Mirek Giersz

List of Publications by Year
in descending order

87 papers	3,804 citations	117625 34 h-index	128289 60 g-index
90 all docs	90 docs citations	90 times ranked	2020 citing authors

#	Article	IF	Citations
1	Evolutionary roads leading to low effective spins, high black hole masses, and O1/O2 rates for LIGO/Virgo binary black holes. Astronomy and Astrophysics, 2020, 636, A104.	5.1	256
2	MOCCA-SURVEY Database â€“ I. Coalescing binary black holes originating from globular clusters. Monthly Notices of the Royal Astronomical Society: Letters, 2017, 464, L36-L40.	3.3	252
3	The dragon simulations: globular cluster evolution with a million stars. Monthly Notices of the Royal Astronomical Society, 2016, 458, 1450-1465.	4.4	192
4	MOCCA code for star cluster simulations â€“ IV. A new scenario for intermediate mass black hole formation in globular clusters. Monthly Notices of the Royal Astronomical Society, 2015, 454, 3150-3165.	4.4	176
5	Compact binaries in star clusters - I. Black hole binaries inside globular clusters. Monthly Notices of the Royal Astronomical Society, 2010, 407, 1946-1962.	4.4	162
6	DYNAMICS OF PLANETARY SYSTEMS IN STAR CLUSTERS. Astrophysical Journal, 2009, 697, 458-482.	4.5	145
7	Statistics of N-body simulations - I. Equal masses before core collapse. Monthly Notices of the Royal Astronomical Society, 1994, 268, 257-275.	4.4	132
8	MOCCA code for star cluster simulations â€“ II. Comparison with N-body simulations. Monthly Notices of the Royal Astronomical Society, 2013, 431, 2184-2199.	4.4	113
9	mocca code for star cluster simulations â€“ I. Blue stragglers, first results. Monthly Notices of the Royal Astronomical Society, 2013, 429, 1221-1243.	4.4	103
10	Statistics of N-body simulations – III. Unequal masses. Monthly Notices of the Royal Astronomical Society, 1996, 279, 1037-1056.	4.4	96
11	mocca-survey Database I: Galactic globular clusters harbouring a black hole subsystem. Monthly Notices of the Royal Astronomical Society, 2018, 478, 1844-1854.	4.4	93
12	MOCCA-SURVEY Database. I. Eccentric Black Hole Mergers during Binaryâ€“Single Interactions in Globular Clusters. Astrophysical Journal, 2018, 855, 124.	4.5	89
13	The origin of the first neutron star â€“ neutron star merger. Astronomy and Astrophysics, 2018, 615, A91.	5.1	85
14	MOCCA-Survey Database â€“ I. Unravelling black hole subsystems in globular clusters. Monthly Notices of the Royal Astronomical Society, 2018, 479, 4652-4664.	4.4	83
15	Statistics of N-body simulations – IV. Unequal masses with a tidal field. Monthly Notices of the Royal Astronomical Society, 1997, 286, 709-731.	4.4	80
16	Monte Carlo simulations of star clusters - VII. The globular cluster 47 Tuc. Monthly Notices of the Royal Astronomical Society, 2011, 410, 2698-2713.	4.4	70
17	Monte Carlo simulations of star clusters – II. Tidally limited, multimass systems with stellar evolution. Monthly Notices of the Royal Astronomical Society, 2001, 324, 218-230.	4.4	63
18	A comparison of direct N-body integration with anisotropic gaseous models of star clusters. Monthly Notices of the Royal Astronomical Society, 1994, 269, 241-256.	4.4	61

