

# Joachim Stadel

## List of Publications by Year in descending order

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117  
papers

17,335  
citations

18436

62  
h-index

24179

110  
g-index

117  
all docs

117  
docs citations

117  
times ranked

6817  
citing authors

#	ARTICLE	IF	CITATIONS
1	Dark Matter Substructure within Galactic Halos. <i>Astrophysical Journal</i> , 1999, 524, L19-L22.	1.6	2,396
2	Cold collapse and the core catastrophe. <i>Monthly Notices of the Royal Astronomical Society</i> , 1999, 310, 1147-1152.	1.6	1,027
3	The inner structure of $\Lambda$ CDM haloes - III. Universality and asymptotic slopes. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 349, 1039-1051.	1.6	832
4	The inner structure of $\Lambda$ CDM haloes - I. A numerical convergence study. <i>Monthly Notices of the Royal Astronomical Society</i> , 2003, 338, 14-34.	1.6	767
5	Clumps and streams in the local dark matter distribution. <i>Nature</i> , 2008, 454, 735-738.	13.7	695
6	Gasoline: a flexible, parallel implementation of TreeSPH. <i>New Astronomy</i> , 2004, 9, 137-158.	0.8	551
7	Fundamental differences between SPH and grid methods. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, 380, 963-978.	1.6	525
8	Concentration, spin and shape of dark matter haloes: scatter and the dependence on mass and environment. <i>Monthly Notices of the Royal Astronomical Society</i> , 2007, 378, 55-71.	1.6	466
9	Dark matter haloes within clusters. <i>Monthly Notices of the Royal Astronomical Society</i> , 1998, 300, 146-162.	1.6	414
10	Earth-mass dark-matter haloes as the first structures in the early Universe. <i>Nature</i> , 2005, 433, 389-391.	13.7	347
11	On the survival and destruction of spiral galaxies in clusters. <i>Monthly Notices of the Royal Astronomical Society</i> , 1999, 304, 465-474.	1.6	342
12	Simultaneous ram pressure and tidal stripping; how dwarf spheroidals lost their gas. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 369, 1021-1038.	1.6	336
13	The Structural Evolution of Substructure. <i>Astrophysical Journal</i> , 2003, 584, 541-558.	1.6	327
14	The Metamorphosis of Tidally Stirred Dwarf Galaxies. <i>Astrophysical Journal</i> , 2001, 559, 754-784.	1.6	312
15	Haloes gone MAD...: The Halo-Finder Comparison Project. <i>Monthly Notices of the Royal Astronomical Society</i> , 2011, 415, 2293-2318.	1.6	302
16	Velocity and spatial biases in cold dark matter subhalo distributions. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 352, 535-546.	1.6	289
17	Formation of Giant Planets by Fragmentation of Protoplanetary Disks. <i>Science</i> , 2002, 298, 1756-1759.	6.0	234
18	Density Profiles of Cold Dark Matter Substructure: Implications for the Missing Satellites Problem. <i>Astrophysical Journal</i> , 2004, 608, 663-679.	1.6	226

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19	The Formation of a Realistic Disk Galaxy in $\Lambda$ -dominated Cosmologies. <i>Astrophysical Journal</i> , 2004, 607, 688-696.	1.6	221
20	Does the Fornax dwarf spheroidal have a central cusp or core?. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 368, 1073-1077.	1.6	213
21	Tidal Stirring and the Origin of Dwarf Spheroidals in the Local Group. <i>Astrophysical Journal</i> , 2001, 547, L123-L127.	1.6	208
22	Convergence and scatter of cluster density profiles. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 353, 624-632.	1.6	206
23	Direct Large-Scale N-Body Simulations of Planetesimal Dynamics. <i>Icarus</i> , 2000, 143, 45-59.	1.1	205
24	Globular clusters, satellite galaxies and stellar haloes from early dark matter peaks. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 368, 563-570.	1.6	197
25	Evolution of the mass function of dark matter haloes. <i>Monthly Notices of the Royal Astronomical Society</i> , 2003, 346, 565-572.	1.6	187
26	Dark matter direct detection with non-Maxwellian velocity structure. <i>Journal of Cosmology and Astroparticle Physics</i> , 2010, 2010, 030-030.	1.9	182
27	Morphological evolution of discs in clusters. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 364, 607-619.	1.6	181
28	Cusps in cold dark matter haloes. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 364, 665-673.	1.6	168
29	The Evolution of Gravitationally Unstable Protoplanetary Disks: Fragmentation and Possible Giant Planet Formation. <i>Astrophysical Journal</i> , 2004, 609, 1045-1064.	1.6	165
30	The Causes of Halo Shape Changes Induced by Cooling Baryons: Disks versus Substructures. <i>Astrophysical Journal</i> , 2008, 681, 1076-1088.	1.6	153
31	PKDGRAV3: beyond trillion particle cosmological simulations for the next era of galaxy surveys. <i>Computational Astrophysics and Cosmology</i> , 2017, 4, .	22.7	150
32	The gravitational and hydrodynamical interaction between the Large Magellanic Cloud and the Galaxy. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 363, 509-520.	1.6	139
33	Structure finding in cosmological simulations: the state of affairs. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 435, 1618-1658.	1.6	138
34	Matter power spectrum and the challenge of percent accuracy. <i>Journal of Cosmology and Astroparticle Physics</i> , 2016, 2016, 047-047.	1.9	137
35	Substructure in Dark Halos: Orbital Eccentricities and Dynamical Friction. <i>Astrophysical Journal</i> , 1999, 515, 50-68.	1.6	135
36	Dynamical friction in constant density cores: a failure of the Chandrasekhar formula. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 373, 1451-1460.	1.6	133

