Petri J KÃ¤pylÃ¤

List of Publications by Year
in descending order

54 papers	1,376 citations	331670 21 h-index	330143 37 g-index
56 all docs	56 docs citations	56 times ranked	508 citing authors

#	Article	IF	Citations
1	CYCLIC MAGNETIC ACTIVITY DUE TO TURBULENT CONVECTION IN SPHERICAL WEDGE GEOMETRY. Astrophysical Journal Letters, 2012, 755, L22.	8.3	149
2	Magnetic Diffusivity Tensor and Dynamo Effects in Rotating and Shearing Turbulence. Astrophysical Journal, 2008, 676, 740-751.	4.5	131
3	EFFECTS OF ENHANCED STRATIFICATION ON EQUATORWARD DYNAMO WAVE PROPAGATION. Astrophysical Journal, 2013, 778, 41.	4.5	106
4	The Pencil Code, a modular MPI code for partial differential equations and particles: multipurpose and multiuser-maintained. Journal of Open Source Software, 2021, 6, 2807.	4.6	92
5	Non-Fickian diffusion and tau approximation from numerical turbulence. Physics of Fluids, 2004, 16, 1020-1027.	4.0	88
6	ON THE CAUSE OF SOLAR-LIKE EQUATORWARD MIGRATION IN GLOBAL CONVECTIVE DYNAMO SIMULATIONS. Astrophysical Journal Letters, 2014, 796, L12.	8.3	46
7	LARGE-SCALE DYNAMOS IN RIGIDLY ROTATING TURBULENT CONVECTION. Astrophysical Journal, 2009, 697, 1153-1163.	4.5	45
8	OSCILLATORY MIGRATING MAGNETIC FIELDS IN HELICAL TURBULENCE IN SPHERICAL DOMAINS. Astrophysical Journal Letters, 2010, 719, L1-L4.	8.3	44
9	Extended Subadiabatic Layer in Simulations of Overshooting Convection. Astrophysical Journal Letters, 2017, 845, L23.	8.3	44
10	Magnetorotational instability driven dynamos at low magnetic Prandtl numbers. Monthly Notices of the Royal Astronomical Society, 2011, 413, 901-907.	4.4	43
11	TURBULENT DYNAMOS WITH SHEAR AND FRACTIONAL HELICITY. Astrophysical Journal, 2009, 699, 1059-1066.	4.5	41
12	STARSPOTS DUE TO LARGE-SCALE VORTICES IN ROTATING TURBULENT CONVECTION. Astrophysical Journal, 2011, 742, 34.	4.5	36
13	SPOKE-LIKE DIFFERENTIAL ROTATION IN A CONVECTIVE DYNAMO WITH A CORONAL ENVELOPE. Astrophysical Journal, 2013, 778, 141.	4.5	35
14	Magnetic helicity effects in astrophysical and laboratory dynamos. New Journal of Physics, 2007, 9, 305-305.	2.9	31
15	QUENCHING AND ANISOTROPY OF HYDROMAGNETIC TURBULENT TRANSPORT. Astrophysical Journal, 2014, 795, 16.	4.5	30
16	Overshooting in simulations of compressible convection. Astronomy and Astrophysics, 2019, 631, A122.	5.1	30
17	AN AZIMUTHAL DYNAMO WAVE IN SPHERICAL SHELL CONVECTION. Astrophysical Journal Letters, 2014, 780, L22.	8.3	27
18	The Î± effect with imposed and dynamo-generated magnetic fields. Monthly Notices of the Royal Astronomical Society, 2009, 398, 1891-1899.	4.4	26

