Robin Williams

List of Publications by Year
in descending order

77 papers	2,631 citations	218592 26 h-index	189801 50 g-index
77 all docs	77 docs citations	77 times ranked	2425 citing authors

#	Article	IF	Citations
1	Space Telescope and Optical Reverberation Mapping Project. X. Understanding the Absorption-line Holiday in NGC 5548. Astrophysical Journal, 2019, 877, 119.	1.6	35
2	Fully-conservative contact-capturing schemes for multi-material advection. Journal of Computational Physics, 2019, 398, 108809.	1.9	5
3	Turbulent transport and mixing in the multimode narrowband Richtmyer-Meshkov instability. Physics of Fluids, 2019, 31, .	1.6	26
4	Shock Structures Described by Hyperbolic Balance Laws. SIAM Journal on Applied Mathematics, 2019, 79, 459-476.	0.8	1
5	The classical D-type expansion of spherical Hâ€‰ii regions. Monthly Notices of the Royal Astronomical Society, 2018, 479, 2016-2023.	1.6	16
6	Sub-grid properties and artificial viscous stresses in staggered-mesh schemes. Journal of Computational Physics, 2018, 374, 413-443.	1.9	4
7	Ejecta sources and scalings. AIP Conference Proceedings, 2018, , .	0.3	5
8	Simulation of Double-Shock Ejecta Production. Journal of Dynamic Behavior of Materials, 2017, 3, 291-299.	1.1	11
9	Late-time growth rate, mixing, and anisotropy in the multimode narrowband Richtmyerâ€“Meshkov instability: The Î¸-group collaboration. Physics of Fluids, 2017, 29, .	1.6	79
10	Foreword to the Special Issue on Ejecta. Journal of Dynamic Behavior of Materials, 2017, 3, 151-155.	1.1	40
11	Thermodynamically-consistent semi-classicalâ„“-changing rates. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 115201.	0.6	2
12	The late time structure of high density contrast, single mode Richtmyer-Meshkov flow. Physics of Fluids, 2016, 28, 074108.	1.6	12
13	Implications of coronal line emission in NGC 4696*. Monthly Notices of the Royal Astronomical Society, 2015, 446, 1234-1244.	1.6	12
14	Accurate determination of the freeâ€“free Gaunt factor â€“ II. Relativistic Gaunt factors. Monthly Notices of the Royal Astronomical Society, 2015, 449, 2112-2118.	1.6	15
15	Comparison of structured- and unstructured-grid, compressible and incompressible methods using the vortex pairing problem. Computer Methods in Applied Mechanics and Engineering, 2015, 293, 207-231.	3.4	325
16	STOUT: CLOUDYâ€™S ATOMIC AND MOLECULAR DATABASE. Astrophysical Journal, 2015, 807, 118.	1.6	28
17	Statistics for Assessing Mixing in a Finite Element Hydrocode. Journal of Fluids Engineering, Transactions of the ASME, 2014, 136, .	0.8	5
18	Radiative precursors driven by converging blast waves in noble gases. Physics of Plasmas, 2014, 21, 033302.	0.7	5

