Giovanni B Valsecchi

List of Publications by Year
in descending order

153	3,753	186265	144013
papers	citations	28 h-index	57 g-index

158	158	158	2154
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Source regions and timescales for the delivery of water to the Earth. Meteoritics and Planetary Science, 2000, 35, 1309-1320.	1.6	701
2	Asteroids falling into the Sun. Nature, 1994, 371, 314-317.	27.8	217
3	Global risks: Pool knowledge to stem losses from disasters. Nature, 2015, 522, 277-279.	27.8	148
4	Quantifying the Risk Posed by Potential Earth Impacts. Icarus, 2002, 159, 423-432.	2.5	141
5	Meteoroid stream identification: a new approach -- I. Theory. Monthly Notices of the Royal Astronomical Society, 1999, 304, 743-750.	4.4	118
6	Resonant returns to close approaches: Analytical theory. Astronomy and Astrophysics, 2003, 408, 1179-1196.	5.1	111
7	Nonlinear impact monitoring: line of variation searches for impactors. Icarus, 2005, 173, 362-384.	2.5	102
8	Large Scattered Planetesimals and the Excitation of the Small Body Belts. Icarus, 1999, 141, 367-387.	2.5	96
9	Injection of Oort Cloud comets: the fundamental role of stellar perturbations. Celestial Mechanics and Dynamical Astronomy, 2008, 102, 111-132.	1.4	79
10	Dynamical and compositional assessment of nearâ€Earth object mission targets. Meteoritics and Planetary Science, 2004, 39, 351-366.	1.6	72
11	Planetary accretion rates: Analytical derivation. Icarus, 1991, 94, 98-111.	2.5	71
12	Basic targeting strategies for rendezvous and flyby missions to the near-Earth asteroids. Planetary and Space Science, 2001, 49, 3-22.	1.7	64
13	Outcomes of planetary close encounters: A systematic comparison of methodologies. Icarus, 1988, 75, 1-29.	2.5	63
14	The dynamical structure of the MEO region: long-term stability, chaos, and transport. Celestial Mechanics and Dynamical Astronomy, 2016, 124, 335-366.	1.4	61
15	The Dynamics of Objects in Orbits Resembling That of P/Encke. Icarus, 1995, 118, 169-180.	2.5	58
16	Neptune Scattered Planetesimals Could Have Sculpted the Primordial Edgeworthâ€“Kuiper Belt. Icarus, 1997, 128, 464-468.	2.5	55
17	Long term impact risk for (101955) 1999 RQ36RQ36. Icarus, 2009, 203, 460-471.	2.5	53
18	Chaos in navigation satellite orbits caused by the perturbed motion of the Moon. Monthly Notices of the Royal Astronomical Society, 2015, 449, 3522-3526.	4.4	52

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19	Virtual Impactors: Search and Destroy. Icarus, 2000, 145, 12-24.	2.5	47
20	Asteroid close encounters with Earth: risk assessment. Planetary and Space Science, 2000, 48, 945-954.	1.7	44
21	Deflecting NEOs in Route of Collision with the Earth. Icarus, 2002, 159, 417-422.	2.5	44
22	The Criticality of Spacecraft Index. Advances in Space Research, 2015, 56, 449-460.	2.6	42
23	Tidal evolution and the Pluto-Charon system. The Moon and the Planets, 1979, 20, 415-421.	0.5	38
24	Asteroid Close Approaches:. , 2002, , 55-70.		37
25	Meteoroid stream identification: a new approach -- II. Application to 865 photographic meteor orbits. Monthly Notices of the Royal Astronomical Society, 1999, 304, 751-758.	4.4	36
26	The key role of massive stars in Oort cloud comet dynamics. Icarus, 2011, 214, 334-347.	2.5	36
27	Gaia and the new comets from the Oort cloud. Planetary and Space Science, 2012, 73, 124-129.	1.7	33
28	The Asteroid Identification Problem. Icarus, 1999, 140, 408-423.	2.5	31
29	The Long-Term Evolution Project. Astrophysics and Space Science Library, 1985, , 203-214.	2.7	30
30	Solar radiation pressure resonances in Low Earth Orbits. Monthly Notices of the Royal Astronomical Society, 2018, 473, 2407-2414.	4.4	29
31	Some remarks on the capture of Triton and the origin of Pluto. Icarus, 1980, 44, 810-812.	2.5	28
32	Meteor stream identification: a new approach - III. The limitations of statistics. Monthly Notices of the Royal Astronomical Society, 2003, 344, 665-672.	4.4	28
33	Long-term effects of the Galactic tide on cometary dynamics. Celestial Mechanics and Dynamical Astronomy, 2006, 95, 299-326.	1.4	28
34	Planetary perturbations for Oort Cloud comets. I. Distributions and dynamics. Icarus, 2013, 222, 20-31.	2.5	28
35	Long-term dynamics beyond Neptune: secular models to study the regular motions. Celestial Mechanics and Dynamical Astronomy, 2016, 126, 369-403.	1.4	28
36	Collision risk against space debris in Earth orbits. Celestial Mechanics and Dynamical Astronomy, 2006, 95, 345-356.	1.4	27

