

# Anvar M Shukurov

## List of Publications by Year in descending order

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147  
papers

5,511  
citations

101543

36  
h-index

88630

70  
g-index

149  
all docs

149  
docs citations

149  
times ranked

2878  
citing authors

#	ARTICLE	IF	CITATIONS
1	GALACTIC MAGNETISM: Recent Developments and Perspectives. Annual Review of Astronomy and Astrophysics, 1996, 34, 155-206.	24.3	830
2	Depolarization and Faraday effects in galaxies. Monthly Notices of the Royal Astronomical Society, 1998, 299, 189-206.	4.4	361
3	Magnetic fields and spiral arms in the galaxy M51. Monthly Notices of the Royal Astronomical Society, 2011, 412, 2396-2416.	4.4	222
4	Evolving turbulence and magnetic fields in galaxy clusters. Monthly Notices of the Royal Astronomical Society, 2006, 366, 1437-1454.	4.4	217
5	A Supernova-regulated Interstellar Medium: Simulations of the Turbulent Multiphase Medium. Astrophysical Journal, 1999, 514, L99-L102.	4.5	168
6	MODELING THE MAGNETIC FIELD IN THE GALACTIC DISK USING NEW ROTATION MEASURE OBSERVATIONS FROM THE VERY LARGE ARRAY. Astrophysical Journal, 2011, 728, 97.	4.5	137
7	The role of waterways in the spread of the Neolithic. Journal of Archaeological Science, 2006, 33, 641-652.	2.4	135
8	A SURVEY OF EXTRAGALACTIC FARADAY ROTATION AT HIGH GALACTIC LATITUDE: THE VERTICAL MAGNETIC FIELD OF THE MILKY WAY TOWARD THE GALACTIC POLES. Astrophysical Journal, 2010, 714, 1170-1186.	4.5	127
9	Magnetic fields in barred galaxies. Astronomy and Astrophysics, 2005, 444, 739-765.	5.1	121
10	Systematic bias in interstellar magnetic field estimates. Astronomy and Astrophysics, 2003, 411, 99-107.	5.1	119
11	Galactic dynamo and helicity losses through fountain flow. Astronomy and Astrophysics, 2006, 448, L33-L36.	5.1	119
12	Colonization of Northern Eurasia by Modern Humans: Radiocarbon Chronology and Environment. Journal of Archaeological Science, 2002, 29, 593-606.	2.4	94
13	The magnetic field of M 31 from multi-wavelength radio polarization observations. Astronomy and Astrophysics, 2004, 414, 53-67.	5.1	88
14	The supernova-regulated ISM – I. The multiphase structure. Monthly Notices of the Royal Astronomical Society, 2013, 432, 1396-1423.	4.4	86
15	Structures in the rotation measure sky. Monthly Notices of the Royal Astronomical Society, 2001, 325, 649-664.	4.4	84
16	Galactic dynamos supported by magnetic helicity fluxes. Monthly Notices of the Royal Astronomical Society, 2007, 377, 874-882.	4.4	84
17	The chronology of Neolithic dispersal in Central and Eastern Europe. Journal of Archaeological Science, 2005, 32, 1441-1458.	2.4	81
18	The dynamo origin of magnetic fields in galaxy clusters. Monthly Notices of the Royal Astronomical Society, 1989, 241, 1-14.	4.4	78

