Orkan M Umurhan

List of Publications by Year
in descending order

60	3,055	172457 29	155660 55
papers	citations	h-index	g-index

61	61	61	2011
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Hypotheses for Triton's plumes: New analyses and future remote sensing tests. Icarus, 2022, 375, 114835.	2.5	6
2	A Near-surface Temperature Model of Arrokoth. Planetary Science Journal, 2022, 3, 110.	3.6	9
3	A Predicted Dearth of Majority Hypervolatile Ices in Oort Cloud Comets. Planetary Science Journal, 2022, 3, 112.	3.6	15
4	The Geophysical Environment of (486958) Arrokothâ€"A Small Kuiper Belt Object Explored by New Horizons. Journal of Geophysical Research E: Planets, 2022, 127, .	3.6	18
5	Detection of Radio Thermal Emission from the Kuiper Belt Object (486958) Arrokoth during the New Horizons Encounter. Planetary Science Journal, 2022, 3, 109.	3.6	3
6	On the origin & thermal stability of Arrokoth's and Pluto's ices. Icarus, 2021, 356, 114072.	2.5	31
7	Triton: Fascinating Moon, Likely Ocean World, Compelling Destination!. Planetary Science Journal, 2021, 2, 137.	3.6	15
8	A minimal model for vertical shear instability in protoplanetary accretion disks. Geophysical and Astrophysical Fluid Dynamics, 2021, 115, 674-695.	1.2	2
9	Modeling global-scale mass flows on the Lagrangian satellites of Dione and Tethys. Icarus, 2021, 369, 114612.	2.5	3
10	Rossby Waves in Astrophysics. Space Science Reviews, 2021, 217, 1.	8.1	47
11	Reply to: Penitente formation is unlikely on Europa. Nature Geoscience, 2020, 13, 20-21.	12.9	1
12	Streaming Instability in Turbulent Protoplanetary Disks. Astrophysical Journal, 2020, 895, 4.	4.5	52
13	Color, composition, and thermal environment of Kuiper Belt object (486958) Arrokoth. Science, 2020, 367, .	12.6	64
14	The geology and geophysics of Kuiper Belt object (486958) Arrokoth. Science, 2020, 367, .	12.6	76
15	The solar nebula origin of (486958) Arrokoth, a primordial contact binary in the Kuiper Belt. Science, 2020, 367, .	12.6	79
16	Migrating Scarps as a Significant Driver for Cometary Surface Evolution. Geophysical Research Letters, 2019, 46, 12794-12804.	4.0	10
17	Detection of ammonia on Plutoâ€™s surface in a region of geologically recent tectonism. Science Advances, 2019, 5, eaav5731.	10.3	49
18	The Initial Conditions for Planet Formation: Turbulence Driven by Hydrodynamical Instabilities in Disks around Young Stars. Publications of the Astronomical Society of the Pacific, 2019, 131, 072001.	3.1	67

#	Article	IF	Citations
19	Initial results from the New Horizons exploration of 2014 MU ₆₉ , a small Kuiper Belt object. Science, 2019, 364, .	12.6	113
20	Recent cryovolcanism in Virgil Fossae on Pluto. Icarus, 2019, 330, 155-168.	2.5	45
21	Role of Interaction between Magnetic Rossby Waves and Tachocline Differential Rotation in Producing Solar Seasons. Astrophysical Journal, 2018, 853, 144.	4.5	56
22	Bladed Terrain on Pluto: Possible origins and evolution. Icarus, 2018, 300, 129-144.	2.5	47
23	Formation of metre-scale bladed roughness on Europaâ€™s surface by ablation of ice. Nature Geoscience, 2018, 11, 901-904.	12.9	25
24	Breaking up is hard to do: Global cartography and topography of Pluto's mid-sized icy Moon Charon from New Horizons. Icarus, 2018, 315, 124-145.	2.5	29
25	Great Expectations: Plans and Predictions for New Horizons Encounter With Kuiper Belt Object 2014 MU₆₉ (â€œUltima Thuleâ€). Geophysical Research Letters, 2018, 45, 8111-8120.	4.0	14
26	Basins, fractures and volcanoes: Global cartography and topography of Pluto from New Horizons. Icarus, 2018, 314, 400-433.	2.5	75
27	Geological mapping of Sputnik Planitia on Pluto. Icarus, 2017, 287, 261-286.	2.5	52
28	Pluto: Pits and mantles on uplands north and east of Sputnik Planitia. Icarus, 2017, 293, 218-230.	2.5	24
29	Sublimation as a landform-shaping process on Pluto. Icarus, 2017, 287, 320-333.	2.5	51
30	Mean radius and shape of Pluto and Charon from New Horizons images. Icarus, 2017, 287, 12-29.	2.5	105
31	Present and past glaciation on Pluto. Icarus, 2017, 287, 287-300.	2.5	43
32	Linear analysis of the vertical shear instability: outstanding issues and improved solutions. Astronomy and Astrophysics, 2016, 586, A33.	5.1	23
33	Modeling of ice pinnacle formation on Callisto. Journal of Geophysical Research E: Planets, 2016, 121, 21-45.	3.6	23
34	On the mechanism of self gravitating Rossby interfacial waves in proto-stellar accretion discs. Geophysical and Astrophysical Fluid Dynamics, 2016, 110, 274-294.	1.2	8
35	Modern Fluid Dynamics for Physics and Astrophysics. Graduate Texts in Physics, 2016, , .	0.2	19
36	Reorientation of Sputnik Planitia implies a subsurface ocean on Pluto. Nature, 2016, 540, 94-96.	27.8	108