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37	A numerical investigation on the eccentricity growth of GNSS disposal orbits. Celestial Mechanics and Dynamical Astronomy, 2016, 125, 71-90.	1.4	26
38	A Simple Probabilistic Model to Estimate the Population of near-Earth Asteroids. Icarus, 2001, 153, 214-217.	2.5	25
39	Effectiveness of GNSS disposal strategies. Acta Astronautica, 2014, 99, 292-302.	3.2	24
40	Cavezzo, the first Italian meteorite recovered by the PRISMA fireball network. Orbit, trajectory, and strewn-field. Monthly Notices of the Royal Astronomical Society, 2020, 501, 1215-1227.	4.4	24
41	The last revolution of new comets: the role of stars and their detectability. Astronomy and Astrophysics, 2011, 535, A86.	5.1	23
42	Planetary close encounters: Importance of nearly tangent orbits. The Moon and the Planets, 1980, 22, 113-124.	0.5	22
43	Comparison between Different Models of Galactic Tidal Effects on Cometary Orbits. Celestial Mechanics and Dynamical Astronomy, 2005, 93, 229-262.	1.4	22
44	Physical investigation of the potentially hazardous Asteroid (144898) 2004 VD17. Icarus, 2007, 191, 628-635.	2.5	22
45	The long-term evolution and initial size of comets 46P/Wirtanen and 67P/Churyumov-Gerasimenko. Monthly Notices of the Royal Astronomical Society, 2007, 376, 1399-1406.	4.4	22
46	Non-resonant secular dynamics of trans-Neptunian objects perturbed by a distant super-Earth. Celestial Mechanics and Dynamical Astronomy, 2017, 129, 329-358.	1.4	22
47	Conservation of the Tisserand parameter at close encounters of interplanetary objects with Jupiter. Earth, Moon and Planets, 1995, 68, 71-94.	0.6	21
48	Study and application of the resonant secular dynamics beyond Neptune. Celestial Mechanics and Dynamical Astronomy, 2017, 127, 477-504.	1.4	20
49	Monte Carlo methods to calculate impact probabilities. Astronomy and Astrophysics, 2014, 569, A47.	5.1	19
50	On the present shape of the Oort cloud and the flux of â€œnewâ€•comets. Icarus, 2017, 292, 218-233.	2.5	19
51	Secular orbital evolution of Jupiter family comets. Astronomy and Astrophysics, 2017, 598, A110.	5.1	19
52	Galileo disposal strategy: stability, chaos and predictability. Monthly Notices of the Royal Astronomical Society, 2017, 464, 4063-4076.	4.4	19
53	Stellar perturbations on the scattered disk. Astronomy and Astrophysics, 2004, 428, 673-681.	5.1	19
54	The Distribution of Energy Perturbations at Planetary Close Encounters. Celestial Mechanics and Dynamical Astronomy, 2000, 78, 83-91.	1.4	18