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19	Magnetic field as a tracer of sheared gas flow in barred galaxies. <i>Nature</i> , 1999, 397, 324-327.	27.8	75
20	Magnetism of spiral galaxies. <i>Nature</i> , 1988, 336, 341-347.	27.8	72
21	The supernova-regulated ISM – II. The mean magnetic field. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2013, 430, L40-L44.	3.3	70
22	Global magnetic patterns in the Milky Way and the Andromeda nebula. <i>Monthly Notices of the Royal Astronomical Society</i> , 1993, 264, 285-297.	4.4	66
23	Regular magnetic fields in coronae of spiral galaxies. <i>Nature</i> , 1990, 347, 51-53.	27.8	63
24	Structured outflow from a dynamo active accretion disc. <i>Astronomy and Astrophysics</i> , 2003, 398, 825-844.	5.1	61
25	Turbulence and magnetic fields in elliptical galaxies. <i>Monthly Notices of the Royal Astronomical Society</i> , 1996, 279, 229-239.	4.4	59
26	Hydromagnetic screw dynamo. <i>Journal of Fluid Mechanics</i> , 1988, 197, 39-56.	3.4	55
27	Galactic spiral patterns and dynamo action – I. A new twist on magnetic arms. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 428, 3569-3589.	4.4	53
28	Magnetic fields in barred galaxies. <i>Astronomy and Astrophysics</i> , 2002, 391, 83-102.	5.1	50
29	NEW CONSTRAINTS ON THE GALACTIC HALO MAGNETIC FIELD USING ROTATION MEASURES OF EXTRAGALACTIC SOURCES TOWARD THE OUTER GALAXY. <i>Astrophysical Journal</i> , 2012, 755, 21.	4.5	49
30	IMAGINE: a comprehensive view of the interstellar medium, Galactic magnetic fields and cosmic rays. <i>Journal of Cosmology and Astroparticle Physics</i> , 2018, 2018, 049-049.	5.4	49
31	Coherent vortex structures in quantum turbulence. <i>Europhysics Letters</i> , 2012, 98, 26002.	2.0	48
32	Global diffusion of cosmic rays in random magnetic fields. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 457, 3975-3987.	4.4	45
33	Anomalous persistence of bisymmetric magnetic structures in spiral galaxies. <i>Monthly Notices of the Royal Astronomical Society</i> , 1997, 292, 1-10.	4.4	44
34	The Near-Eastern Roots of the Neolithic in South Asia. <i>PLoS ONE</i> , 2014, 9, e95714.	2.5	44
35	Magnetic and optical spiral arms in the galaxy NGC 6946. <i>Monthly Notices of the Royal Astronomical Society</i> , 2000, 318, 925-937.	4.4	42
36	Magnetic Structures Produced by the Small-Scale Dynamo. <i>Physical Review Letters</i> , 2007, 99, 134501.	7.8	41



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55	Modelling the Neolithic transition in a heterogeneous environment. <i>Journal of Archaeological Science</i> , 2010, 37, 2929-2937.	2.4	27
56	Quantification of the morphological characteristics of hESC colonies. <i>Scientific Reports</i> , 2019, 9, 17569.	3.3	27
57	The effects of vertical outflows on disk dynamos. <i>Astronomy and Astrophysics</i> , 2001, 370, 635-648.	5.1	25
58	The distribution of mean and fluctuating magnetic fields in the multiphase interstellar medium. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2017, 464, L105-L109.	3.3	23
59	Evolution of galactic magnetic fields. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 483, 2424-2440.	4.4	23
60	Galactic fountains as magnetic pumps. <i>Monthly Notices of the Royal Astronomical Society</i> , 1995, 276, 651-662.	4.4	22
61	A physical approach to modelling large-scale galactic magnetic fields. <i>Astronomy and Astrophysics</i> , 2019, 623, A113.	5.1	21
62	Supernova-regulated ISM. V. Space and Time Correlations. <i>Astrophysical Journal</i> , 2017, 850, 4.	4.5	20
63	Hydrostatic equilibrium in a magnetized, warped Galactic disc. <i>Monthly Notices of the Royal Astronomical Society</i> , 2001, 325, 312-320.	4.4	19
64	Galactic spiral patterns and dynamo action – II. Asymptotic solutions. <i>Monthly Notices of the Royal Astronomical Society</i> , 2013, 433, 3274-3289.	4.4	19
65	Neutrino mass and the origin of galactic magnetic fields. <i>Physical Review D</i> , 1993, 48, 4557-4561.	4.7	18
66	Mesoscale Magnetic Structures in Spiral Galaxies. , 0, , 113-135.		18
67	Galactic magnetic fields and hierarchical galaxy formation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2015, 450, 3472-3489.	4.4	18
68	Depolarization and Faraday effects in galaxies. <i>Monthly Notices of the Royal Astronomical Society</i> , 1999, 303, 207-208.	4.4	17
69	Canals in Milky Way radio polarization maps. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2006, 371, L21-L25.	3.3	16
70	Magnetic fields in barred galaxies. <i>Astronomy and Astrophysics</i> , 2007, 465, 157-170.	5.1	16
71	Maximally-efficient-generation approach in the dynamo theory. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 1990, 52, 125-139.	1.2	15
72	Topological signatures of interstellar magnetic fields – I. Betti numbers and persistence diagrams. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 475, 1843-1858.	4.4	15

