductivity model for drift and micro-tearing modes. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	7
4	Dynamics of ambipolarity. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	0
5	Symmetries of a reduced fluid-gyrokinetic system. <i>Journal of Plasma Physics</i> , 2018, 84, .	2.1	1
6	Effect of curvature in the magnetic shear profile on micro-tearing modes in the tokamak pedestal. <i>Physics of Plasmas</i> , 2018, 25, 062505.	1.9	2
7	Flow shear suppression of pedestal ion temperature gradient turbulence-A first principles theoretical framework. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 084003.	2.1	13
8	Analysis of the Hermite spectrum in plasma turbulence. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	5
9	Ambipolarity in a tokamak with magnetic field ripple. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	2
10	Plasma anisotropy and the radial particle flux in a rippled tokamak. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	4
11	Plasma current resonance in asymmetric toroidal systems. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	2
12	Relativistic Plasma Polarizer: Impact of Temperature Anisotropy on Relativistic Transparency. <i>Physical Review Letters</i> , 2015, 115, 025002.	7.8	43
13	Radial transport with perturbed magnetic field. <i>Physics of Plasmas</i> , 2015, 22, 052501.	1.9	2
14	Local thermodynamics of a magnetized, anisotropic plasma. <i>Physics of Plasmas</i> , 2013, 20, 022506.	1.9	12
15	Thermal fluctuations and critical behavior in a magnetized, anisotropic plasma. <i>Physics of Plasmas</i> , 2013, 20, 122107.	1.9	1
16	Relativistic Petschek reconnection with pressure anisotropy in a pair-plasma. <i>Monthly Notices of the Royal Astronomical Society</i> , 2010, 403, 335-341.	4.4	7
17	A Hamiltonian electromagnetic gyrofluid model. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	43
18	Variational coordinate transformation in plasma physics. <i>Physics of Plasmas</i> , 2009, 16, 112505.	1.9	0

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19	Symmetry analysis of the Grad-Shafranov equation. <i>Physics of Plasmas</i> , 2009, 16, 123101.	1.9	17
20	Fluid model for relativistic, magnetized plasmas. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	12
21	Comment on "Derivation of paleoclassical key hypothesis" [Phys. Plasmas 14, 040701 (2007)]. <i>Physics of Plasmas</i> , 2008, 15, 014703.	1.9	1
22	Plasma fluctuations as Markovian noise. <i>Physical Review E</i> , 2007, 76, 066402.	2.1	9
23	Relating parallel and perpendicular flows of particles and heat in a magnetized toroidal plasma. <i>Physics of Plasmas</i> , 2006, 13, 094501.	1.9	0
24	Applications of noise theory to plasma fluctuations. <i>Physical Review E</i> , 2006, 73, 065402.	2.1	19
25	Isothermal tokamak. <i>Physics of Plasmas</i> , 2006, 13, 122508.	1.9	21
26	Electrostatic potential fluctuations in a Maxwellian plasma. <i>Physics of Plasmas</i> , 2006, 13, 014505.	1.9	3
27	Fluid description of ion dynamics in a toroidally confined plasma. <i>Physics of Plasmas</i> , 2005, 12, 052302.	1.9	2
28	Kinetic theory of flowing, magnetized plasma. <i>Physics of Plasmas</i> , 2005, 12, 102506.	1.9	13
29	Closed fluid description of relativistic, magnetized plasma interacting with radiation field. <i>Physical Review E</i> , 2004, 70, 036404.	2.1	9
30	Radiation reaction in fusion plasmas. <i>Physical Review E</i> , 2004, 70, 046407.	2.1	34
31	Thermal density fluctuations and correlations in homogeneous plasmas. <i>Physics of Plasmas</i> , 2004, 11, 5430-5435.	1.9	7
