

# Daniel J Price

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/11410090/publications.pdf>

Version: 2024-02-01

103  
papers

6,269  
citations

57758

44  
h-index

74163

75  
g-index

105  
all docs

105  
docs citations

105  
times ranked

3672  
citing authors

#	ARTICLE	IF	CITATIONS
1	<scp>SPLASH</scp>: An Interactive Visualisation Tool for Smoothed Particle Hydrodynamics Simulations. Publications of the Astronomical Society of Australia, 2007, 24, 159-173.	3.4	590
2	Smoothed particle hydrodynamics and magnetohydrodynamics. Journal of Computational Physics, 2012, 231, 759-794.	3.8	503
3	Modelling discontinuities and Kelvinâ€™Helmholtz instabilities in SPH. Journal of Computational Physics, 2008, 227, 10040-10057.	3.8	311
4	<scp>Phantom</scp>: A Smoothed Particle Hydrodynamics and Magnetohydrodynamics Code for Astrophysics. Publications of the Astronomical Society of Australia, 2018, 35, .	3.4	267
5	Disc formation from tidal disruptions of stars on eccentric orbits by Schwarzschild black holes. Monthly Notices of the Royal Astronomical Society, 2016, 455, 2253-2266.	4.4	159
6	The effect of magnetic fields on star cluster formation. Monthly Notices of the Royal Astronomical Society, 2008, 385, 1820-1834.	4.4	142
7	THE DENSITY VARIANCEâ€™MACH NUMBER RELATION IN SUPERSONIC, ISOTHERMAL TURBULENCE. Astrophysical Journal Letters, 2011, 727, L21.	8.3	127
8	On the diffusive propagation of warps in thin accretion discs. Monthly Notices of the Royal Astronomical Society, 2010, , .	4.4	122
9	THE KOZAI-LIDOV MECHANISM IN HYDRODYNAMICAL DISKS. Astrophysical Journal Letters, 2014, 792, L33.	8.3	122
10	Circumbinary, not transitional: on the spiral arms, cavity, shadows, fast radial flows, streamers, and horseshoe in the HDâ€™142527 disc. Monthly Notices of the Royal Astronomical Society, 2018, 477, 1270-1284.	4.4	122
11	Can non-ideal magnetohydrodynamics solve the magnetic braking catastrophe?. Monthly Notices of the Royal Astronomical Society, 2016, 457, 1037-1061.	4.4	115
12	Wave-like warp propagation in circumbinary discs â€™ I. Analytic theory and numerical simulations. Monthly Notices of the Royal Astronomical Society, 2013, 433, 2142-2156.	4.4	113
13	Inefficient star formation: the combined effects of magnetic fields and radiative feedback. Monthly Notices of the Royal Astronomical Society, 2009, 398, 33-46.	4.4	108
14	EVIDENCE FOR ACCRETION RATE CHANGE DURING TYPE I X-RAY BURSTS. Astrophysical Journal, 2013, 772, 94.	4.5	108
15	Collapse of a molecular cloud core to stellar densities: stellar-core and outflow formation in radiation magnetohydrodynamic simulations. Monthly Notices of the Royal Astronomical Society, 2014, 437, 77-95.	4.4	103
16	Dusty gas with smoothed particle hydrodynamics - I. Algorithm and test suite. Monthly Notices of the Royal Astronomical Society, 2012, 420, 2345-2364.	4.4	100
17	A comparison between grid and particle methods on the statistics of driven, supersonic, isothermal turbulence. Monthly Notices of the Royal Astronomical Society, 0, , no-no.	4.4	99
18	On the Bardeenâ€™Petterson effect in black hole accretion discs. Monthly Notices of the Royal Astronomical Society, 2015, 448, 1526-1540.	4.4	95

