

# Rajiv Aggarwal

## List of Publications by Year in descending order

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79  
papers

743  
citations

516710

16  
h-index

642732

23  
g-index

79  
all docs

79  
docs citations

79  
times ranked

119  
citing authors

#	ARTICLE	IF	CITATIONS
1	On the axisymmetric restricted five-body problem within the frame of variable mass: The convex case. <i>New Astronomy</i> , 2022, 92, 101697.	1.8	2
2	The study of Newtonâ€™s Raphson basins of convergence in the three-dipole problem. <i>Nonlinear Dynamics</i> , 2022, 107, 829-854.	5.2	1
3	Modified Robeâ€™s Problem with Perturbations in the Coriolis and Centrifugal Forces. <i>Few-Body Systems</i> , 2022, 63, 1.	1.5	3
4	On the topology of basins of convergence linked to libration points in the modified R3BP with oblateness. <i>New Astronomy</i> , 2022, 94, 101776.	1.8	5
5	The influence of third order terms on basins of convergence in the HÃ©nonâ€™-Heiles type system. <i>New Astronomy</i> , 2022, 94, 101761.	1.8	0
6	Effect of Earthâ€™s Equatorial Ellipticity on the Resonant Curve and Phase Portrait of Geo-centric Satellite Under the Gravitational Effect of the Earthâ€™-Moonâ€™-Sun System by Using Unperturbed Solution. <i>Few-Body Systems</i> , 2022, 63, 1.	1.5	0
7	Fractal basins of convergence in the restricted rhomboidal six-body problem. <i>New Astronomy</i> , 2022, 94, 101798.	1.8	2
8	On the beyond-Newtonian collinear circular restricted $(3 + 1)$ -body problem with spinning primaries. <i>Astrophysics and Space Science</i> , 2022, 367, .	1.4	3
9	Restricted $2 + 2$ body problem with oblateness and straight segment. <i>Journal of Astrophysics and Astronomy</i> , 2022, 43, .	1.0	2
10	On the rhomboidal restricted five-body problem: Analysis of the basins of convergence. <i>New Astronomy</i> , 2022, , 101893.	1.8	0
11	Assessing the Effects of Holling Type-II Treatment Rate on HIV-TB Co-infection. <i>Acta Biotheoretica</i> , 2021, 69, 1-35.	1.5	7
12	Estimating the impact of antiretroviral therapy on HIV-TB co-infection: Optimal strategy prediction. <i>International Journal of Biomathematics</i> , 2021, 14, 2150004.	2.9	4
13	On the modified circular restricted three-body problem with variable mass. <i>New Astronomy</i> , 2021, 84, 101510.	1.8	14
14	The analysis of basins of convergence in the regular polygon problem of $(N+1)$ bodies system with spheroidal primaries. <i>New Astronomy</i> , 2021, 85, 101530.	1.8	1
15	Assessing the impact of transmissibility on a cluster-based COVID-19 model in India. <i>International Journal of Modeling, Simulation, and Scientific Computing</i> , 2021, 12, 2141002.	1.4	5
16	Fractal basins of attraction in a binary quasar model. <i>New Astronomy</i> , 2021, 84, 101543.	1.8	1
17	Emerging therapeutic approaches to COVID-19. <i>Current Pharmaceutical Design</i> , 2021, 27, 3370-3388.	1.9	2
18	On the basins of convergence in the magneticâ€™binary problem with angular velocity. <i>Computational and Mathematical Methods</i> , 2021, 3, e1161.	0.8	4