#	Article	IF	Citations
19	Radiative cooling II: effects of density and metallicity. Monthly Notices of the Royal Astronomical Society, 2014, 440, 3100-3112.	1.6	14
20	Unstably Stratified Homogeneous Turbulence as a Tool for Turbulent Mixing Modeling. Journal of Fluids Engineering, Transactions of the ASME, 2014, 136, .	0.8	16
21	A Hybrid Compressibleâ€“Incompressible Computational Fluid Dynamics Method for Richtmyerâ€“Meshkov Mixing. Journal of Fluids Engineering, Transactions of the ASME, 2014, 136, .	0.8	7
22	An Investigation Into Nonlinear Growth Rate of Two-Dimensional and Three-Dimensional Single-Mode Richtmyerâ€“Meshkov Instability Using an Arbitrary-Lagrangianâ€“Eulerian Algorithm. Journal of Fluids Engineering, Transactions of the ASME, 2014, 136, .	0.8	9
23	Accurate determination of the freeâ€“free Gaunt factor â€“ I. Non-relativistic Gaunt factors. Monthly Notices of the Royal Astronomical Society, 2014, 444, 420-428.	1.6	65
24	ON THE OBSERVABILITY OF OPTICALLY THIN CORONAL HYPERFINE STRUCTURE LINES. Astrophysical Journal, 2014, 787, 96.	1.6	1
25	Accuracy of highâ€order densityâ€based compressible methods in low Mach vortical flows. International Journal for Numerical Methods in Fluids, 2014, 74, 335-358.	0.9	28
26	Radiative cooling in collisionally ionized and photoionized plasmas. Monthly Notices of the Royal Astronomical Society, 2013, 429, 3133-3143.	1.6	22
27	EXPANDED IRON UTA SPECTRAâ€”PROBING THE THERMAL STABILITY LIMITS IN AGN CLOUDS. Astrophysical Journal, 2013, 767, 123.	1.6	9
28	EFFECTS OF EXTERNAL RADIATION FIELDS ON LINE EMISSIONâ€”APPLICATION TO STAR-FORMING REGIONS. Astrophysical Journal, 2013, 779, 122.	1.6	5
29	Physics of the single-shocked and reshocked Richtmyerâ€“Meshkov instability. Journal of Turbulence, 2012, 13, N10.	0.5	25
30	ROVIBRATIONALLY RESOLVED DIRECT PHOTODISSOCIATION THROUGH THE LYMAN AND WERNER TRANSITIONS OF H₂FOR FUV/X-RAY-IRRADIATED ENVIRONMENTS. Astrophysical Journal, 2012, 746, 78.	1.6	17
31	Hydrogen two-photon continuum emission from the Horseshoe filament in NGC 1275. Monthly Notices of the Royal Astronomical Society, 2012, 425, 1421-1429.	1.6	10
32	PUMPING UP THE [N I] NEBULAR LINES. Astrophysical Journal, 2012, 757, 79.	1.6	26
33	Richtmyerâ€“Meshkov turbulent mixing arising from an inclined material interface with realistic surface perturbations and reshocked flow. Physics of Fluids, 2011, 23, .	1.6	79
34	The energy source of the filaments around the giant galaxy NGCâ€ƒ1275. Monthly Notices of the Royal Astronomical Society, 2011, 417, 172-177.	1.6	96
35	Growth of a Richtmyer-Meshkov turbulent layer after reshock. Physics of Fluids, 2011, 23, .	1.6	70
36	The influence of initial conditions on turbulent mixing due to Richtmyerâ€“Meshkov instability. Journal of Fluid Mechanics, 2010, 654, 99-139.	1.4	160

#	Article	IF	Citations
37	IMPLICATIONS OF INFALLING Fe II-EMITTING CLOUDS IN ACTIVE GALACTIC NUCLEI: ANISOTROPIC PROPERTIES. Astrophysical Journal, 2009, 707, L82-L86.	1.6	71
38	LABORATORY EXPERIMENTS, NUMERICAL SIMULATIONS, AND ASTRONOMICAL OBSERVATIONS OF DEFLECTED SUPERSONIC JETS: APPLICATION TO HH 110. Astrophysical Journal, 2009, 705, 1073-1094.	1.6	55
39	Laboratory experiments to study supersonic astrophysical flows interacting with clumpy environments. Astrophysics and Space Science, 2009, 322, 101-105.	0.5	11
40	Collisional heating as the origin of filament emission in galaxy clusters. Monthly Notices of the Royal Astronomical Society, 2009, 392, 1475-1502.	1.6	138
41	Diffuse continuum transfer in Hï¿½ï¿½ï¿½ii regions. Monthly Notices of the Royal Astronomical Society, 2009, 400, 263-272.	1.6	8
42	Turbulent mixing in spherical implosions. International Journal for Numerical Methods in Fluids, 2008, 56, 1597-1603.	0.9	52
43	On entropy generation and dissipation of kinetic energy in high-resolution shock-capturing schemes. Journal of Computational Physics, 2008, 227, 4853-4872.	1.9	83
44	An improved reconstruction method for compressible flows with low Mach number features. Journal of Computational Physics, 2008, 227, 4873-4894.	1.9	237
45	The origin of molecular hydrogen emission in cooling-flow filaments. Monthly Notices of the Royal Astronomical Society: Letters, 2008, 386, L72-L76.	1.2	63
46	Modeling X-ray Ionization of Grains with Cloudy. EAS Publications Series, 2008, 31, 213-214.	0.3	0
47	Merged Ionization/Dissociation Fronts in Planetary Nebulae. Astrophysical Journal, 2007, 671, L137-L140.	1.6	21
48	Photoionized Flows from Magnetized Globules. Astrophysics and Space Science, 2007, 307, 179-182.	0.5	10
49	Numerical Simulations and Astrophysical Applications of Laboratory Jets at Omega. Astrophysics and Space Science, 2007, 307, 57-62.	0.5	17
50	Laboratory-astrophysics jet experiments at the omegaÂlaserÂfacility. European Physical Journal Special Topics, 2006, 133, 1019-1023.	0.2	2
51	Selfâ€Consistent Dynamic Models of Steady Ionization Fronts. I. Weakâ€D and Weakâ€R Fronts. Astrophysical Journal, 2005, 621, 328-347.	1.6	42
52	Recent Experimental Results and Modelling of High-Mach-Number Jets and the Transition to Turbulence. Astrophysics and Space Science, 2005, 298, 121-128.	0.5	8
53	Shock Propagation Through Multiphase Media*. Astrophysics and Space Science, 2005, 298, 191-196.	0.5	1
54	High-Energy-Density Laboratory Astrophysics Studies of Jets and Bow Shocks. Astrophysical Journal, 2005, 634, L77-L80.	1.6	90

