

# Roman R Rafikov

## List of Publications by Year in descending order

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65  
papers

3,542  
citations

136950

32  
h-index

155660

55  
g-index

65  
all docs

65  
docs citations

65  
times ranked

2336  
citing authors

#	ARTICLE	IF	CITATIONS
1	Boundary layers of accretion discs: wave-driven transport and disc evolution. <i>Monthly Notices of the Royal Astronomical Society</i> , 2022, 512, 2945-2960.	4.4	5
2	Eclipse Timing the Milky Way's Gravitational Potential. <i>Astrophysical Journal Letters</i> , 2022, 928, L17.	8.3	8
3	Formation of Gaps in Self-gravitating Debris Disks by Secular Resonance in a Single-planet System. I. A Simplified Model. <i>Astrophysical Journal</i> , 2021, 910, 13.	4.5	21
4	Secular dynamics of binaries in stellar clusters – III. Doubly averaged dynamics in the presence of general-relativistic precession. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 505, 4151-4177.	4.4	9
5	Planet formation in stellar binaries: global simulations of planetesimal growth. <i>Astronomy and Astrophysics</i> , 2021, 652, A104.	5.1	12
6	Planet-driven density waves in protoplanetary discs: Numerical verification of non-linear evolution theory. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 508, 2329-2349.	4.4	11
7	Boundary layers of accretion discs: Discovery of vortex-driven modes and other waves. <i>Monthly Notices of the Royal Astronomical Society</i> , 2021, 509, 440-462.	4.4	7
8	Planet-Disk Interaction in Disks with Cooling: Basic Theory. <i>Astrophysical Journal</i> , 2020, 892, 65.	4.5	38
9	A Fast $O(N^2)$ Fragmentation Algorithm. <i>Astrophysical Journal, Supplement Series</i> , 2020, 247, 65.	7.7	3
10	Gaps and Rings in Protoplanetary Disks with Realistic Thermodynamics: The Critical Role of In-plane Radiation Transport. <i>Astrophysical Journal</i> , 2020, 904, 121.	4.5	22
11	Doppler Boosting of the S-stars in the Galactic Center. <i>Astrophysical Journal Letters</i> , 2020, 905, L35.	8.3	2
12	Potential softening and eccentricity dynamics in razor-thin, nearly Keplerian discs. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 489, 4176-4195.	4.4	8
13	Compact Object Binary Mergers Driven By Cluster Tides: A New Channel for LIGO/Virgo Gravitational-wave Events. <i>Astrophysical Journal Letters</i> , 2019, 881, L13.	8.3	17
14	Secular dynamics of binaries in stellar clusters – II. Dynamical evolution. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 488, 5512-5535.	4.4	23
15	Envelopes of embedded super-Earths – I. Two-dimensional simulations. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 487, 2319-2334.	4.4	12
16	On the Planetary Interpretation of Multiple Gaps and Rings in Protoplanetary Disks Seen By ALMA. <i>Astrophysical Journal Letters</i> , 2019, 878, L9.	8.3	43
17	The Gemini Planet Imager Exoplanet Survey: Giant Planet and Brown Dwarf Demographics from 10 to 100 au. <i>Astronomical Journal</i> , 2019, 158, 13.	4.7	270
18	Multiple Spiral Arms in Protoplanetary Disks: Linear Theory. <i>Astrophysical Journal</i> , 2019, 875, 37.	4.5	22

