

# Michael Ruderman

## List of Publications by Citations

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119  
papers

3,127  
citations

30  
h-index

51  
g-index

126  
ext. papers

3,452  
ext. citations

3.7  
avg, IF

5.79  
L-index

#	Paper	IF	Citations
119	The Damping of Coronal Loop Oscillations. <i>Astrophysical Journal</i> , <b>2002</b> , 577, 475-486	4.7	382
118	Resonant MHD Waves in the Solar Atmosphere. <i>Space Science Reviews</i> , <b>2011</b> , 158, 289-338	7.5	153
117	Transverse Oscillations of Coronal Loops. <i>Space Science Reviews</i> , <b>2009</b> , 149, 199-228	7.5	138
116	Observations of ubiquitous compressive waves in the Sun's chromosphere. <i>Nature Communications</i> , <b>2012</b> , 3, 1315	17.4	128
115	Transverse Oscillations of Longitudinally Stratified Coronal Loops with Variable Cross Section. <i>Astrophysical Journal</i> , <b>2008</b> , 686, 694-700	4.7	106
114	Non-Axisymmetric Oscillations of Thin Prominence Fibrils. <i>Solar Physics</i> , <b>2005</b> , 229, 79-94	2.6	104
113	Kinetic-Gasdynamic Modeling of the Heliospheric Interface. <i>Space Science Reviews</i> , <b>2009</b> , 146, 329-351	7.5	97
112	DNLS equation for large-amplitude solitons propagating in an arbitrary direction in a high- $\beta$ Hall plasma. <i>Journal of Plasma Physics</i> , <b>2002</b> , 67, 271-276	2.7	86
111	Resonantly damped oscillations of longitudinally stratified coronal loops. <i>Astronomy and Astrophysics</i> , <b>2006</b> , 457, 1059-1070	5.1	78
110	Structure of the region of solar wind-Interstellar medium interaction and its influence on H atoms penetrating the solar wind. <i>Astrophysics and Space Science</i> , <b>1979</b> , 66, 441-451	1.6	74
109	Dynamics of modulationally unstable ion-acoustic wavepackets in plasmas with negative ions. <i>Journal of Plasma Physics</i> , <b>2008</b> , 74, 639-656	2.7	71
108	Nonaxisymmetric Oscillations of Thin Twisted Magnetic Tubes. <i>Solar Physics</i> , <b>2007</b> , 246, 119-131	2.6	60
107	The resonant damping of oscillations of coronal loops with elliptic cross-sections. <i>Astronomy and Astrophysics</i> , <b>2003</b> , 409, 287-297	5.1	60
106	Conservation laws and connection formulae for resonant MHD waves. <i>Physica Scripta</i> , <b>1995</b> , T60, 171-184	4.6	57
105	Long nonlinear waves in a compressible magnetically structured atmosphere. <i>Solar Physics</i> , <b>1987</b> , 109, 247-263	2.6	46
104	Damping of coronal loop kink oscillations due to mode conversion. <i>Astronomy and Astrophysics</i> , <b>2013</b> , 555, A27	5.1	43
103	Nonlinear propagating kink waves in thin magnetic tubes. <i>Physics of Plasmas</i> , <b>2010</b> , 17, 082108	2.1	39