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73	Simple models of nonlinear fluctuation dynamo. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 1993, 68, 237-261.	1.2	14
74	Statistical properties of Faraday rotation measure in external galaxies – I. Intervening disc galaxies. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 477, 2528-2546.	4.4	14
75	Galactic dynamos with captured magnetic flux and an accretion flow. <i>Astronomy and Astrophysics</i> , 2001, 372, 1048-1063.	5.1	14
76	Wavelet tomography of the Galactic magnetic field. <i>Astronomy and Astrophysics</i> , 2002, 391, 361-368.	5.1	14
77	Nonlinear states of the screw dynamo. <i>Physical Review E</i> , 2002, 65, 036311.	2.1	13
78	The effects of spiral arms on the multi-phase ISM. <i>Astrophysics and Space Science</i> , 2004, 289, 319-322.	1.4	13
79	Bayesian inference for a wave-front model of the neolithization of Europe. <i>Physical Review E</i> , 2012, 86, 016105.	2.1	13
80	Productivity of Premodern Agriculture in the Cucuteni–Trypillia Area. <i>Human Biology</i> , 2015, 87, 235.	0.2	13
81	STATISTICAL TESTS OF GALACTIC DYNAMO THEORY. <i>Astrophysical Journal</i> , 2016, 833, 43.	4.5	13
82	Turbulent generation of magnetic fields in astrophysical jets. <i>Astrophysics and Space Science</i> , 1988, 140, 165-174.	1.4	12
83	Climate, subsistence and human movements in the Western Dvina – Lovat River Basins. <i>Quaternary International</i> , 2009, 203, 52-66.	1.5	12
84	Dynamics of single human embryonic stem cells and their pairs: a quantitative analysis. <i>Scientific Reports</i> , 2017, 7, 570.	3.3	12
85	The recent advances in the mathematical modelling of human pluripotent stem cells. <i>SN Applied Sciences</i> , 2020, 2, 276.	2.9	12
86	Non-local effects in the mean-field disc dynamo I. An asymptotic expansion. <i>Geophysical and Astrophysical Fluid Dynamics</i> , 2000, 93, 97-114.	1.2	11
87	The Spread of the Neolithic in the South East European Plain: Radiocarbon Chronology, Subsistence, and Environment. <i>Radiocarbon</i> , 2009, 51, 783-793.	1.8	11
88	Inference for population dynamics in the Neolithic period. <i>Annals of Applied Statistics</i> , 2012, 6, .	1.1	11
89	Depolarization of synchrotron radiation in a multilayer magneto-ionic medium. <i>Astronomy and Astrophysics</i> , 2014, 567, A82.	5.1	10
90	Constraining regular and turbulent magnetic field strengths in M51 via Faraday depolarization. <i>Astronomy and Astrophysics</i> , 2014, 568, A83.	5.1	10