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19	Disk Accretion Driven by Spiral Shocks. <i>Astrophysical Journal</i> , 2018, 854, 84.	4.5	17
20	Fast and Slow Precession of Gaseous Debris Disks around Planet-accreting White Dwarfs. <i>Astrophysical Journal</i> , 2018, 857, 135.	4.5	29
21	Spin Evolution and Cometary Interpretation of the Interstellar Minor Object 1I/2017 $\hat{\text{a}}^{\text{TM}}$ Oumuamua. <i>Astrophysical Journal Letters</i> , 2018, 867, L17.	8.3	36
22	Secular Evolution Driven by Massive Eccentric Disks/Rings: An Apsidally Aligned Case. <i>Astrophysical Journal</i> , 2018, 864, 74.	4.5	9
23	1I/2017 $\hat{\text{a}}^{\text{TM}}$ Oumuamua-like Interstellar Asteroids as Possible Messengers from Dead Stars. <i>Astrophysical Journal</i> , 2018, 861, 35.	4.5	39
24	NEAR-INFRARED IMAGING POLARIMETRY OF INNER REGION OF GG TAU A DISK. <i>Astronomical Journal</i> , 2017, 153, 7.	4.7	12
25	Radial Transport and Meridional Circulation in Accretion Disks. <i>Astrophysical Journal</i> , 2017, 837, 101.	4.5	14
26	Protoplanetary Disks as (Possibly) Viscous Disks. <i>Astrophysical Journal</i> , 2017, 837, 163.	4.5	62
27	SEARCHING FOR BINARY SUPERMASSIVE BLACK HOLES VIA VARIABLE BROAD EMISSION LINE SHIFTS: LOW BINARY FRACTION. <i>Astrophysical Journal</i> , 2017, 834, 129.	4.5	38
28	Evidence That the Directly Imaged Planet HD 131399 Ab Is a Background Star. <i>Astronomical Journal</i> , 2017, 154, 218.	4.7	52
29	DISCOVERY OF A SUBSTELLAR COMPANION TO THE NEARBY DEBRIS DISK HOST HR 2562. <i>Astrophysical Journal Letters</i> , 2016, 829, L4.	8.3	60
30	AN M DWARF COMPANION AND ITS INDUCED SPIRAL ARMS IN THE HD 100453 PROTOPLANETARY DISK. <i>Astrophysical Journal Letters</i> , 2016, 816, L12.	8.3	96
31	TATOOINE NURSERIES: STRUCTURE AND EVOLUTION OF CIRCUMBINARY PROTOPLANETARY DISKS. <i>Astrophysical Journal</i> , 2016, 816, 94.	4.5	29
32	ON THE ECCENTRICITY EXCITATION IN POST-MAIN-SEQUENCE BINARIES. <i>Astrophysical Journal</i> , 2016, 830, 8.	4.5	30
33	ACCRETION AND ORBITAL INSPIRAL IN GAS-ASSISTED SUPERMASSIVE BLACK HOLE BINARY MERGERS. <i>Astrophysical Journal</i> , 2016, 827, 111.	4.5	25
34	GENERALIZED SIMILARITY FOR ACCRETION/DECRETION DISKS. <i>Astrophysical Journal</i> , 2016, 830, 7.	4.5	20
35	PROTOPLANETARY DISK HEATING AND EVOLUTION DRIVEN BY SPIRAL DENSITY WAVES. <i>Astrophysical Journal</i> , 2016, 831, 122.	4.5	54
36	OBSERVATIONAL SIGNATURES OF PLANETS IN PROTOPLANETARY DISKS: SPIRAL ARMS OBSERVED IN SCATTERED LIGHT IMAGING CAN BE INDUCED BY PLANETS. <i>Astrophysical Journal Letters</i> , 2015, 809, L5.	8.3	198