102	Propagation of solitons of the Derivative Nonlinear Schrödinger equation in a plasma with fluctuating density. <i>Physics of Plasmas</i> , <b>2002</b> , 9, 2940-2945	2.1	37
101	Transverse oscillations of two parallel coronal loops. <i>Astronomy and Astrophysics</i> , <b>2008</b> , 485, 849-857	5.1	36
100	The geometry effect on transverse oscillations of coronal loops. <i>Astronomy and Astrophysics</i> , <b>2006</b> , 459, 241-244	5.1	36
99	Transverse Oscillations of Coronal Loops with Slowly Changing Density. <i>Solar Physics</i> , <b>2011</b> , 271, 41-54	2.6	35
98	The Effect of Flows on Transverse Oscillations of Coronal Loops. <i>Solar Physics</i> , <b>2010</b> , 267, 377-391	2.6	35
97	PROPAGATION AND DISPERSION OF SAUSAGE WAVE TRAINS IN MAGNETIC FLUX TUBES. <i>Astrophysical Journal</i> , <b>2015</b> , 806, 56	4.7	32
96	Nonlinear theory of resonant slow waves in dissipative layers. <i>Physics of Plasmas</i> , <b>1997</b> , 4, 75-90	2.1	32
95	The dynamics of current carriers in standing Alfvén waves: Parallel electric fields in the auroral acceleration region. <i>Journal of Geophysical Research</i> , <b>2002</b> , 107, SMP 19-1		32
94	Non-stationary resonant Alfvén surface waves in one-dimensional magnetic plasmas. <i>Journal of Plasma Physics</i> , <b>1995</b> , 54, 129-148	2.7	32
93	Coronal Loop Heating by Torsional Alfvén Waves Directly Driven by Footpoint Motions: Harmonic Driving versus Stochastic Driving. <i>Astrophysical Journal</i> , <b>1999</b> , 521, 851-858	4.7	32
92	Dissipative instability of the MHD tangential discontinuity in magnetized plasmas with anisotropic viscosity and thermal conductivity. <i>Journal of Plasma Physics</i> , <b>1996</b> , 56, 285-306	2.7	31
91	Propagating kink waves in thin twisted magnetic tubes with continuous equilibrium magnetic field. <i>Astronomy and Astrophysics</i> , <b>2015</b> , 575, A130	5.1	30
90	Fast Sausage Waves in Current-Carrying Coronal Loops. <i>Solar Physics</i> , <b>2012</b> , 280, 153-163	2.6	30
89	Resonant damping of kink oscillations of cooling coronal magnetic loops. <i>Astronomy and Astrophysics</i> , <b>2011</b> , 534, A78	5.1	30
88	Nonlinear waves in the solar atmosphere. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , <b>2006</b> , 364, 485-504	3	28
87	Nonlinear theory of slow dissipative layers in anisotropic plasmas. <i>Physics of Plasmas</i> , <b>1998</b> , 5, 252-260	2.1	28
86	Kelvin-Helmholtz instability on the magnetospheric flanks: An absolute and convective instability approach. <i>Journal of Geophysical Research</i> , <b>2000</b> , 105, 27685-27699		27
85	On the model of the solar wind-interstellar medium interaction with two shock waves. <i>Astrophysics and Space Science</i> , <b>1976</b> , 41, 481-490	1.6	26

84	Damping of prominence longitudinal oscillations due to mass accretion. <i>Astronomy and Astrophysics</i> , <b>2016</b> , 591, A131	5.1	26
83	PROPAGATION AND DISPERSION OF TRANSVERSE WAVE TRAINS IN MAGNETIC FLUX TUBES. <i>Astrophysical Journal</i> , <b>2014</b> , 789, 48	4.7	25
82	On the Convection in a Porous Medium with Inclined Temperature Gradient and Vertical Throughflow. Part I. Normal Modes. <i>Transport in Porous Media</i> , <b>2009</b> , 80, 137-151	3.1	25
81	On the Convection in a Porous Medium with Inclined Temperature Gradient and Vertical Throughflow. Part II. Absolute and Convective Instabilities, and Spatially Amplifying Waves. <i>Transport in Porous Media</i> , <b>2009</b> , 80, 153-172	3.1	24
80	The absolute and convective instability of the magnetospheric flanks. <i>Journal of Geophysical Research</i> , <b>2000</b> , 105, 385-393		24
79	Long, nonlinear, non-axisymmetric surface-wave propagation in a magnetic tube. <i>Journal of Plasma Physics</i> , <b>1992</b> , 47, 175-191	2.7	24
78	Leaky and non-leaky kink oscillations of magnetic flux tubes. <i>Journal of Plasma Physics</i> , <b>2006</b> , 72, 285	2.7	23
77	Comment on Slow nonlinear waves in magnetic flux tubes[Phys. Plasmas 11, 2256 (2004)]. <i>Physics of Plasmas</i> , <b>2005</b> , 12, 034701	2.1	23
76	Analytic solutions for resonant Alfvén waves in 1D magnetic flux tubes in dissipative stationary MHD. <i>Solar Physics</i> , <b>1995</b> , 161, 123-138	2.6	23
75	On the Ratio of Periods of the Fundamental Harmonic and First Overtone of Magnetic Tube Kink Oscillations. <i>Solar Physics</i> , <b>2016</b> , 291, 1143-1157	2.6	21
74	Excitation of resonant Alfvén waves in the magnetosphere by negative energy surface waves on the magnetopause. <i>Journal of Geophysical Research</i> , <b>1998</b> , 103, 26573-26584		21
73	Nonlinearity effects on resonant absorption of surface Alfvén waves in incompressible plasmas. <i>Solar Physics</i> , <b>1993</b> , 143, 69-88	2.6	21
72	ELECTRON THERMAL CONDUCTION AS A POSSIBLE PHYSICAL MECHANISM TO MAKE THE INNER HELIOSHEATH THINNER. <i>Astrophysical Journal Letters</i> , <b>2014</b> , 795, L7	7.9	20
71	Viscous damping of surface magnetohydrodynamic waves on magnetic interface in cold plasmas. <i>Solar Physics</i> , <b>1991</b> , 131, 11-24	2.6	20
70	Surface Alfvén waves of negative energy. <i>Journal of Plasma Physics</i> , <b>1995</b> , 54, 149-155	2.7	19
69	Nonlinear fast sausage waves in homogeneous magnetic flux tubes. <i>Journal of Plasma Physics</i> , <b>2015</b> , 81,	2.7	17
68	An Analytical Model of the Kelvin-Helmholtz Instability of Transverse Coronal Loop Oscillations. <i>Astrophysical Journal</i> , <b>2019</b> , 870, 108	4.7	17
67	Standing kink oscillations of thin twisted magnetic tubes with continuous equilibrium magnetic field. <i>Astronomy and Astrophysics</i> , <b>2015</b> , 580, A57	5.1	15