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55	Planetary perturbations for Oort cloud comets: II. Implications for the origin of observable comets. Icarus, 2014, 231, 110-121.	2.5	18
56	Planetary perturbations for Oort cloud comets: III. Evolution of the cloud and production of centaurs and Halley type comets. Icarus, 2014, 231, 99-109.	2.5	16
57	Natural highways for end-of-life solutions in the LEO region. Celestial Mechanics and Dynamical Astronomy, 2018, 130, 1.	1.4	16
58	Efficiency of a wide-area survey in achieving short- and long-term warning for small impactors. Icarus, 2012, 219, 41-47.	2.5	15
59	Nongravitational perturbations and virtual impactors: the case of asteroid (410777) 2009 FD. Astronomy and Astrophysics, 2014, 572, A100.	5.1	15
60	Cometary impact rates on the Moon and planets during the late heavy bombardment. Astronomy and Astrophysics, 2017, 598, A67.	5.1	15
61	The effect of orbital eccentricities on the shape of the hill-type analytical stability surfaces in the general three-body problem. Celestial Mechanics, 1984, 32, 217-230.	0.1	13
62	Significant high number commensurabilities in the main lunar problem. I: The Saros as a near-periodicity of the moon's orbit. Celestial Mechanics and Dynamical Astronomy, 1991, 52, 241-261.	1.4	13
63	Risk of collisions for constellation satellites. Nature, 1999, 399, 743-743.	27.8	13
64	Algorithms for Stellar Perturbation Computations on Oort Cloud Comets. Earth, Moon and Planets, 2006, 97, 411-434.	0.6	13
65	Distant retrograde orbits and the asteroid hazard. European Physical Journal Plus, 2017, 132, 1.	2.6	13
66	Collision risk for high inclination satellite constellations. Planetary and Space Science, 2000, 48, 319-330.	1.7	12
67	On the possible values of the orbit distance between a near-Earth asteroid and the Earth. Monthly Notices of the Royal Astronomical Society, 2013, 429, 2687-2699.	4.4	12
68	From Jupiter-family to Encke-like orbits. Astronomy and Astrophysics, 2004, 422, 369-375.	5.1	11
69	Completeness of Impact Monitoring. Icarus, 2019, 321, 647-660.	2.5	10
70	Effects of a close encounter with Jupiter on different populations of planet-crossing objects. The Moon and the Planets, 1980, 22, 133-139.	0.5	9
71	Visualizing Impact Probabilities of Space Debris. Space Debris, 1999, 1, 143-158.	0.7	9
72	An analytical solution for the swing-by problem. Celestial Mechanics and Dynamical Astronomy, 2015, 123, 151-166.	1.4	8

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73	Distribution of long-period comets: comparison between simulations and observations. Astronomy and Astrophysics, 2017, 604, A24.	5.1	8
74	A frequency portrait of Low Earth Orbits. Celestial Mechanics and Dynamical Astronomy, 2019, 131, 1.	1.4	8
75	A dynamical analysis of the Taurid Complex: evidence for past orbital convergences. Monthly Notices of the Royal Astronomical Society, 2021, 507, 2568-2591.	4.4	8
76	High-order librations of Halley-type comets. , 1988, , 899-905.		8
77	Strong Perturbations at Close Encounters with Jupiter. Astrophysics and Space Science Library, 1982, , 379-384.	2.7	8
78	Modelling close encounters with Ã–pik's theory. Planetary and Space Science, 1997, 45, 1561-1574.	1.7	7
79	From the Oort cloud to observable short-period comets -- I. The initial stage of cometary capture. Monthly Notices of the Royal Astronomical Society, 2001, 325, 1303-1311.	4.4	7
80	Resonant Fly-by Missions to Near Earth Asteroids. Celestial Mechanics and Dynamical Astronomy, 2002, 83, 49-62.	1.4	7
81	Close encounters and collisions of Near-Earth asteroids with the Earth. Comptes Rendus Physique, 2005, 6, 337-344.	0.9	7
82	Environmental effect of space debris repositioning. Advances in Space Research, 2017, 60, 28-37.	2.6	7
83	Exploiting dynamical perturbations for the end-of-life disposal of spacecraft in LEO. Astronomy and Computing, 2019, 27, 1-10.	1.7	7
84	Near Earth Asteroid search and follow-up beyond 22nd magnitude. Astronomy and Astrophysics, 2004, 418, 743-750.	5.1	7
85	Geometric Conditions for Quasi-Collisions in Ã¶pikâ€™s Theory. , 2006, , 145-158.		6
86	A New Protocol for the Astrometric Follow-up of Near Earth Asteroids. Earth, Moon and Planets, 2007, 100, 31-41.	0.6	6
87	Orbital and mission planning constraints for the deflection of NEOs impacting on Earth. Icarus, 2008, 194, 450-462.	2.5	6
88	A case study of the May 30, 2017, Italian fireball. European Physical Journal Plus, 2020, 135, 1.	2.6	6
89	On the past orbital history of comet P/Halley. Celestial Mechanics, 1987, 43, 319-322.	0.1	5
90	Analysis of the Space Debris Impacts Risk on the International Space Station. Celestial Mechanics and Dynamical Astronomy, 2002, 83, 63-76.	1.4	5