32	Radiation reaction and relativistic hydrodynamics. <i>Physical Review E</i> , 2004, 69, 056406.	2.1	26
33	Generalization of collisional fluid theory to long mean-free-path and relativistic motion. <i>Physics of Plasmas</i> , 2002, 9, 3341-3348.	1.9	12
34	Fluid description of a magnetized plasma. <i>Physics of Plasmas</i> , 2002, 9, 1882-1889.	1.9	19
35	Fluid Description of Relativistic, Magnetized Plasma. <i>Astrophysical Journal</i> , 2002, 567, 1262-1271.	4.5	21
36	New Physics in Fusion Plasma Confinement. <i>Physics Today</i> , 2002, 55, 30-36.	0.3	47

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37	Plasma equilibria in dipolar magnetic configurations. <i>Physics of Plasmas</i> , 2000, 7, 1831-1838.	1.9	11
38	Magnetic Dipole Equilibrium Solution at Finite Plasma Pressure. <i>Physical Review Letters</i> , 1999, 82, 2689-2692.	7.8	40
39	Collisionless transport parallel to the magnetic field in a toroidal plasma. <i>Physics of Plasmas</i> , 1999, 6, 550-555.	1.9	7
40	Ion plateau transport near the tokamak magnetic axis. <i>Physics of Plasmas</i> , 1998, 5, 953-958.	1.9	14
41	Neutral particle and radiation effects on Pfirsch-Schlüter fluxes near the edge. <i>Physics of Plasmas</i> , 1998, 5, 3961-3968.	1.9	24
42	Transport theory in the collisionless limit. <i>Physics of Plasmas</i> , 1998, 5, 3282-3286.	1.9	36
43	Effects of orbit distortion on classical transport. <i>Physics of Plasmas</i> , 1998, 5, 3680-3684.	1.9	9
44	Ion transport process around magnetic axis in tokamaks. <i>Physics of Plasmas</i> , 1997, 4, 771-777.	1.9	40
45	Effects of orbit squeezing on ion transport processes close to magnetic axis. <i>Physics of Plasmas</i> , 1997, 4, 1371-1374.	1.9	17
46	Ion transport in a partially ionized impure edge plasma. <i>Physics of Plasmas</i> , 1997, 4, 4218-4226.	1.9	4
47	Plasma transport near the separatrix of a magnetic island. <i>Physics of Plasmas</i> , 1997, 4, 2920-2927.	1.9	33
48	Electron transport fluxes in potato plateau regime. <i>Physics of Plasmas</i> , 1997, 4, 4331-4332.	1.9	6
49	Electron transport processes close to magnetic axis in tokamaks. <i>Physics of Plasmas</i> , 1997, 4, 1375-1378.	1.9	19
50	Tokamak Edge Transport Theory. <i>Contributions To Plasma Physics</i> , 1996, 36, 177-181.	1.1	1
51	Kinetic and transport theory near the tokamak edge. <i>Physics of Plasmas</i> , 1996, 3, 2365-2373.	1.9	4
52	Ion Transport in Turbulent Edge Plasmas. <i>Physical Review Letters</i> , 1996, 77, 2479-2482.	7.8	4
53	Flux limiting due to electron impact excitation energy loss. <i>Physics of Plasmas</i> , 1996, 3, 461-467.	1.9	2
54	Analytical and numerical studies of ion mobility near the tokamak plasma edge. <i>Physics of Plasmas</i> , 1995, 2, 1996-2006.	1.9	7

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55	Neoclassical kinetic theory near an X point: Plateau regime. <i>Physics of Plasmas</i> , 1994, 1, 548-551.	1.9	2
56	A two-dimensional kinetic model of the scrape-off layer. <i>Physics of Plasmas</i> , 1994, 1, 1882-1889.	1.9	9
57	Effects of orbit squeezing on poloidal mass flow and bootstrap current in tokamak plasmas. <i>Physics of Plasmas</i> , 1994, 1, 3365-3368.	1.9	25
58	Ion orbit loss and the poloidal electric field in a tokamak. <i>Physics of Plasmas</i> , 1994, 1, 3641-3645.	1.9	5
59	Ion mobility and transport barriers in the tokamak plasmas. <i>Physics of Fluids B</i> , 1993, 5, 4499-4501.	1.7	8
60	Gyrosheath near the tokamak edge. <i>Physics of Fluids B</i> , 1993, 5, 4011-4014.	1.7	10