66	The structure of fast sausage waves in current-carrying coronal loops. <i>Annales Geophysicae</i> , <b>2014</b> , 32, 1189-1193	2	15
65	Absolute and Convective Instability of Tangential Discontinuities in Viscous Fluids: Application to Heliopause. <i>Astrophysics and Space Science</i> , <b>2000</b> , 274, 327-341	1.6	15
64	Kink and fluting modes of stratified coronal magnetic loops with elliptical cross-sections. <i>Astronomy and Astrophysics</i> , <b>2011</b> , 527, A53	5.1	15
63	Torsional Alfvén waves: magneto-seismology in static and dynamic coronal plasmas. <i>Astronomy and Astrophysics</i> , <b>2011</b> , 534, A27	5.1	14
62	The stability of parallel-propagating circularly polarized Alfvén waves revisited. <i>Journal of Plasma Physics</i> , <b>2004</b> , 70, 143-153	2.7	14
61	Damped kink oscillations of flowing prominence threads. <i>Astronomy and Astrophysics</i> , <b>2012</b> , 546, A82	5.1	13
60	On the vertical and horizontal transverse oscillations of curved coronal loops. <i>Astronomy and Astrophysics</i> , <b>2009</b> , 506, 885-893	5.1	13
59	Kelvin-Helmholtz absolute and convective instabilities of, and signalling in, an inviscid fluid-viscous fluid configuration. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2004</b> , 460, 847-874	2.4	13
58	Kink oscillations of cooling coronal loops with variable cross-section. <i>Astronomy and Astrophysics</i> , <b>2017</b> , 602, A50	5.1	12
57	Longitudinal propagation of nonlinear surface Alfvén waves at a magnetic interface in a compressible atmosphere. <i>Plasma Physics and Controlled Fusion</i> , <b>1988</b> , 30, 1117-1125	2	12
56	Nonlinear Kink Oscillations of Coronal Magnetic Loops. <i>Solar Physics</i> , <b>2014</b> , 289, 1999-2020	2.6	11
55	MHD Waves and Instabilities in Space Plasma Flows. <i>Space Science Reviews</i> , <b>2011</b> , 158, 505-523	7.5	11
54	The effect of density stratification on the transverse oscillations of two parallel coronal loops. <i>Astronomy and Astrophysics</i> , <b>2010</b> , 515, A33	5.1	11
53	Interaction of sound waves with an inhomogeneous magnetized plasma in a strongly nonlinear resonant slow-wave layer. <i>Journal of Plasma Physics</i> , <b>2000</b> , 63, 43-77	2.7	10
52	Effect of siphon flow on resonant damping of kink oscillations in magnetic flux tubes. <i>Astronomy and Astrophysics</i> , <b>2019</b> , 631, A31	5.1	9
51	The nature of convectively unstable waveguide mode disturbances on the magnetospheric flanks. <i>Journal of Geophysical Research</i> , <b>2002</b> , 107, SMP 14-1		9
50	Resonant damping of kink oscillations of thin cooling and expanding coronal magnetic loops. <i>Astronomy and Astrophysics</i> , <b>2018</b> , 619, A173	5.1	9
49	Resonant damping of kink oscillations of thin expanding magnetic tubes. <i>Astronomy and Astrophysics</i> , <b>2018</b> , 615, A156	5.1	8