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91	Risk of Collision for the Navigation Constellations: The Case of the Forthcoming Galileo. Journal of the Astronautical Sciences, 2004, 52, 455-474.	1.5	5
92	Cartography of the b-plane of a close encounter I: semimajor axes of post-encounter orbits. Celestial Mechanics and Dynamical Astronomy, 2018, 130, 1.	1.4	5
93	Luminous efficiency of meteors derived from ablation model after assessment of its range of validity. Astronomy and Astrophysics, 2021, 652, A84.	5.1	5
94	Statistical and Numerical Studies of the Orbital Evolution of Short-Period Comets. Astrophysics and Space Science Library, 1985, , 261-278.	2.7	5
95	Low Velocity Encounters of Minor Bodies with the Outer Planets. Astrophysics and Space Science Library, 1983, , 377-395.	2.7	5
96	Sources of Planetary Rotation: Mapping Planetesimals' Contributions to Angular Momentum. Icarus, 1997, 129, 384-400.	2.5	4
97	Close Encounters in Ã–pikâ€™s Theory. Lecture Notes in Physics, 2002, , 145-178.	0.7	4
98	Eliminating Virtual Impactors with the Very Large Telescope: An ESO Program with the FORS2 Camera. Earth, Moon and Planets, 2003, 93, 239-248.	0.6	4
99	236 years ago.Â.Â.. Proceedings of the International Astronomical Union, 2006, 2, xvii-xx.	0.0	4
100	Development of a Realistic Set of Synthetic Earth Impactor Orbits. , 2019, , .		4
101	Yarkovsky effect detection and updated impact hazard assessment for near-Earth asteroid (410777) 2009 FD. Astronomy and Astrophysics, 2019, 627, L11.	5.1	4
102	Improving impact monitoring through Line Of Variations densification. Icarus, 2020, 351, 113966.	2.5	4
103	Significant High Number Commensurabilities in the Main Lunar Problem: A Postscript to a Discovery of the Ancient Chaldeans. NATO ASI Series Series B: Physics, 1991, , 273-282.	0.2	4
104	From Jupiter-family comets to objects in Encke-like orbits. International Astronomical Union Colloquium, 1999, 173, 353-364.	0.1	4
105	Significant high number commensurabilities in the main lunar problem II: The occurrence of Saros-like near periodicities. Celestial Mechanics and Dynamical Astronomy, 1993, 57, 341-358.	1.4	3
106	The arrangement in mean elements space of the periodic orbits close to that of the Moon. Celestial Mechanics and Dynamical Astronomy, 1993, 56, 373-380.	1.4	3
107	The probable collision of P/Shoemaker-Levy 9 (1993e) with Jupiter in 1994. Planetary and Space Science, 1994, 42, 663-667.	1.7	3
108	Small satellite missions to Long-Period Comets: The Hale-Bopp opportunity. Acta Astronautica, 1996, 39, 45-50.	3.2	3

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109	Mapping the Effects of Distant Perturbations on Particleâ€“Planet Interactions. Icarus, 1997, 125, 288-301.	2.5	3
110	Is the dynamics of Jupiter family comets amenable to Monte Carlo modelling?. Monthly Notices of the Royal Astronomical Society, 2003, 344, 1283-1295.	4.4	3
111	The Campo Imperatore Near Earth Object Survey (CINEOS). Earth, Moon and Planets, 2007, 100, 259-271.	0.6	3
112	The population of bright NEAs. Proceedings of the International Astronomical Union, 2012, 10, 492-493.	0.0	3
113	A space mission to detect imminent Earth impactors. Proceedings of the International Astronomical Union, 2012, 10, 488-489.	0.0	3
114	Methods for the Study of the Dynamics of the Oort Cloud Comets II: Modelling the Galactic Tide. , 2007, , 273-296.		3
115	Dynamical Features of the Oort Cloud Comets. Lecture Notes in Physics, 2010, , 401-430.	0.7	3
116	The Distribution of Energy Perturbations at Planetary Close Encounters. , 2001, , 83-91.		3
117	Dynamics of Comets. Symposium - International Astronomical Union, 1992, 152, 255-268.	0.1	2
118	Exploiting Earth horseshoe orbits for space missions. Planetary and Space Science, 1998, 46, 1623-1626.	1.7	2
119	Collision risk: a new method for assessing and visualizing it. Acta Astronautica, 2003, 53, 203-217.	3.2	2
120	Possible meteoroid streams associated with (69230) Hermes and 2002 SY50. Earth, Moon and Planets, 2006, 95, 5-10.	0.6	2
121	The definition of planet: A dynamicist's point of view. Serbian Astronomical Journal, 2009, , 1-5.	0.6	2
122	How an aware usage of the long-term dynamics can improve the long-term situation in the LEO region. Acta Astronautica, 2020, 174, 159-165.	3.2	2
123	The size of collision solutions in orbital elements space. Proceedings of the International Astronomical Union, 2004, 2004, 249-254.	0.0	1
124	Low solar elongation searches for NEO: a deep sky test and its implications for survey strategies. Proceedings of the International Astronomical Union, 2006, 2, 291-300.	0.0	1
125	Selection effects in the discovery of NEAs. Proceedings of the International Astronomical Union, 2012, 10, 490-491.	0.0	1
126	The geometry of impacts on a synchronous planetary satellite. Celestial Mechanics and Dynamical Astronomy, 2014, 119, 257-270.	1.4	1