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37	From planetesimals to terrestrial planets: N-body simulations including the effects of nebular gas and giant planets. <i>Icarus</i> , 2010, 207, 517-535.	1.1	124
38	The Fate of Supermassive Black Holes and the Evolution of the $M_{\text{BH}}-\dot{M}$ Relation in Merging Galaxies: The Effect of Gaseous Dissipation. <i>Astrophysical Journal</i> , 2005, 623, L67-L70.	1.6	119
39	<i>Euclid</i> preparation: II. The <i>EuclidEmulator</i> – a tool to compute the cosmology dependence of the nonlinear matter power spectrum. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 484, 5509-5529.	1.6	117
40	The inner structure of $\Lambda$ CDM haloes II. Halo mass profiles and low surface brightness galaxy rotation curves. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 355, 794-812.	1.6	116
41	Cooling flows within galactic haloes: the kinematics and properties of infalling multiphase gas. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 370, 1612-1622.	1.6	116
42	The effect of non-gravitational gas heating in groups and clusters of galaxies. <i>Monthly Notices of the Royal Astronomical Society</i> , 2002, 336, 409-424.	1.6	112
43	Angular momentum transport and disc morphology in smoothed particle hydrodynamics simulations of galaxy formation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2007, 375, 53-67.	1.6	108
44	Quantifying baryon effects on the matter power spectrum and the weak lensing shear correlation. <i>Journal of Cosmology and Astroparticle Physics</i> , 2019, 2019, 020-020.	1.9	108
45	The seeds of rich galaxy clusters in the Universe. <i>Nature</i> , 1998, 392, 359-361.	13.7	106
46	CORE CREATION IN GALAXIES AND HALOS VIA SINKING MASSIVE OBJECTS. <i>Astrophysical Journal</i> , 2010, 725, 1707-1716.	1.6	103
47	Radial distribution and strong lensing statistics of satellite galaxies and substructure using high-resolution $\Lambda$ CDM hydrodynamical simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2006, 366, 1529-1538.	1.6	99
48	The cosmic code comparison project. <i>Computational Science &amp; Discovery</i> , 2008, 1, 015003.	1.5	99
49	Gravitational instability in binary protoplanetary discs: new constraints on giant planet formation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 363, 641-648.	1.6	96
50	Dark matter in Draco and the Local Group: Implications for direct detection experiments. <i>Physical Review D</i> , 2001, 64, .	1.6	95
51	Tidal debris of dwarf spheroidals as a probe of structure formation models. <i>Monthly Notices of the Royal Astronomical Society</i> , 2002, 336, 119-130.	1.6	89
52	Two-body relaxation in cold dark matter simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 348, 977-986.	1.6	89
53	The survival and disruption of cold dark matter microhaloes: implications for direct and indirect detection experiments. <i>Monthly Notices of the Royal Astronomical Society</i> , 2007, 375, 191-198.	1.6	89
54	Dark matter subhaloes in numerical simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2005, 359, 1537-1548.	1.6	85