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19	A fractional order HIV-TB co-infection model in the presence of exogenous reinfection and recurrent TB. <i>Nonlinear Dynamics</i> , 2021, 104, 4701-4725.	5.2	15
20	On the Sitnikov-like $N$ -body problem with quasi-homogeneous potential. <i>Computational and Mathematical Methods</i> , 2021, 3, e1180.	0.8	1
21	On the Perturbed Restricted 2+2 Body Problem when the Primaries are Non-spherical. <i>Few-Body Systems</i> , 2021, 62, .	1.5	5
22	Effect of three-body interaction on the topology of basins of convergence linked to the libration points in the R3BP. <i>Planetary and Space Science</i> , 2021, 205, 105281.	1.7	4
23	Combined effect of small perturbations in the Coriolis and centrifugal forces and three-body interaction on the existence of stationary points in the R3BP. <i>New Astronomy</i> , 2021, 89, 101630.	1.8	8
24	Optimal control strategies on COVID-19 infection to bolster the efficacy of vaccination in India. <i>Scientific Reports</i> , 2021, 11, 20124.	3.3	16
25	Analyzing the Effect of Vaccination Over COVID Cases and Deaths in Asian Countries Using Machine Learning Models. <i>Frontiers in Cellular and Infection Microbiology</i> , 2021, 11, 806265.	3.9	7
26	The analysis of periodic orbits generated by Lagrangian solutions of the restricted three-body problem with non-spherical primaries. <i>New Astronomy</i> , 2020, 74, 101287.	1.8	14
27	Dynamics of HIV-TB co-infection with detection as optimal intervention strategy. <i>International Journal of Non-Linear Mechanics</i> , 2020, 120, 103388.	2.6	16
28	The effect of radiation pressure on the basins of convergence in the restricted four-body problem. <i>Chaos, Solitons and Fractals</i> , 2020, 141, 110347.	5.1	8
29	Stability analysis of a delayed HIV-TB co-infection model in resource limitation settings. <i>Chaos, Solitons and Fractals</i> , 2020, 140, 110138.	5.1	15
30	The study of the fractal basins of convergence linked with equilibrium points in the perturbed $(N + 1)$ -body ring problem. <i>Astronomische Nachrichten</i> , 2020, 341, 741-761.	1.2	2
31	An insight on the restricted problem of 2+2 bodies with straight segment. <i>Astronomische Nachrichten</i> , 2020, 341, 669-683.	1.2	8
32	The unpredictability of the basins of attraction in photogravitational Chermnykh's problem. <i>Astrophysics and Space Science</i> , 2020, 365, 1.	1.4	8
33	Determining the Properties of the Basins of Convergence in the Generalized Hénon-Heiles System. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2020, 30, 2050007.	1.7	3
34	On the spatial collinear restricted four-body problem with non-spherical primaries. <i>Chaos, Solitons and Fractals</i> , 2020, 133, 109609.	5.1	17
35	Analysis of Copenhagen problem with a repulsive quasi-homogeneous Manev type potential within the frame of variable mass. <i>Astronomische Nachrichten</i> , 2020, 341, 410-423.	1.2	0
36	The perturbed restricted three-body problem with angular velocity: Analysis of basins of convergence linked to the libration points. <i>International Journal of Non-Linear Mechanics</i> , 2020, 123, 103494.	2.6	3

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37	Unveiling the basins of convergence in the pseudo-Newtonian planar circular restricted four-body problem. <i>New Astronomy</i> , 2019, 66, 52-67.	1.8	8
38	Orbit classification in the Copenhagen problem with oblate primaries. <i>Astronomische Nachrichten</i> , 2019, 340, 760-770.	1.2	3
39	The analysis of restricted five-body problem within frame of variable mass. <i>New Astronomy</i> , 2019, 70, 12-21.	1.8	39
40	Divulging the effect of small perturbations in the Coriolis and centrifugal forces in the photogravitational version of autonomous restricted four-body problem with oblate primary. <i>Astronomische Nachrichten</i> , 2019, 340, 413-429.	1.2	1
41	On the perturbed photogravitational restricted five-body problem: the analysis of fractal basins of convergence. <i>Astrophysics and Space Science</i> , 2019, 364, 1.	1.4	8
42	On the Convergence Dynamics of the Sitnikov Problem with Non-spherical Primaries. <i>International Journal of Applied and Computational Mathematics</i> , 2019, 5, 1.	1.6	3
43	The effect of small perturbations in the Coriolis and centrifugal forces in the axisymmetric restricted five-body problem. <i>Astrophysics and Space Science</i> , 2019, 364, 1.	1.4	17
44	On the Newton-Raphson basins of convergence associated with the libration points in the axisymmetric restricted five-body problem: The concave configuration. <i>International Journal of Non-Linear Mechanics</i> , 2019, 112, 25-47.	2.6	21
45	Networks of periodic orbits in the circular restricted three-body problem with first order post-Newtonian terms. <i>Meccanica</i> , 2019, 54, 2339-2365.	2.0	9
46	On the fractal basins of convergence of the libration points in the axisymmetric five-body problem: The convex configuration. <i>International Journal of Non-Linear Mechanics</i> , 2019, 109, 80-106.	2.6	22
47	Revealing the existence and stability of equilibrium points in the circular autonomous restricted four-body problem with variable mass. <i>New Astronomy</i> , 2019, 68, 1-9.	1.8	5
48	Out-of-plane equilibrium points and regions of motion in the photogravitational R3BP when the primaries are heterogeneous spheroid with three layers. <i>New Astronomy</i> , 2018, 63, 15-26.	1.8	19
49	Robe's Restricted Problem of 2 + 2 Bodies with a Roche Ellipsoid - Triaxial System. <i>Journal of the Astronautical Sciences</i> , 2018, 65, 63-81.	1.5	7
50	Exploring the fractal basins of convergence in the restricted four-body problem with oblateness. <i>International Journal of Non-Linear Mechanics</i> , 2018, 102, 62-71.	2.6	25
51	On the existence of libration points in the spatial collinear restricted four-body problem within frame of repulsive Manev potential and variable mass. <i>Chaos, Solitons and Fractals</i> , 2018, 117, 94-104.	5.1	10
52	Basins of Convergence in the Circular Sitnikov Four-Body Problem with Nonspherical Primaries. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2018, 28, 1830016.	1.7	14
53	The effect of small perturbations in the Coriolis and centrifugal forces on the existence of libration points in the restricted four-body problem with variable mass. <i>Astronomische Nachrichten</i> , 2018, 339, 492-512.	1.2	15
54	Comparing the Geometry of the Basins of Attraction, the Speed and the Efficiency of Several Numerical Methods. <i>International Journal of Applied and Computational Mathematics</i> , 2018, 4, 1.	1.6	4