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91	Depolarization canals and interstellar turbulence. EAS Publications Series, 2007, 23, 109-128.	0.3	10
92	On the origin of galactic magnetic fields. Astrophysics and Space Science, 2002, 281, 285-288.	1.4	9
93	Reconnecting flux-rope dynamo. Physical Review E, 2009, 80, 055301.	2.1	9
94	Regional variations in the European Neolithic dispersal: the role of the coastlines. Antiquity, 2014, 88, 1291-1302.	1.0	9
95	3D morphology of a random field from its 2D cross-section. Monthly Notices of the Royal Astronomical Society: Letters, 2015, 447, L55-L59.	3.3	9
96	A steady state of the disc dynamo. Geophysical and Astrophysical Fluid Dynamics, 1992, 65, 231-244.	1.2	8
97	IMAGINE: Modeling the Galactic Magnetic Field. Galaxies, 2019, 7, 17.	3.0	8
98	Parameters of the Supernova-Driven Interstellar Turbulence. Galaxies, 2020, 8, 56.	3.0	8
99	Accretion disc dynamos opened up by external magnetic fields. Astronomy and Astrophysics, 2004, 413, 403-414.	5.1	8
100	A Pan-European model of the Neolithic. Documenta Praehistorica, 0, 34, 139-154.	1.0	8
101	The galactic dynamo: Axisymmetric and non-axisymmetric modes. Geophysical and Astrophysical Fluid Dynamics, 1990, 50, 131-146.	1.2	7
102	The supernova-regulated ISM – VI. Magnetic effects on the structure of the interstellar medium. Monthly Notices of the Royal Astronomical Society, 2019, 488, 5065-5074.	4.4	7
103	Evolution of a magnetic blob in a helical flow. Astronomische Nachrichten, 1991, 312, 33-39.	1.2	6
104	Galactic Spiral Arms and Dynamo Control Parameters. Studia Geophysica Et Geodaetica, 1998, 42, 391-396.	0.5	6
105	OCT4 expression in human embryonic stem cells: spatio-temporal dynamics and fate transitions. Physical Biology, 2021, 18, 026003.	1.8	6
106	Turbulence and Magnetic Fields in Clusters of Galaxies. Astrophysics and Space Science, 1998, 263, 87-90.	1.4	5
107	Course 4 Astrophysical dynamos. Les Houches Summer School Proceedings, 2008, , 251-299.	0.2	5
108	Asymptotic solutions for mean-field slab dynamos. Geophysical and Astrophysical Fluid Dynamics, 2014, 108, 568-583.	1.2	5

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109	Topological data analysis and diagnostics of compressible magnetohydrodynamic turbulence. Journal of Plasma Physics, 2018, 84, .	2.1	5
110	Statistical Topology and the Random Interstellar Medium. Journal of the American Statistical Association, 2020, 115, 625-635.	3.1	5
111	Vortical Motions Driven by Supernova Explosions. , 1999, , 127-131.		4
112	Reply to Y. V. Kuzmin, S. G. Keates (Journal of Archaeological Science 31 (2004) 141â€“143). Journal of Archaeological Science, 2005, 32, 1125-1130.	2.4	4
113	Stretching in a model of a turbulent flow. Physica D: Nonlinear Phenomena, 2009, 238, 365-369.	2.8	4
114	Seeding hESCs to achieve optimal colony clonality. Scientific Reports, 2019, 9, 15299.	3.3	4
115	Fickian and non-Fickian diffusion of cosmic rays. Monthly Notices of the Royal Astronomical Society, 2019, 487, 975-980.	4.4	4
116	Endothelial Differentiation G Protein-Coupled Receptor 5 Plays an Important Role in Induction and Maintenance of Pluripotency. Stem Cells, 2019, 37, 318-331.	3.2	4
117	Hydromagnetic Dynamo in Astrophysical Jets. , 1993, , 367-371.		4
118	Galactic Dynamos. The Fluid Mechanics of Astrophysics and Geophysics, 2007, , 314-359.	0.2	4
119	Non-local effects in the mean-field disc dynamo: II â€“ numerical and asymptotic solutions. Geophysical and Astrophysical Fluid Dynamics, 2004, 98, 345-363.	1.2	3
120	Magnetic Fields and Mass Inflow in Central Regions of Barred Galaxies. AIP Conference Proceedings, 2005, , .	0.4	3
121	The origin and evolution of cluster magnetism. Astronomische Nachrichten, 2006, 327, 583-586.	1.2	3
122	Dynamo action in MÃ¶bius flow. Physical Review E, 2008, 78, 025301.	2.1	3
123	A mathematical modelling framework for the regulation of intra-cellular OCT4 in human pluripotent stem cells. PLoS ONE, 2021, 16, e0254991.	2.5	3
124	Hydromagnetic Dynamo in Astrophysical Jets. Symposium - International Astronomical Union, 1993, 157, 367-371.	0.1	2
125	Dynamically dominant magnetic fields in the diffuse interstellar medium. Proceedings of the International Astronomical Union, 2008, 4, 87-88.	0.0	2
126	Galactic spiral patterns and dynamo action. Proceedings of the International Astronomical Union, 2012, 8, 249-250.	0.0	2