48	Non-reflective Propagation of Kink Waves in Coronal Magnetic Loops. <i>Solar Physics</i> , <b>2013</b> , 286, 417-426	2.6	8
47	Resonantly damped oscillations of two coronal loops. <i>Astronomy and Astrophysics</i> , <b>2011</b> , 525, A4	5.1	8
46	Resonantly damped oscillations of longitudinally stratified coronal loops. <i>Astronomy and Astrophysics</i> , <b>2007</b> , 463, 759-759	5.1	8
45	Comment on Note on the Initial Value Problem for Coronal Loop Kink Waves By P. S. Cally. <i>Solar Physics</i> , <b>2006</b> , 237, 119-121	2.6	8
44	Propagation of nonlinear Alfvén surface waves along a tangential magnetohydrodynamic discontinuity in an incompressible fluid. <i>Fluid Dynamics</i> , <b>1985</b> , 20, 85-92	0.7	8
43	Transverse oscillations of non-planar coronal loops. <i>Astronomy and Astrophysics</i> , <b>2011</b> , 529, A33	5.1	8
42	Nonlinear Damping of Standing Kink Waves Computed With Elsässer Variables. <i>Astrophysical Journal</i> , <b>2021</b> , 910, 58	4.7	8
41	Compressibility Effect on the Rayleigh-Taylor Instability with Sheared Magnetic Fields. <i>Solar Physics</i> , <b>2017</b> , 292, 1	2.6	7
40	Nonlinear Generation of Fluting Perturbations by Kink Mode. <i>Solar Physics</i> , <b>2017</b> , 292, 111	2.6	7
39	On the effect of transport coefficient anisotropy on the plasma flow in heliospheric interface. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2013</b> , 434, 3202-3207	4.3	7
38	The structure of the hydrodynamic plasma flow near the heliopause stagnation point. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2010</b> , 401, 607-612	4.3	7
37	Stability of MHD shear flows: Application to space physics. <i>Journal of Physics: Conference Series</i> , <b>2010</b> , 216, 012016	0.3	7
36	Absolute and convective instabilities of parallel propagating circularly polarized Alfvén waves: numerical results. <i>Astronomy and Astrophysics</i> , <b>2006</b> , 452, 641-646	5.1	7
35	Stability of an MHD shear flow with a piecewise linear velocity profile. <i>Astronomy and Astrophysics</i> , <b>2006</b> , 448, 1177-1184	5.1	7
34	Absolute and convective instabilities of parallel propagating circularly polarized Alfvén waves: Beat instability. <i>Physics of Plasmas</i> , <b>2005</b> , 12, 062103	2.1	7
33	Nonlinear Waves in the Magnetically Structured Solar Atmosphere. <i>NATO Science Series Series II, Mathematics, Physics and Chemistry</i> , <b>2003</b> , 239-274		7
32	Rayleigh-Taylor instabilities with sheared magnetic fields in partially ionised plasmas. <i>Astronomy and Astrophysics</i> , <b>2018</b> , 609, A23	5.1	7
31	Phase mixing of Alfvén waves propagating in non-reflective magnetic plasma configurations. <i>Astronomy and Astrophysics</i> , <b>2017</b> , 600, A122	5.1	6