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55	Revealing the Newton-Raphson basins of convergence in the circular pseudo-Newtonian Sitnikov problem. <i>International Journal of Non-Linear Mechanics</i> , 2018, 105, 43-54.	2.6	8
56	Fractal basins of convergence of libration points in the planar Copenhagen problem with a repulsive quasi-homogeneous Manev-type potential. <i>International Journal of Non-Linear Mechanics</i> , 2018, 103, 113-127.	2.6	24
57	On the photo-gravitational restricted four-body problem with variable mass. <i>Astrophysics and Space Science</i> , 2018, 363, 1.	1.4	20
58	Investigating the Basins of Convergence in the Circular Sitnikov Three-Body Problem with Non-spherical Primaries. <i>Few-Body Systems</i> , 2018, 59, 1.	1.5	15
59	On the restricted four-body problem with the effect of small perturbations in the Coriolis and centrifugal forces. <i>Astrophysics and Space Science</i> , 2017, 362, 1.	1.4	38
60	The Nonlinear Stability of L 4 in the R3BP when the Smaller Primary is a Heterogeneous Spheroid. <i>Journal of the Astronautical Sciences</i> , 2017, 64, 18-49.	1.5	15
61	Effect of oblateness on the existence and location of libration points in R4BP. , 2017, , .		0
62	Resonance in the perturbations of a synchronous satellite due to angular rate of the earth-moon system around the sun and the earth's rotation rate. <i>International Journal of Advanced Astronomy</i> , 2016, 4, 68-75.	0.1	3
63	Perturbed Robe's restricted problem of 2+2 bodies when the primaries form a Roche ellipsoid-triaxial system. <i>Journal of Dynamical Systems and Geometric Theories</i> , 2016, 14, 99-117.	0.2	5
64	Stability of libration points in the restricted four-body problem with variable mass. <i>Astrophysics and Space Science</i> , 2016, 361, 1.	1.4	33
65	Periodic Orbits in the Photogravitational Restricted Problem When the Primaries Are Triaxial Rigid Bodies. <i>International Journal of Astronomy and Astrophysics</i> , 2016, 06, 111-121.	0.5	3
66	Combined effects of Finite Straight Segment and Oblateness on the Libration Points in the Restricted-Three Body Problem. <i>International Journal of Technology</i> , 2016, 6, 185.	0.5	0
67	Perturbed Robe's Restricted Problem of 2+2 Bodies when the primaries form a Roche Ellipsoid-Triaxial System. <i>International Journal of Technology</i> , 2016, 6, 150.	0.5	0
68	A study of non-collinear libration points in restricted three body problem with stokes drag effect when smaller primary is an oblate spheroid. <i>Astrophysics and Space Science</i> , 2015, 358, 1.	1.4	28
69	Restricted Three Body Problem with Stokes Drag Effect. <i>International Journal of Astronomy and Astrophysics</i> , 2015, 05, 95-105.	0.5	7
70	Effect of Perturbations in Coriolis and Centrifugal Forces on the Non-Linear Stability of $L_4$ in the Photogravitational Restricted Three Body Problem. <i>International Journal of Astronomy and Astrophysics</i> , 2015, 05, 275-290.	0.5	0
71	Existence and Stability of Non-Collinear Librations Points in the Restricted Problem with Poynting Robertson Light Drag Effect. <i>International Journal of Mathematics Trends and Technology</i> , 2015, 19, 20-33.	0.1	5
72	Robe's restricted problem of 2+2 bodies when the bigger primary is a Roche ellipsoid and the smaller primary is an oblate body. <i>Astrophysics and Space Science</i> , 2014, 349, 57-69.	1.4	23

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73	Resonance in a geo-centric synchronous satellite under the gravitational forces of the Sun, the Moon and the Earth including its equatorial ellipticity. <i>Astrophysics and Space Science</i> , 2014, 349, 727-743.	1.4	3
74	Robe's restricted problem of 2+2 bodies with one of the primaries an oblate body. <i>Astrophysics and Space Science</i> , 2014, 352, 467-479.	1.4	16
75	Perturbations of a geo-centric synchronous satellite with resonance. <i>Astrophysics and Space Science</i> , 2014, 353, 417-424.	1.4	2
76	Resonance in a geo-centric satellite due to earth's equatorial ellipticity. <i>Astrophysics and Space Science</i> , 2013, 347, 249-259.	1.4	8
77	Resonance in the earth-moon system around the sun including earth's equatorial ellipticity. <i>Astrophysics and Space Science</i> , 2013, 348, 367-375.	1.4	3
78	Robe's restricted problem of 2+2 bodies when the bigger primary is a Roche ellipsoid. <i>Acta Astronautica</i> , 2013, 89, 31-37.	3.2	21
79	Robe's problem: its extension to 2+2 bodies. <i>Astrophysics and Space Science</i> , 2012, 339, 283-294.	1.4	27