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127	Galactic Dynamo Theory Confronted with Observations. , 1990, , 119-124.		2
128	Intermittent Magnetic Fields Generated by Turbulence in Galaxies and Galaxy Clusters. , 1990, , 499-503.		2
129	Mean fields and fluctuations in compressible magnetohydrodynamic flows. Geophysical and Astrophysical Fluid Dynamics, 2022, 116, 261-289.	1.2	2
130	Ultra-high energy cosmic rays in the galactic corona. Astrophysics and Space Science, 1991, 179, 141-145.	1.4	1
131	Topological pumping of magnetic fields by galactic fountains. Astronomical and Astrophysical Transactions, 1996, 11, 259-270.	0.2	1
132	Self-Regulating Supernova Heating in Interstellar Medium Simulations. Astrophysics and Space Science, 2004, 292, 267-272.	1.4	1
133	Fluctuation dynamo based on magnetic reconnections. Astronomische Nachrichten, 2010, 331, 46-62.	1.2	1
134	Magnetic Fields in the Milky Way Halo. Proceedings of the International Astronomical Union, 2012, 10, 403-403.	0.0	1
135	The Origin of Large-Scale Magnetic Fields in Low-Mass Galaxies. Galaxies, 2019, 7, 91.	3.0	1
136	On the Origin of Galactic Magnetic Fields. , 2002, , 285-288.		1
137	Galactic Dynamo Theory Confronted with Observations. Symposium - International Astronomical Union, 1990, 140, 119-124.	0.1	0
138	The Origin of Magnetic Fields in Elliptical Galaxies. Highlights of Astronomy, 2002, 12, 731-732.	0.0	0
139	Summary of the Discussions. Highlights of Astronomy, 2002, 12, 745-748.	0.0	0
140	Outflows from Dynamo-Active Protostellar Accretion Discs. Astrophysics and Space Science, 2004, 292, 493-500.	1.4	0
141	Comet Halley in 1986: successful science the 80s way. Astronomy and Geophysics, 2006, 47, 2.07-2.07.	0.2	0
142	Relative distributions of cosmic ray electrons and magnetic fields in the ISM. Proceedings of the International Astronomical Union, 2008, 4, 93-94.	0.0	0
143	Contour-crossing statistics for small scale structure on radio polarized intensity maps of the interstellar medium. Astronomy Reports, 2009, 53, 879-885.	0.9	0
144	Editors' note: Astron. Nachr. 1/2010. Astronomische Nachrichten, 2010, 331, 4-4.	1.2	0

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145	Turbulent Diamagnetism and Galactic Dynamo. , 2001, , 233-237.		0
146	The Origin of Magnetic Field in a Swirling Jet. Astrophysics and Space Science Library, 1993, , 399-402.	2.7	0
147	Magnetic Fields and Spiral Structure. , 2004, , 299-302.		0