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55	THE GENGA CODE: GRAVITATIONAL ENCOUNTERS IN $N$ -BODY SIMULATIONS WITH GPU ACCELERATION. <i>Astrophysical Journal</i> , 2014, 796, 23.	1.6	85
56	Halo Substructure and Disk Heating in a $\Lambda$ Cold Dark Matter Universe. <i>Astrophysical Journal</i> , 2001, 563, L1-L4.	1.6	85
57	Evolution of the density profiles of dark matter haloes. <i>Monthly Notices of the Royal Astronomical Society</i> , 0, 357, 82-96.	1.6	80
58	Preheating the Intracluster Medium in High-Resolution Simulations: The Effect on the Gas Entropy. <i>Astrophysical Journal</i> , 2001, 559, L71-L74.	1.6	80
59	The Local Group as a test of cosmological models. <i>New Astronomy</i> , 1997, 2, 91-106.	0.8	79
60	Intracluster Stellar Population Properties from $N$ -Body Cosmological Simulations. I. Constraints at $z=0$ . <i>Astrophysical Journal</i> , 2003, 594, 172-185.	1.6	77
61	The formation of ultra-compact dwarf galaxies and nucleated dwarf galaxies. <i>Monthly Notices of the Royal Astronomical Society</i> , 2008, 385, 2136-2142.	1.6	72
62	The Origin of Polar Ring Galaxies: Evidence for Galaxy Formation by Cold Accretion. <i>Astrophysical Journal</i> , 2006, 636, L25-L28.	1.6	71
63	Predicting the Number, Spatial Distribution, and Merging History of Dark Matter Halos. <i>Astrophysical Journal</i> , 2002, 564, 8-14.	1.6	67
64	Formation and Accretion History of Terrestrial Planets from Runaway Growth through to Late Time: Implications for Orbital Eccentricity. <i>Astrophysical Journal</i> , 2008, 685, 1247-1261.	1.6	64
65	The graininess of dark matter haloes. <i>Monthly Notices of the Royal Astronomical Society</i> , 2009, 394, 641-659.	1.6	64
66	<i>Euclid</i> preparation: IX. <i>Euclid</i> Emulator 2 – power spectrum emulation with massive neutrinos and self-consistent dark energy perturbations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 505, 2840-2869.	1.6	62
67	Forming Mercury by Giant Impacts. <i>Astrophysical Journal</i> , 2018, 865, 35.	1.6	60
68	Numerical aspects of giant impact simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 467, 4252-4263.	1.6	56
69	The origin and tidal evolution of cuspy triaxial haloes. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 354, 522-528.	1.6	55
70	Baryonic effects for weak lensing. Part I. Power spectrum and covariance matrix. <i>Journal of Cosmology and Astroparticle Physics</i> , 2020, 2020, 019-019.	1.9	54
71	Fossil Remnants of Reionization in the Halo of the Milky Way. <i>Astrophysical Journal</i> , 2008, 689, L41-L44.	1.6	51
72	How common are Earth-Moon planetary systems?. <i>Icarus</i> , 2011, 214, 357-365.	1.1	51

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73	Discreteness Effects in $\Lambda$ CDM Simulations: A Wavelet Statistical View. <i>Astrophysical Journal</i> , 2008, 686, 1-12.	1.6	47
74	Towards an accurate mass function for precision cosmology. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 431, 1866-1882.	1.6	45
75	Stochasticity and predictability in terrestrial planet formation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 465, 2170-2188.	1.6	39
76	COLD DARK MATTER SUBSTRUCTURES IN EARLY-TYPE GALAXY HALOS. <i>Astrophysical Journal</i> , 2016, 824, 144.	1.6	38
77	A universal velocity distribution of relaxed collisionless structures. <i>Journal of Cosmology and Astroparticle Physics</i> , 2006, 2006, 014-014.	1.9	37
78	Multimass spherical structure models for N-body simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2008, 386, 1543-1556.	1.6	35
79	Formation of LISA Black Hole Binaries in Merging Dwarf Galaxies: The Imprint of Dark Matter. <i>Astrophysical Journal Letters</i> , 2018, 864, L19.	3.0	33
80	On the Origin of Early-Type Galaxies and the Evolution of the Interaction Rate in the Field. <i>Astronomical Journal</i> , 1999, 117, 1651-1656.	1.9	33
81	MERGING GALAXY CLUSTERS: OFFSET BETWEEN THE SUNYAEV ZEL'DOVICH EFFECT AND X-RAY PEAKS. <i>Astrophysical Journal</i> , 2012, 748, 45.	1.6	29
82	Bifurcation in the history of Uranus and Neptune: the role of giant impacts. <i>Monthly Notices of the Royal Astronomical Society</i> , 2020, 492, 5336-5353.	1.6	27
83	An optimum time-stepping scheme for N-body simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2007, 376, 273-286.	1.6	26
84	Simulations of gaseous disc-embedded planet interaction. <i>Monthly Notices of the Royal Astronomical Society</i> , 2004, 347, 421-429.	1.6	24
85	Super-Earths and dynamical stability of planetary systems: first parallel GPU simulations using GENGA. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 433, 2194-2205.	1.6	22
86	Point Correlations in CDM and $\Lambda$ CDM Simulations. <i>Astrophysical Journal</i> , 1999, 517, 54-63.	1.6	22
87	An Alternative to Grids and Glasses: Quasi-universal Pre-initial Conditions for N-body Simulations. <i>Astrophysical Journal</i> , 2007, 656, 631-635.	1.6	21
88	The age dependence of galaxy clustering. <i>Monthly Notices of the Royal Astronomical Society</i> , 2007, 378, 777-784.	1.6	21
89	Enhanced Mixing in Giant Impact Simulations with a New Lagrangian Method. <i>Astrophysical Journal</i> , 2019, 870, 127.	1.6	21
90	A performance study of cosmological simulations on message-passing and shared-memory multiprocessors. , 1996, , .		20