#	ARTICLE	IF	CITATIONS
19	Dusty gas with one fluid. Monthly Notices of the Royal Astronomical Society, 2014, 440, 2136-2146.	4.4	85
20	Flybys in protoplanetary discs: I. Gas and dust dynamics. Monthly Notices of the Royal Astronomical Society, 2019, 483, 4114-4139.	4.4	85
21	Constrained hyperbolic divergence cleaning for smoothed particle magnetohydrodynamics. Journal of Computational Physics, 2012, 231, 7214-7236.	3.8	83
22	On the accumulation of planetesimals near disc gaps created by protoplanets. Monthly Notices of the Royal Astronomical Society, 2012, 423, 1450-1462.	4.4	81
23	Two mechanisms for dust gap opening in protoplanetary discs. Monthly Notices of the Royal Astronomical Society: Letters, 2016, 459, L1-L5.	3.3	81
24	GIANT OUTBURSTS IN Be/X-RAY BINARIES. Astrophysical Journal Letters, 2014, 790, L34.	8.3	79
25	On the origin of horseshoes in transitional discs. Monthly Notices of the Royal Astronomical Society, 2017, 464, 1449-1455.	4.4	79
26	On the Diversity of Asymmetries in Gapped Protoplanetary Disks. Astronomical Journal, 2021, 161, 33.	4.7	69
27	EVIDENCE FOR ENHANCED PERSISTENT EMISSION DURING SUB-EDDINGTON THERMONUCLEAR BURSTS. Astrophysical Journal, 2015, 801, 60.	4.5	68
28	Collimated jets from the first core. Monthly Notices of the Royal Astronomical Society: Letters, 2012, 423, L45-L49.	3.3	65
29	A fast and explicit algorithm for simulating the dynamics of small dust grains with smoothed particle hydrodynamics. Monthly Notices of the Royal Astronomical Society, 2015, 451, 813-826.	4.4	64
30	Tearing up a misaligned accretion disc with a binary companion. Monthly Notices of the Royal Astronomical Society, 2015, 449, 1251-1258.	4.4	62
31	Grand Challenges in Protoplanetary Disc Modelling. Publications of the Astronomical Society of Australia, 2016, 33, .	3.4	61
32	A method for reconstructing the PDF of a 3D turbulent density field from 2D observations. Monthly Notices of the Royal Astronomical Society: Letters, 2010, 405, L56-L60.	3.3	59
33	Evidence for a Circumplanetary Disk around Protoplanet PDS 70 b. Astrophysical Journal Letters, 2019, 877, L33.	8.3	59
34	The Ophiuchus Disc Survey Employing ALMA (ODISEA) – III. The evolution of substructures in massive discs at $3\text{--}5$ au resolution. Monthly Notices of the Royal Astronomical Society, 2021, 501, 2934-2953.	4.4	57
35	Extending common envelope simulations from Roche lobe overflow to the nebular phase. Monthly Notices of the Royal Astronomical Society, 2019, 484, 631-647.	4.4	55
36	Dusty gas with smoothed particle hydrodynamics - II. Implicit timestepping and astrophysical drag regimes. Monthly Notices of the Royal Astronomical Society, 2012, 420, 2365-2376.	4.4	54

#	ARTICLE	IF	CITATIONS
37	Dust and gas mixtures with multiple grain species – a one-fluid approach. Monthly Notices of the Royal Astronomical Society, 2014, 444, 1940-1956.	4.4	54
38	The morphology of the Milky Way – I. Reconstructing CO maps from simulations in fixed potentials. Monthly Notices of the Royal Astronomical Society, 2014, 444, 919-941.	4.4	54
39	There is no magnetic braking catastrophe: low-mass star cluster and protostellar disc formation with non-ideal magnetohydrodynamics. Monthly Notices of the Royal Astronomical Society, 2019, 489, 1719-1741.	4.4	54
40	Suppression of the accretion rate in thin discs around binary black holes. Monthly Notices of the Royal Astronomical Society, 2016, 460, 1243-1253.	4.4	53
41	Flybys in protoplanetary discs – II. Observational signatures. Monthly Notices of the Royal Astronomical Society, 2020, 491, 504-514.	4.4	51
42	Post-periapsis pancakes: sustenance for self-gravity in tidal disruption events. Monthly Notices of the Royal Astronomical Society, 2016, 455, 3612-3627.	4.4	49
43	Is the dust-to-gas ratio constant in molecular clouds?. Monthly Notices of the Royal Astronomical Society: Letters, 2017, 471, L52-L56.	3.3	49
44	Smoothed Particle Magnetohydrodynamics - IV. Using the vector potential. Monthly Notices of the Royal Astronomical Society, 2010, 401, 1475-1499.	4.4	47
45	On dust entrainment in photoevaporative winds. Monthly Notices of the Royal Astronomical Society, 2016, 461, 742-759.	4.4	47
46	Inhomogeneous cosmology with numerical relativity. Physical Review D, 2017, 95, .	4.7	47
47	The collapse of a molecular cloud core to stellar densities using radiation non-ideal magnetohydrodynamics. Monthly Notices of the Royal Astronomical Society, 2018, 475, 1859-1880.	4.4	47
48	Rapid AGN accretion from counter-rotating discs. Monthly Notices of the Royal Astronomical Society, 2012, 422, 2547-2552.	4.4	45
49	Constrained hyperbolic divergence cleaning in smoothed particle magnetohydrodynamics with variable cleaning speeds. Journal of Computational Physics, 2016, 322, 326-344.	3.8	43
50	Einstein’s Universe: Cosmological structure formation in numerical relativity. Physical Review D, 2019, 99, .	4.7	43
51	dustybox and dustywave: two test problems for numerical simulations of two-fluid astrophysical dust-gas mixtures. Monthly Notices of the Royal Astronomical Society, 2011, 418, 1491-1497.	4.4	41
52	Resolving high Reynolds numbers in smoothed particle hydrodynamics simulations of subsonic turbulence. Monthly Notices of the Royal Astronomical Society: Letters, 2012, 420, L33-L37.	3.3	41
53	The evolution of large cavities and disc eccentricity in circumbinary discs. Monthly Notices of the Royal Astronomical Society, 2020, 499, 3362-3380.	4.4	40
54	Signatures of an eccentric disc cavity: Dust and gas in IRS 48. Monthly Notices of the Royal Astronomical Society, 2019, 490, 2579-2587.	4.4	37