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37	The formation of Charonâ€™s red poles from seasonally cold-trapped volatiles. Nature, 2016, 539, 65-68.	27.8	44
38	CRITICAL LAYERS AND PROTOPLANETARY DISK TURBULENCE. Astrophysical Journal, 2016, 830, 95.	4.5	18
39	Convection in a volatile nitrogen-ice-rich layer drives Plutoâ€™s geological vigour. Nature, 2016, 534, 82-85.	27.8	102
40	The atmosphere of Pluto as observed by New Horizons. Science, 2016, 351, aad8866.	12.6	201
41	Vortex formation in protoplanetary discs induced by the vertical shear instability. Monthly Notices of the Royal Astronomical Society, 2016, 456, 3571-3584.	4.4	57
42	The geology of Pluto and Charon through the eyes of New Horizons. Science, 2016, 351, 1284-1293.	12.6	219
43	Interacting vorticity waves as an instability mechanism for magnetohydrodynamic shear instabilities. Journal of Fluid Mechanics, 2015, 767, 199-225.	3.4	24
44	On the nonnormalâ€“nonlinear interaction mechanism between counter-propagating Rossby waves. Theoretical and Computational Fluid Dynamics, 2015, 29, 205-224.	2.2	5
45	The Pluto system: Initial results from its exploration by New Horizons. Science, 2015, 350, aad1815.	12.6	407
46	Linear and non-linear evolution of the vertical shear instability in accretion discs. Monthly Notices of the Royal Astronomical Society, 2013, 435, 2610-2632.	4.4	290
47	Breathing Life Into Dead-Zones. EPJ Web of Conferences, 2013, 46, 03003.	0.3	4
48	Nondissipative Saturation of the Magnetorotational Instability in Thin Disks. Physical Review Letters, 2012, 109, 224501.	7.8	12
49	Saturation of the magnetorotational instability by stable magnetoacoustic modes. Proceedings of the International Astronomical Union, 2012, 8, 365-366.	0.0	0
50	Vorticity inversion and action-at-a-distance instability in stably stratified shear flow. Journal of Fluid Mechanics, 2011, 670, 301-325.	3.4	24
51	Non-exponential hydrodynamical growth in density-stratified thin Keplerian discs. Monthly Notices of the Royal Astronomical Society, 2010, 406, 517-528.	4.4	6
52	Linear dynamics of weakly viscous accretion disks: a disk analog of Tollmien-Schlichting waves. Astronomy and Astrophysics, 2009, 497, 1-15.	5.1	2
53	Iâ€“V relations in nano thin semi-conductors with mobile acceptors or donors. Solid State Ionics, 2008, 179, 24-24.	2.7	3
54	A Buoyancyâ€“Vorticity Wave Interaction Approach to Stratified Shear Flow. Journals of the Atmospheric Sciences, 2008, 65, 2615-2630.	1.7	34

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55	Properties of solid state devices with significant impurity hopping conduction. Journal Physics D: Applied Physics, 2008, 41, 135106.	2.8	5
56	Properties of solid state devices with mobile ionic defects. Part I: The effects of motion, space charge and contact potential in metal | semiconductor | metal devices. Solid State Ionics, 2007, 178, 1-12.	2.7	47
57	On the stratorotational instability in the quasi-hydrostatic semigeostrophic limit. Monthly Notices of the Royal Astronomical Society, 2006, 365, 85-100.	4.4	27
58	Hydrodynamic stability of rotationally supported flows: LinearÂandÂnonlinearÂ2DÂshearing box results. Astronomy and Astrophysics, 2004, 427, 855-872.	5.1	102
59	Dynamics in coalescing critical layers. Journal of Fluid Mechanics, 2001, 449, 115-139.	3.4	4
60	Stellar Oscillons. Annals of the New York Academy of Sciences, 1998, 867, 298-305.	3.8	9