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37	THE STRUCTURE OF SPIRAL SHOCKS EXCITED BY PLANETARY-MASS COMPANIONS. <i>Astrophysical Journal</i> , 2015, 813, 88.	4.5	149
38	BIRTH LOCATIONS OF THE <i>KEPLER</i> CIRCUMBINARY PLANETS. <i>Astrophysical Journal</i> , 2015, 808, 58.	4.5	48
39	PLANET FORMATION IN STELLAR BINARIES. II. OVERCOMING THE FRAGMENTATION BARRIER IN $\hat{\iota}$ CENTAURI AND $\hat{\iota}^3$ CEPHEI-LIKE SYSTEMS. <i>Astrophysical Journal</i> , 2015, 798, 70.	4.5	61
40	PLANET FORMATION IN BINARIES: DYNAMICS OF PLANETESIMALS PERTURBED BY THE ECCENTRIC PROTOPLANETARY DISK AND THE SECONDARY. <i>Astrophysical Journal</i> , 2015, 798, 71.	4.5	64
41	PLANET FORMATION IN STELLAR BINARIES. I. PLANETESIMAL DYNAMICS IN MASSIVE PROTOPLANETARY DISKS. <i>Astrophysical Journal</i> , 2015, 798, 69.	4.5	61
42	VISCOSITY PRESCRIPTION FOR GRAVITATIONALLY UNSTABLE ACCRETION DISKS. <i>Astrophysical Journal</i> , 2015, 804, 62.	4.5	36
43	SCATTERING OUTCOMES OF CLOSE-IN PLANETS: CONSTRAINTS ON PLANET MIGRATION. <i>Astrophysical Journal</i> , 2014, 786, 101.	4.5	93
44	ANGULAR MOMENTUM TRANSPORT BY ACOUSTIC MODES GENERATED IN THE BOUNDARY LAYER. II. MAGNETOHYDRODYNAMIC SIMULATIONS. <i>Astrophysical Journal</i> , 2013, 770, 68.	4.5	21
45	PLANET FORMATION IN SMALL SEPARATION BINARIES: NOT SO SECULARLY EXCITED BY THE COMPANION. <i>Astrophysical Journal Letters</i> , 2013, 765, L8.	8.3	56
46	ANALYSIS OF SPIN-ORBIT MISALIGNMENT IN THE ECLIPSING BINARY DI HERCULIS. <i>Astrophysical Journal</i> , 2013, 768, 112.	4.5	43
47	LOW-MASS PLANETS IN PROTOPLANETARY DISKS WITH NET VERTICAL MAGNETIC FIELDS: THE PLANETARY WAKE AND GAP OPENING. <i>Astrophysical Journal</i> , 2013, 768, 143.	4.5	71
48	SEARCH FOR SUPERMASSIVE BLACK HOLE BINARIES IN THE SLOAN DIGITAL SKY SURVEY SPECTROSCOPIC SAMPLE. <i>Astrophysical Journal</i> , 2013, 777, 44.	4.5	68
49	STRUCTURE AND EVOLUTION OF CIRCUMBINARY DISKS AROUND SUPERMASSIVE BLACK HOLE BINARIES. <i>Astrophysical Journal</i> , 2013, 774, 144.	4.5	48
50	BUILDING TATOOINE: SUPPRESSION OF THE DIRECT SECULAR EXCITATION IN <i>KEPLER</i> CIRCUMBINARY PLANET FORMATION. <i>Astrophysical Journal Letters</i> , 2013, 764, L16.	8.3	69
51	ANGULAR MOMENTUM TRANSPORT BY ACOUSTIC MODES GENERATED IN THE BOUNDARY LAYER. I. HYDRODYNAMICAL THEORY AND SIMULATIONS. <i>Astrophysical Journal</i> , 2013, 770, 67.	4.5	37
52	ANGULAR MOMENTUM TRANSPORT AND VARIABILITY IN BOUNDARY LAYERS OF ACCRETION DISKS DRIVEN BY GLOBAL ACOUSTIC MODES. <i>Astrophysical Journal</i> , 2012, 760, 22.	4.5	21
53	INNER EDGES OF COMPACT DEBRIS DISKS AROUND METAL-RICH WHITE DWARFS. <i>Astrophysical Journal</i> , 2012, 760, 123.	4.5	84
54	DISK-SATELLITE INTERACTION IN DISKS WITH DENSITY GAPS. <i>Astrophysical Journal</i> , 2012, 758, 33.	4.5	24

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55	THE ORIGIN OF THE NEGATIVE TORQUE DENSITY IN DISK-SATELLITE INTERACTION. <i>Astrophysical Journal</i> , 2012, 747, 24.	4.5	24
56	Global models of runaway accretion in white dwarf debris discs. <i>Monthly Notices of the Royal Astronomical Society</i> , 2012, 423, 505-528.	4.4	127
57	GLOBAL MODELING OF RADIATIVELY DRIVEN ACCRETION OF METALS FROM COMPACT DEBRIS DISKS ONTO WHITE DWARFS. <i>Astrophysical Journal</i> , 2011, 741, 36.	4.5	52
58	DENSITY WAVES EXCITED BY LOW-MASS PLANETS IN PROTOPLANETARY DISKS. I. LINEAR REGIME. <i>Astrophysical Journal</i> , 2011, 741, 56.	4.5	68
59	METAL ACCRETION ONTO WHITE DWARFS CAUSED BY POYNTING-ROBERTSON DRAG ON THEIR DEBRIS DISKS. <i>Astrophysical Journal Letters</i> , 2011, 732, L3.	8.3	109
60	DENSITY WAVES EXCITED BY LOW-MASS PLANETS IN PROTOPLANETARY DISKS. II. HIGH-RESOLUTION SIMULATIONS OF THE NONLINEAR REGIME. <i>Astrophysical Journal</i> , 2011, 741, 57.	4.5	89
61	Runaway accretion of metals from compact discs of debris on to white dwarfs. <i>Monthly Notices of the Royal Astronomical Society: Letters</i> , 2011, 416, L55-L59.	3.3	130
62	Non-power law behavior in fragmentation cascades. <i>Icarus</i> , 2011, 214, 179-193.	2.5	12
63	STELLAR PROPER MOTION AND THE TIMING OF PLANETARY TRANSITS. <i>Astrophysical Journal</i> , 2009, 700, 965-970.	4.5	43
64	PROPERTIES OF GRAVITOTURBULENT ACCRETION DISKS. <i>Astrophysical Journal</i> , 2009, 704, 281-291.	4.5	145
65	Can Giant Planets Form by Direct Gravitational Instability?. <i>Astrophysical Journal</i> , 2005, 621, L69-L72.	4.5	336