#	ARTICLE	IF	CITATIONS
55	A switch to reduce resistivity in smoothed particle magnetohydrodynamics. Monthly Notices of the Royal Astronomical Society, 2013, 436, 2810-2817.	4.4	36
56	Common envelopes in massive stars: towards the role of radiation pressure and recombination energy in ejecting red supergiant envelopes. Monthly Notices of the Royal Astronomical Society, 2022, 512, 5462-5480.	4.4	36
57	Dusty gas with one fluid in smoothed particle hydrodynamics. Monthly Notices of the Royal Astronomical Society, 2014, 440, 2147-2163.	4.4	35
58	Magnetic field evolution in tidal disruption events. Monthly Notices of the Royal Astronomical Society, 2017, 469, 4879-4888.	4.4	35
59	MULTIGRAIN: a smoothed particle hydrodynamic algorithm for multiple small dust grains and gas. Monthly Notices of the Royal Astronomical Society, 2018, 476, 2186-2198.	4.4	34
60	The impact of recombination energy on simulations of the common-envelope binary interaction. Monthly Notices of the Royal Astronomical Society, 2020, 494, 5333-5349.	4.4	34
61	The impact of non-ideal magnetohydrodynamics on binary star formation. Monthly Notices of the Royal Astronomical Society, 2017, 466, 1788-1804.	4.4	33
62	Smoothed particle magnetohydrodynamic simulations of protostellar outflows with misaligned magnetic field and rotation axes. Monthly Notices of the Royal Astronomical Society, 2015, 451, 288-299.	4.4	32
63	The Trouble with Hubble: Local versus Global Expansion Rates in Inhomogeneous Cosmological Simulations with Numerical Relativity. Astrophysical Journal Letters, 2018, 865, L4.	8.3	32
64	Are the spiral arms in the MWC 758 protoplanetary disc driven by a companion inside the cavity?. Monthly Notices of the Royal Astronomical Society, 2020, 498, 639-650.	4.4	31
65	The effect of extreme ionization rates during the initial collapse of a molecular cloud core. Monthly Notices of the Royal Astronomical Society, 2018, 476, 2063-2074.	4.4	26
66	On the cavity size in circumbinary discs. Monthly Notices of the Royal Astronomical Society, 2020, 498, 2936-2947.	4.4	26
67	Gas squeezing during the merger of a supermassive black hole binary. Monthly Notices of the Royal Astronomical Society, 2016, 457, 939-948.	4.4	24
68	On the origin of magnetic fields in stars. Monthly Notices of the Royal Astronomical Society, 2018, 481, 2450-2457.	4.4	24
69	Hall effect-driven formation of gravitationally unstable discs in magnetized molecular cloud cores. Monthly Notices of the Royal Astronomical Society, 2018, 480, 4434-4442.	4.4	24
70	A dusty filament and turbulent CO spirals in HD 135344B - SAO 206462. Monthly Notices of the Royal Astronomical Society, 2021, 507, 3789-3809.	4.4	24
71	A comparison between grid and particle methods on the small-scale dynamo in magnetized supersonic turbulence. Monthly Notices of the Royal Astronomical Society, 2016, 461, 1260-1275.	4.4	23
72	Binary-induced spiral arms inside the disc cavity of AB Aurigae. Monthly Notices of the Royal Astronomical Society, 2020, 496, 2362-2371.	4.4	22