61	Rotation in Ohmically heated tokamaks: Experiment and theory. <i>Physics of Fluids B</i> , 1993, 5, 2485-2490.	1.7	10
62	Shock formation in a poloidally rotating tokamak plasma. <i>Physics of Fluids B</i> , 1992, 4, 404-412.	1.7	71
63	Effects of orbit squeezing on ion transport in the banana regime in tokamaks. <i>Physics of Fluids B</i> , 1992, 4, 2547-2551.	1.7	71
64	Stabilization of the m=1 tearing mode by resonance detuning. <i>Physics of Fluids B</i> , 1992, 4, 2733-2736.	1.7	15
65	Exact solutions for a system of nonlinear plasma fluid equations. <i>Physics of Fluids B</i> , 1992, 4, 831-840.	1.7	3
66	The effect of charge exchange on plasma flows. <i>Physics of Fluids B</i> , 1992, 4, 2675-2676.	1.7	18
67	The space potential in the tokamak text. <i>Physics of Fluids B</i> , 1991, 3, 3448-3461.	1.7	80
68	A practical limitation on transport by ripple-trapped ions. <i>Physics of Fluids B</i> , 1991, 3, 3198-3200.	1.7	1
69	Inversion of the ballooning transformation. <i>Physics of Fluids B</i> , 1990, 2, 7-10.	1.7	14
70	Effect of asymmetric sources on tokamak neoclassical transport in the plateau regime. <i>Physics of Fluids B</i> , 1990, 2, 2113-2117.	1.7	5
71	Canonical coordinates for guiding center particles. <i>Physics of Fluids B</i> , 1990, 2, 2563-2567.	1.7	45
72	Enhanced pinch effect due to the electrostatic potential. <i>Physics of Fluids B</i> , 1990, 2, 2353-2357.	1.7	6

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73	Self-consistent radial sheath. Physics of Fluids B, 1989, 1, 2031-2039.	1.7	104
74	Stability of low-shear tokamaks. Physics of Fluids, 1988, 31, 1217.	1.4	59
75	Tearing mode growth in a regime of weak magnetic shear. Physics of Fluids, 1988, 31, 1161.	1.4	1
76	On tokamak equilibrium. Journal of Plasma Physics, 1988, 40, 481-491.	2.1	2
77	Hamiltonian four-field model for nonlinear tokamak dynamics. Physics of Fluids, 1987, 30, 3204.	1.4	96
78	Destabilization of Alfvén-resonant modes by resistivity and diamagnetic drifts. Physics of Fluids, 1987, 30, 4.	1.4	4
79	A generalized reduced fluid model with finite ion-gyroradius effects. Physics of Fluids, 1986, 29, 1480.	1.4	55
80	Analytic theory of the nonlinear $m=1$ tearing mode. Physics of Fluids, 1986, 29, 1633.	1.4	34
81	Island bootstrap current modification of the nonlinear dynamics of the tearing mode. Physics of Fluids, 1986, 29, 899.	1.4	308
82	Ambipolarons: Solitary wave solutions for the radial electric field in a plasma. Physics of Fluids, 1986, 29, 69.	1.4	16
83	Electromagnetic solitary waves in magnetized plasmas. Journal of Plasma Physics, 1985, 34, 103-114.	2.1	23
84	A four-field model for tokamak plasma dynamics. Physics of Fluids, 1985, 28, 2466.	1.4	186
85	Nonlinear dynamics of magnetic islands with curvature and pressure. Physics of Fluids, 1985, 28, 294-302.	1.4	144
86	Nonlinear kinetic theory of a single helicity tearing instability. Physics of Fluids, 1984, 27, 2043.	1.4	11
87	Magnetic field errors in bumpy torus configurations. Physics of Fluids, 1984, 27, 2268.	1.4	1
88	Theory of anomalous tearing mode growth and the major tokamak disruption. Physics of Fluids, 1984, 27, 1449.	1.4	77
89	Hamiltonian formulation of reduced magnetohydrodynamics. Physics of Fluids, 1984, 27, 886.	1.4	121
90	Radial guiding center drifts and omnigenity in bumpy torus confinement systems. Physics of Fluids, 1983, 26, 1252.	1.4	3

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91	Reduced magnetohydrodynamics and the Hasegawa-Mima equation. Physics of Fluids, 1983, 26, 3242.	1.4	52
92	Renormalization of plasma turbulence in toroidal geometry. Physics of Fluids, 1982, 25, 350.	1.4	3