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91	THE PRE-MERGER IMPACT VELOCITY OF THE BINARY CLUSTER A1750 FROM X-RAY, LENSING, AND HYDRODYNAMICAL SIMULATIONS. <i>Astrophysical Journal</i> , 2013, 779, 63.	1.6	19
92	A Parallel Integration Method for Solar System Dynamics. <i>Astronomical Journal</i> , 1997, 114, 409.	1.9	19
93	The Descendants of Lyman Break Galaxies in Galaxy Clusters: Spatial Distribution and Orbital Properties. <i>Astrophysical Journal</i> , 2001, 547, 555-559.	1.6	19
94	The same with less: the cosmic web of warm versus cold dark matter dwarf galaxies. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 451, 4413-4423.	1.6	17
95	Dark energy perturbations in $N$ -body simulations. <i>Journal of Cosmology and Astroparticle Physics</i> , 2019, 2019, 013-013.	1.9	14
96	Primordial Earth Mantle Heterogeneity Caused by the Moon-forming Giant Impact?. <i>Astrophysical Journal</i> , 2019, 887, 211.	1.6	14
97	Machine learning applied to simulations of collisions between rotating, differentiated planets. <i>Computational Astrophysics and Cosmology</i> , 2020, 7, 2.	22.7	13
98	The velocity anisotropy–density slope relation. <i>Journal of Cosmology and Astroparticle Physics</i> , 2006, 2006, 014-014.	1.9	11
99	Decaying dark matter: simulations and weak-lensing forecast. <i>Journal of Cosmology and Astroparticle Physics</i> , 2021, 2021, 040.	1.9	9
100	The Origin of Cores and Density Profiles of Gaseous Baryonic Structures. <i>Astrophysical Journal</i> , 2003, 595, L37-L40.	1.6	8
101	Mars™ Formation Can Constrain the Primordial Orbits of the Gas Giants. <i>Astrophysical Journal Letters</i> , 2021, 910, L16.	3.0	8
102	The strong fixed point property for small sets. <i>Order</i> , 1991, 8, 29-32.	0.3	7
103	High Performance Computational Astrophysics with PKDGRAV/Gasoline. <i>Kluwer International Series in Engineering and Computer Science</i> , 2002, , 501-523.	0.2	7
104	GENGA. II. GPU Planetary N-body Simulations with Non-Newtonian Forces and High Number of Particles. <i>Astrophysical Journal</i> , 2022, 932, 124.	1.6	7
105	Could Uranus and Neptune form by collisions of planetary embryos?. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 502, 1647-1660.	1.6	6
106	The EOS/resolution conspiracy: convergence in proto-planetary collision simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 505, 1806-1816.	1.6	6
107	On the age-radius relation and orbital history of cluster galaxies. <i>Proceedings of the International Astronomical Union</i> , 2004, 2004, .	0.0	5
108	Evolution of Dark Matter Halo Density Profiles and Substructure from $\Lambda$ CDM Simulations. <i>Proceedings of the International Astronomical Union</i> , 2004, 2004, 231-236.	0.0	4

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109	Did Uranus' regular moons form via a rocky giant impactor?. Icarus, 2022, 375, 114842.	1.1	4
110	A universal density slope $\hat{\omega}$ velocity anisotropy relation. EAS Publications Series, 2006, 20, 33-36.	0.3	3
111	Automated spectral line identification. Publications of the Astronomical Society of the Pacific, 1990, 102, 587.	1.0	3
112	The fate of LSB galaxies in clusters and the origin of the diffuse intra-cluster light. International Astronomical Union Colloquium, 1999, 171, 229-236.	0.1	2
113	Prospects for Cosmology with Cluster Mass Profiles. Astrophysical Journal, 1997, 477, L5-L8.	1.6	1
114	The pursuit of the whole NChilada: Virtual petaflops using multi-adaptive algorithms for gravitational systems. IBM Journal of Research and Development, 2004, 48, 183-197.	3.2	0
115	How common are Earth-Moon planetary systems?. Proceedings of the International Astronomical Union, 2010, 6, 414-415.	0.0	0
116	Numerical influences on galaxy formation. , 2004, , .		0
117	The cosmic web of dwarf galaxies in a warm versus cold dark matter universe: Mock galaxies in CDM and WDM simulations. , 2017, , .		0