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19	Numerical study of large-scale vorticity generation in shear-flow turbulence. Physical Review E, 2009, 79, 016302.	2.1	23
20	Common dynamo scaling in slowly rotating young and evolved stars. Nature Astronomy, 2020, 4, 658-662.	10.1	23
21	The Î± effect in rotating convection with sinusoidal shear. Monthly Notices of the Royal Astronomical Society, 2010, 402, 1458-1466.	4.4	22
22	Pumping velocity in homogeneous helical turbulence with shear. Physical Review E, 2011, 84, 056314.	2.1	21
23	Effects of a subadiabatic layer on convection and dynamos in spherical wedge simulations. Geophysical and Astrophysical Fluid Dynamics, 2019, 113, 149-183.	1.2	21
24	Ejections of Magnetic Structures Above a Spherical Wedge Driven by a Convective Dynamo with Differential Rotation. Solar Physics, 2012, 280, 299-319.	2.5	20
25	Stellar Dynamos in the Transition Regime: Multiple Dynamo Modes and Antisolar Differential Rotation. Astrophysical Journal, 2019, 886, 21.	4.5	19
26	Bihelical Spectrum of Solar Magnetic Helicity and Its Evolution. Astrophysical Journal, 2018, 863, 182.	4.5	18
27	Star-in-a-box simulations of fully convective stars. Astronomy and Astrophysics, 2021, 651, A66.	5.1	18
28	Oscillatory large-scale dynamos from Cartesian convection simulations. Geophysical and Astrophysical Fluid Dynamics, 2013, 107, 244-257.	1.2	17
29	Sensitivity to luminosity, centrifugal force, and boundary conditions in spherical shell convection. Geophysical and Astrophysical Fluid Dynamics, 2020, 114, 8-34.	1.2	17
30	Methods for compressible fluid simulation on GPUs using high-order finite differences. Computer Physics Communications, 2017, 217, 11-22.	7.5	14
31	ANGULAR MOMENTUM TRANSPORT IN CONVECTIVELY UNSTABLE SHEAR FLOWS. Astrophysical Journal, 2010, 719, 67-76.	4.5	12
32	On global solar dynamo simulations. Astronomische Nachrichten, 2011, 332, 43-50.	1.2	12
33	Smallâ€scale dynamos in simulations of stratified turbulent convection. Astronomische Nachrichten, 2018, 339, 127-133.	1.2	12
34	3D MHD simulations of subsurface convection in OB stars. Proceedings of the International Astronomical Union, 2010, 6, 32-37.	0.0	7
35	Turbulent viscosity and magnetic Prandtl number from simulations of isotropically forced turbulence. Astronomy and Astrophysics, 2020, 636, A93.	5.1	7
36	Prandtl number dependence of stellar convection: Flow statistics and convective energy transport. Astronomy and Astrophysics, 2021, 655, A78.	5.1	6

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37	Testing turbulent closure models with convection simulations. Astronomische Nachrichten, 2015, 336, 32-52.	1.2	5
38	Magneto-hydrodynamical origin of eclipsing time variations in post-common-envelope binaries for solar mass secondaries. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	5
39	Effects of smallâ€scale dynamo and compressibility on the Î› effect. Astronomische Nachrichten, 2019, 340, 744-751.	1.2	5
40	Solar-like Dynamos and Rotational Scaling of Cycles from Star-in-a-box Simulations. Astrophysical Journal Letters, 2022, 931, L17.	8.3	5
41	Verification of Reynolds stress parameterizations from simulations. Astronomische Nachrichten, 2012, 333, 78-83.	1.2	4
42	f-mode strengthening from a localised bipolar subsurface magnetic field. Geophysical and Astrophysical Fluid Dynamics, 2020, 114, 196-212.	1.2	4
43	Effects of rotation and input energy flux on convective overshooting. Proceedings of the International Astronomical Union, 2006, 2, 437-442.	0.0	2
44	Role of longitudinal activity complexes for solar and stellar dynamos. Proceedings of the International Astronomical Union, 2012, 8, 175-186.	0.0	2
45	Dynamical quenching with nonâ€local Î± and downward pumping. Astronomische Nachrichten, 2015, 336, 91-96.	1.2	2
46	Reynolds number dependence of Lyapunov exponents of turbulence and fluid particles. Physical Review E, 2021, 103, 033110.	2.1	2
47	Origin of eclipsing time variations: Contributions of different modes of the dynamo-generated magnetic field. Astronomy and Astrophysics, 2022, 663, A90.	5.1	2
48	Turbulence and magnetic spots at the surface of hot massive stars. Proceedings of the International Astronomical Union, 2010, 6, 200-203.	0.0	1
49	From convective to stellar dynamos. Proceedings of the International Astronomical Union, 2010, 6, 279-287.	0.0	1
50	Flux concentrations in turbulent convection. Proceedings of the International Astronomical Union, 2012, 8, 283-288.	0.0	1
51	Solar-like differential rotation and equatorward migration in a convective dynamo with a coronal envelope. Proceedings of the International Astronomical Union, 2012, 8, 307-312.	0.0	1
52	Helical coronal ejections and their role in the solar cycle. Proceedings of the International Astronomical Union, 2004, 2004, 57-64.	0.0	0
53	Stellar nonlinear dynamos: observations and modelling. Proceedings of the International Astronomical Union, 2008, 4, 417-418.	0.0	0
54	Oscillatory migratory large-scale fields in mean-field and direct simulations. Proceedings of the International Astronomical Union, 2009, 5, 197-201.	0.0	0