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127	EXECUTIVE COMMITTEE WORKING GROUP: PUBLIC NAMING OF PLANETS AND PLANETARY SATELLITES. Proceedings of the International Astronomical Union, 2015, 11, 539-548.	0.0	1
128	The evolution of the Line of Variations at close encounters: an analytic approach. Celestial Mechanics and Dynamical Astronomy, 2019, 131, 1.	1.4	1
129	Evaluating the Risk of Impacts and the Efficiency of Risk Reduction. , 2007, , 203-210.		1
130	Planetary Close Encounters: The Engine of Cometary Orbital Evolution. , 1999, , 187-196.		1
131	Resonant Fly-by Missions to near Earth Asteroids. , 2002, , 49-62.		1
132	Collision risk against space debris in Earth orbits. , 2006, , 345-356.		1
133	Low Velocity Encounters of Minor Bodies With the Outer Planets. International Astronomical Union Colloquium, 1983, 74, 377-395.	0.1	0
134	The Use of Geocentric Variables to Search for Meteoroid Streams and Their Parents. International Astronomical Union Colloquium, 1999, 172, 55-64.	0.1	0
135	On The Orbit Of The Moon. Earth, Moon and Planets, 1999, 85/86, 443-443.	0.6	0
136	Commission 20: Positions and Motions of Minor Planets, Comets and Satellites: (Positions et) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 387 Astronomical Union, 2000, 24, 140-143.	0.0	0
137	Commission 20: Positions and Motions of Minor Planets, Comets and Satellites. Proceedings of the International Astronomical Union, 2005, 1, 153-160.	0.0	0
138	Working Group on Definition of Planet. Proceedings of the International Astronomical Union, 2005, 1, 189-189.	0.0	0
139	Divisions I & III WG: on Near Earth Objects. Proceedings of the International Astronomical Union, 2005, 1, 187-188.	0.0	0
140	Collision probability: a new analytical derivation. , 2010, , .		0
141	Whom should we call? Data policy for immediate impactors announcements. Proceedings of the International Astronomical Union, 2012, 10, 484-485.	0.0	0
142	Ranking in-orbit fragmentations and space objects. Proceedings of the International Astronomical Union, 2014, 9, 118-125.	0.0	0
143	Periodic Orbits Close to That of the Moon in Hill's Problem. Frontiers in Astronomy and Space Sciences, 2018, 5, .	2.8	0
144	Order statistics andheavy-taileddistributions for planetary perturbations on Oort cloud comets. Astronomy and Astrophysics, 2010, 513, A14.	5.1	0

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145	On the Past Orbital History of Comet P/Halley. , 1988, , 319-322.		0
146	The Arrangement in Mean Elements Space of the Periodic Orbits Close to that of the Moon. , 1993, , 373-380.		0
147	Significant High Number Commensurabilities in the Main Lunar Problem II: The Occurrence of Saros-Like Near Periodicities. , 1993, , 341-358.		0
148	Hunting for Periodic Orbits Close to that of the Moon in the Restricted Circular Three-Body Problem. NATO ASI Series Series B: Physics, 1995, , 231-234.	0.2	0
149	Dynamics in the Jovian System. Astrophysics and Space Science Library, 1997, , 401-410.	2.7	0
150	The Use of Geocentric Variables to Search for Meteoroid Streams and Their Parents. , 1999, , 55-64.		0
151	Possible Meteoroid Streams Associated with (69230) Hermes and 2002 SY50. , 2005, , 5-10.		0
152	Long-term effects of the Galactic tide on cometary dynamics. , 2006, , 299-326.		0
153	Methods for the Study of the Dynamics of the Oort Cloud Comets I: Modelling the Stellar Perturbations. , 2007, , 257-272.		0