30	Non-reflective Propagation of Kink Pulses in Magnetic Waveguides in the Solar Atmosphere. <i>Solar Physics</i> , <b>2015</b> , 290, 1323-1335	2.6	6
29	Nonlinear Effects in Resonant Layers in Solar and Space Plasmas. <i>Space Science Reviews</i> , <b>2011</b> , 158, 421-450	4.5	6
28	Parametric instabilities of circularly polarized small-amplitude Alfvén waves in Hall plasmas. <i>Journal of Plasma Physics</i> , <b>2008</b> , 74, 119-138	2.7	6
27	Rayleigh-Taylor instability of a magnetic tangential discontinuity in the presence of flow. <i>Astronomy and Astrophysics</i> , <b>2015</b> , 580, A37	5.1	6
26	Nonlinear dissipation of surface Alfvén waves in the solar corona. <i>Astrophysical Journal</i> , <b>1992</b> , 399, 724	4.7	6
25	Resonant Damping of Propagating Kink Waves in Non-stationary, Longitudinally Stratified, and Expanding Solar Waveguides. <i>Frontiers in Astronomy and Space Sciences</i> , <b>2019</b> , 6,	3.8	5
24	Excitation of decayless kink oscillations by random motion. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2020</b> ,	4.3	5
23	Resonant damping and instability of propagating kink waves in flowing and twisted magnetic flux tubes. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2020</b> , 496, 67-79	4.3	5
22	Negative energy standing wave instability in the presence of flow. <i>Journal of Plasma Physics</i> , <b>2018</b> , 84,	2.7	5
21	Phase mixing of Alfvén waves in axisymmetric non-reflective magnetic plasma configurations. <i>Monthly Notices of the Royal Astronomical Society</i> , <b>2018</b> , 474, 2289-2301	4.3	5
20	Absolute and convective instabilities of parallel propagating circularly polarized Alfvén waves: Decay instability. <i>Physics of Plasmas</i> , <b>2004</b> , 11, 4178-4187	2.1	5
19	Possible Cross-Section for a Coronal Loop of Given Shape?. <i>Solar Physics</i> , <b>2015</b> , 290, 423-435	2.6	4
18	Coronal Seismology Using Transverse Oscillations of Non-planar Coronal Loops. <i>Solar Physics</i> , <b>2012</b> , 278, 177-185	2.6	4
17	Phase mixing of Alfvén waves in two-dimensional magnetic plasma configurations with exponentially decreasing density. <i>Astronomy and Astrophysics</i> , <b>2018</b> , 620, A44	5.1	4
16	Unified theory of damping of linear surface Alfvén waves in inhomogeneous incompressible plasmas. <i>Journal of Plasma Physics</i> , <b>1996</b> , 56, 107-125	2.7	3
15	Formation of Chromospheric Spicules in Magnetic Bright Points: An Analytical Approach Using Cartesian Slab Geometry. <i>Astrophysical Journal</i> , <b>2020</b> , 905, 168	4.7	3
14	Nonlinear radial oscillations of coronal loops. <i>Geomagnetism and Aeronomy</i> , <b>2016</b> , 56, 1040-1044	0.9	3
13	Significance of Cooling Effect on Comprehension of Kink Oscillations of Coronal Loops. <i>Frontiers in Astronomy and Space Sciences</i> , <b>2021</b> , 7,	3.8	3

12	Decayless Kink Oscillations Excited by Random Driving: Motion in Transitional Layer. <i>Solar Physics</i> , <b>2021</b> , 296, 1	2.6	3
11	Quasi-parallel propagation of solitary waves in magnetised non-relativistic electron-positron plasmas. <i>Journal of Plasma Physics</i> , <b>2020</b> , 86,	2.7	2
10	Absolute and Convective Instabilities of Circularly Polarized Alfvén Waves. <i>Space Science Reviews</i> , <b>2005</b> , 121, 287-297	7.5	2
9	Propagation of Torsional Alfvén Pulses in Zero-beta Flux Tubes. <i>Astrophysical Journal</i> , <b>2021</b> , 911, 39	4.7	2
8	Propagation of leaky surface waves on contact magnetohydrodynamic discontinuities in incompressible plasmas. <i>Physics of Plasmas</i> , <b>2018</b> , 25, 122107	2.1	2
7	Rayleigh-Taylor instability of a magnetic tangential discontinuity in the presence of oscillating gravitational acceleration. <i>Astronomy and Astrophysics</i> , <b>2018</b> , 615, A130	5.1	1
6	On the Evolution of Pre-Flare Patterns of a 3-Dimensional Model of AR 11429. <i>Proceedings of the International Astronomical Union</i> , <b>2017</b> , 13, 294-297	0.1	1
5	Reflection and Evolution of Torsional Alfvén Pulses in Zero-beta Flux Tubes. <i>Astrophysical Journal</i> , <b>2021</b> , 922, 118	4.7	0
4	Resonant Instability of Kink Oscillations in Magnetic Flux Tubes with Siphon Flow. <i>Solar Physics</i> , <b>2021</b> , 296, 1	2.6	0
3	Kink Oscillations of Thin Magnetic Tubes with Discontinuous Density. <i>Solar Physics</i> , <b>2014</b> , 289, 2473-2485.6	5.6	0
2	Effect of stratification on the frequency of bounded Rossby modes over a non-flat bottom. <i>Geophysical and Astrophysical Fluid Dynamics</i> , <b>2013</b> , 107, 541-563	1.4	0
1	Non-axisymmetric oscillations of thin twisted magnetic tubes. <i>Proceedings of the International Astronomical Union</i> , <b>2007</b> , 3, 344-350	0.1	0