#	ARTICLE	IF	CITATIONS
73	On the fragmentation boundary in magnetized self-gravitating discs. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 466, 3406-3416.	4.4	21
74	The theory of kinks – I. A semi-analytic model of velocity perturbations due to planet-disc interaction. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 504, 5444-5454.	4.4	21
75	Electromagnetic Signatures from the Tidal Tail of a Black Hole-Neutron Star Merger. <i>Astrophysical Journal</i> , 2021, 915, 69.	4.5	19
76	Planet migration, resonant locking, and accretion streams in PDS 70: comparing models and data. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 499, 2015-2027.	4.4	18
77	Mapping the Planetary Wake in HD 163296 with Kinematics. <i>Astrophysical Journal Letters</i> , 2022, 929, L25.	8.3	18
78	Does turbulence determine the initial mass function?. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 465, 105-110.	4.4	17
79	General relativistic smoothed particle hydrodynamics. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 485, 819-842.	4.4	17
80	Is the gap in the DS Tau disc hiding a planet?. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 495, 1913-1926.	4.4	17
81	Super-Earths in the TW Hydra disc. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2019, 484, L130-L135.	3.3	16
82	On the rise times in FU Orionis events. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2021, 510, L37-L41.	3.3	16
83	Response of a circumbinary accretion disc to black hole mass loss. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 425, 1958-1966.	4.4	15
84	On the Papaloizou-Pringle instability in tidal disruption events. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 474, 1737-1745.	4.4	14
85	Circumbinary and circumstellar discs around the eccentric binary IRAS 04158+2805 – a testbed for binary-disc interaction. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 507, 1157-1174.	4.4	14
86	A solution to the overdamping problem when simulating dust-gas mixtures with smoothed particle hydrodynamics. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 495, 3929-3934.	4.4	13
87	Formation of eccentric gas discs from sublimating or partially disrupted asteroids orbiting white dwarfs. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2021, 505, L21-L25.	3.3	13
88	Rocking shadows in broken circumbinary discs. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2020, 493, L143-L147.	3.3	11
89	A Tale of Two Transition Disks: ALMA Long-baseline Observations of ISO-Oph 2 Reveal Two Closely Packed Nonaxisymmetric Rings and a $\sim 142$ au Cavity. <i>Astrophysical Journal Letters</i> , 2020, 902, L33.	8.3	11
90	Accretion rates in hierarchical triple systems with discs. <i>Monthly Notices of the Royal Astronomical Society</i> , 2022, 514, 906-919.	4.4	11

#	ARTICLE	IF	CITATIONS
91	Spirals, shadows& precession in HD100453 â€“ II. The hidden companion. Monthly Notices of the Royal Astronomical Society, 2020, 499, 3857-3867.	4.4	10
92	Dust growth, fragmentation, and self-induced dust traps in <scp>phantom</scp>. Monthly Notices of the Royal Astronomical Society, 2021, 507, 2318-2338.	4.4	9
93	Dust traffic jams in inclined circumbinary protoplanetary discs â€“ I. Morphology and formation theory. Monthly Notices of the Royal Astronomical Society, 2021, 508, 2743-2757.	4.4	9
94	On the origin of magnetic fields in stars â€“ II. The effect of numerical resolution. Monthly Notices of the Royal Astronomical Society, 2022, 511, 746-764.	4.4	9
95	Gravitational waves from tidal disruption events: an open and comprehensive catalog. Monthly Notices of the Royal Astronomical Society, 2021, 510, 992-1001.	4.4	7
96	Stable anisotropic heat conduction in smoothed particle hydrodynamics. Monthly Notices of the Royal Astronomical Society, 2019, 483, 4901-4909.	4.4	5
97	Publisher Note: Circumbinary, not transitional: On the spiral arms, cavity, shadows, fast radial flows, streamers and horseshoe in the HD142527 disc. Monthly Notices of the Royal Astronomical Society, 2018, 481, 3169-3169.	4.4	3
98	A smoothed particle hydrodynamics algorithm for multigrain dust with separate sets of particles. Monthly Notices of the Royal Astronomical Society, 2020, 499, 3806-3818.	4.4	3
99	Misaligned snowplough effect and the electromagnetic counterpart to black hole binary mergers. Monthly Notices of the Royal Astronomical Society, 2019, 484, 31-38.	4.4	2
100	Erratum and Addendum: Smoothed particle magnetohydrodynamic simulations of protostellar outflows with misaligned magnetic field and rotation axes. Monthly Notices of the Royal Astronomical Society, 2017, 464, 2499-2501.	4.4	1
101	Magnetic fields and Turbulence in Star Formation using Smoothed Particle Hydrodynamics. Proceedings of the International Astronomical Union, 2010, 6, 169-177.	0.0	0
102	Modelling Magnetised Protostellar Jets with SPH. Thirty Years of Astronomical Discovery With UKIRT, 2014, , 101-104.	0.3	0
103	Planet Formation in the ALMA Era. , 2018, , 155-167.		0