#	Article	IF	Citations
55	Non-spherical evolution of the line-driven wind instability. Monthly Notices of the Royal Astronomical Society, 2003, 344, 725-740.	1.6	3
56	Resolved shocks in clumpy media. Monthly Notices of the Royal Astronomical Society, 2002, 333, 1-8.	1.6	16
57	On the instability of D-type ionization fronts. Monthly Notices of the Royal Astronomical Society, 2002, 331, 693-706.	1.6	49
58	Instabilities in two-fluid magnetized media with inter-component drift. Monthly Notices of the Royal Astronomical Society, 2002, 337, 117-132.	1.6	11
59	Magnetic ionization fronts -- III. Internal structures. Monthly Notices of the Royal Astronomical Society, 2001, 325, 293-304.	1.6	11
60	Hydrodynamics of photoionized columns in the Eagle Nebula, M 16. Monthly Notices of the Royal Astronomical Society, 2001, 327, 788-798.	1.6	65
61	The modification by diffuse radiation of "cometary tail" formation behind globules. Astronomy and Astrophysics, 2001, 369, 263-268.	2.1	18
62	Magnetic ionization fronts -- II. Jump conditions for oblique magnetization. Monthly Notices of the Royal Astronomical Society, 2000, 314, 315-323.	1.6	23
63	Continuum-driven shocks in active galactic nuclei. Monthly Notices of the Royal Astronomical Society, 2000, 316, 803-818.	1.6	8
64	Some Recent Results on MHD Shocks and Winds. Astrophysics and Space Science, 2000, 272, 163-167.	0.5	1
65	The Fine Structures of Planetary Nebulae. Astrophysics and Space Science, 2000, 272, 197-204.	0.5	2
66	Structure and Stability of Ionization Fronts. Astrophysics and Space Science, 2000, 272, 155-162.	0.5	5
67	Symbiotic starburst-black hole active galactic nuclei â€" I. Isothermal hydrodynamics of the mass-loaded interstellar medium. Monthly Notices of the Royal Astronomical Society, 1999, 310, 913-962.	1.6	26
68	Shadowing instabilities of ionization fronts. Monthly Notices of the Royal Astronomical Society, 1999, 310, 789-796.	1.6	64
69	Cometary and bipolar ultracompact H II regions. Monthly Notices of the Royal Astronomical Society, 1998, 298, 33-41.	1.6	26
70	Mass Injection Rates Due to Supernovae and Cloud Evaporation in Starburst Superwinds. Astrophysical Journal, 1997, 482, 182-185.	1.6	22
71	Jet-Cloud Interactions and the Brightening of the Narrow-Line Region in Seyfert Galaxies. Astrophysical Journal, 1997, 491, L73-L76.	1.6	37
72	Line forming regions in active galaxies and their nuclei. Astrophysics and Space Science, 1996, 237, 187-206.	0.5	1

#	Article	IF	Citations
73	Wide intermediate scale structures in mass-loaded flows. Astrophysics and Space Science, 1996, 235, 165-168.	0.5	2
74	All's knot quiet on the recombination front. Astrophysics and Space Science, 1995, 233, 195-198.	0.5	1
75	Flows and shocks in active galaxies and their nuclei. Astrophysics and Space Science, 1995, 233, 199-214.	0.5	0
76	The Weakening of the Termination Shocks of Isothermal Winds by Mass Loading. Astrophysical Journal, 1995, 446, 759.	1.6	22
77	Can Dust Formation in Evolved Stars Be Suppressed near Active Galactic Nuclei?. Astrophysical Journal, 1995, 453, 77.	1.6	24