93	Effects of electrostatic trapping on neoclassical impurity transport in a collision-dominated plasma. Physics of Fluids, 1982, 25, 536.	1.4	15
94	Analytic bumpy torus equilibrium. Physics of Fluids, 1982, 25, 2022.	1.4	5
95	Bumpy torus transport in the low collision frequency limit. Physics of Fluids, 1981, 24, 290.	1.4	49
96	Variational theory of electrical conductivity and kinetic tearing modes. Physics of Fluids, 1981, 24, 1655.	1.4	18
97	Uniqueness and inversion of the ballooning representation. Physics of Fluids, 1981, 24, 180.	1.4	16
98	Quasi-linear diffusion and radial transport in tokamaks. Physics of Fluids, 1981, 24, 1164.	1.4	48
99	Effects of ion dynamics on tearing modes. Physics of Fluids, 1980, 23, 599.	1.4	9
100	Twisting modes. Physics of Fluids, 1979, 22, 889.	1.4	20
101	Large mode-number tearing and twisting modes. Physics of Fluids, 1979, 22, 1932.	1.4	16
102	Unified theory of tearing modes. Physics of Fluids, 1979, 22, 2147.	1.4	41
103	Stabilization of trapped-electron shear-Alfvén instabilities by temperature gradient. Physics of Fluids, 1979, 22, 2364.	1.4	4
104	Collisionless "Current-Channel" Tearing Modes. Physical Review Letters, 1978, 41, 1375-1378.	7.8	17
105	The drift kinetic equation for toroidal plasmas with large mass velocities. Plasma Physics, 1978, 20, 673-678.	0.9	53
106	Kinetic and finite beta effects on the m=1 tearing instability. Physics of Fluids, 1978, 21, 1007.	1.4	28
107	Variational theory of drift and tearing eigenmodes in slab geometry. Physics of Fluids, 1978, 21, 1140.	1.4	43
108	Pfirsch-Schlüter friction in present tokamak plasmas. Physics of Fluids, 1977, 20, 1880.	1.4	4

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109	Theory of plasma transport in toroidal confinement systems. <i>Reviews of Modern Physics</i> , 1976, 48, 239-308.	45.6	1,546
110	Tokamak Heat Transport Due to Tearing Modes. <i>Physical Review Letters</i> , 1976, 37, 102-104.	7.8	46
111	Effects of electrostatic trapping on neoclassical transport in an impure plasma. <i>Physics of Fluids</i> , 1976, 19, 1163.	1.4	49
112	Kinetic theory of tearing instability. <i>Physics of Fluids</i> , 1975, 18, 1778.	1.4	174
113	Kinetic theory of plasma scrape-off in a divertor tokamak. <i>Physics of Fluids</i> , 1974, 17, 2236.	1.4	33
114	Rotation of a toroidally confined, collisional plasma. <i>Physics of Fluids</i> , 1974, 17, 961.	1.4	181
115	Recursive derivation of drift-kinetic equation. <i>Plasma Physics</i> , 1973, 15, 77-80.	0.9	138
116	Plasma transport in a torus of arbitrary aspect ratio. <i>Physics of Fluids</i> , 1973, 16, 1645.	1.4	69
117	Collision-dominated plasma transport in toroidal confinement systems. <i>Physics of Fluids</i> , 1973, 16, 1883.	1.4	83
118	Plasma Transport in Toroidal Confinement Systems. <i>Physics of Fluids</i> , 1972, 15, 116.	1.4	397
119	Effect of Field Asymmetry on Neoclassical Transport in a Tokamak. <i>Physics of Fluids</i> , 1972, 15, 2211.	1.4	17
120	Fourier Transform Methods in Linear Transport Theory. <i>Journal of Mathematical Physics</i> , 1971, 12, 1970-1980.	1.1	11
121	Resistive Plasma Rotation and Shock Formation in Toroidal Geometry. <i>Physics of Fluids</i> , 1971, 14, 361.	1.4	50
122	Three-dimensional Linear Transport Theory. <i>Journal of Mathematical Physics</i> , 1970, 11, 1126-1135.	1.1	18
123	Rotation of Tokamak Equilibria. <i>Physical Review Letters</i> , 1970, 25, 427-430.	7.8	9
124	Elastic Radiation in a Half-space. <i>Journal of Mathematical Physics</i> , 1970, 11, 2546-2552.	1.1	6