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19	Intermediate mass black hole formation in compact young massive star clusters. Monthly Notices of the Royal Astronomical Society, 2021, 501, 5257-5273.	4.4	60
20	Binary black hole mergers from globular clusters: the impact of globular cluster properties. Monthly Notices of the Royal Astronomical Society, 2018, 480, 5645-5656.	4.4	58
21	Compact binaries in star clusters - II. Escapers and detection rates. Monthly Notices of the Royal Astronomical Society, 2011, , no-no.	4.4	57
22	Monte Carlo simulations of star clusters - V. The globular cluster M4. Monthly Notices of the Royal Astronomical Society, 2008, 389, 1858-1870.	4.4	55
23	Monte Carlo simulations of star clusters IV. Calibration of the Monte Carlo code and comparison with observations for the open cluster M67. Monthly Notices of the Royal Astronomical Society, 2008, 388, 429-443.	4.4	53
24	The state of globular clusters at birth â€“ II. Primordial binaries. Monthly Notices of the Royal Astronomical Society, 2015, 446, 226-239.	4.4	52
25	Statistics of N-body simulations - II. Equal masses after core collapse. Monthly Notices of the Royal Astronomical Society, 1994, 270, 298-324.	4.4	51
26	Monte Carlo simulations of star clusters -- I. First Results. Monthly Notices of the Royal Astronomical Society, 1998, 298, 1239-1248.	4.4	49
27	A stochastic Monte Carlo approach to modelling real star cluster evolution -- III. Direct integration of three- and four-body interactions. Monthly Notices of the Royal Astronomical Society, 2003, 343, 781-795.	4.4	49
28	A stochastic Monte Carlo approach to model real star cluster evolution–II. Self-consistent models and primordial binaries. Monthly Notices of the Royal Astronomical Society, 2000, 317, 581-606.	4.4	47
29	Monte Carlo simulations of star clusters - VI. The globular cluster NGC 6397. Monthly Notices of the Royal Astronomical Society, 2009, 395, 1173-1183.	4.4	47
30	mocca survey data baseâ€“ i. Dissolution of tidally filling star clusters harbouring black hole subsystems. Monthly Notices of the Royal Astronomical Society, 2019, 487, 2412-2423.	4.4	42
31	MOCCA-SURVEY database I. Accreting white dwarf binary systems in globular clusters â€“ IV. Cataclysmic variables â€“ properties of bright and faint populations. Monthly Notices of the Royal Astronomical Society, 2019, 483, 315-331.	4.4	40
32	The MÂ4 Core Project with HST â€“ II. Multiple stellar populations at the bottom of the main sequence. Monthly Notices of the Royal Astronomical Society, 2014, 439, 1588-1595.	4.4	39
33	On the initial binary population for star cluster simulations. Monthly Notices of the Royal Astronomical Society, 2017, 471, 2812-2828.	4.4	38
34	Monte Carlo simulations of star clusters - III. A million-body star cluster. Monthly Notices of the Royal Astronomical Society, 2006, 371, 484-494.	4.4	35
35	MOCCA-SURVEY Database I: Assessing GW kick retention fractions for BHâ€“BH mergers in globular clusters. Monthly Notices of the Royal Astronomical Society, 2018, 481, 2168-2179.	4.4	35
36	In Search of the Thermal Eccentricity Distribution. Astrophysical Journal, 2019, 872, 165.	4.5	35

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37	Monte Carlo simulations of star clusters - I. First Results. Monthly Notices of the Royal Astronomical Society, 1998, 298, 1239-1248.	4.4	34
38	mocca code for star cluster simulations â€“ III. Stellar-mass black holes in the globular cluster M22. Monthly Notices of the Royal Astronomical Society, 2014, 439, 2459-2467.	4.4	32
39	MODEST-2: a summary. New Astronomy, 2003, 8, 605-628.	1.8	31
40	The state of globular clusters at birth: emergence from the gas-embedded phase. Monthly Notices of the Royal Astronomical Society, 2013, 436, 3399-3412.	4.4	31
41	No cataclysmic variables missing: higher merger rate brings into agreement observed and predicted space densities. Monthly Notices of the Royal Astronomical Society, 2018, 478, 5626-5637.	4.4	31
42	1 Gyr in the life of the globular cluster NGC 6397. Monthly Notices of the Royal Astronomical Society: Letters, 2009, 397, L46-L50.	3.3	30
43	MOCCA-SURVEY database I. Accreting white dwarf binary systems in globular clusters â€“ I. Cataclysmic variables â€“ present-day population. Monthly Notices of the Royal Astronomical Society, 2016, 462, 2950-2969.	4.4	30
44	Breaching the Limit: Formation of GW190521-like and IMBH Mergers in Young Massive Clusters. Astrophysical Journal, 2021, 920, 128.	4.5	30
45	Mass evaporation rate of globular clusters in a strong tidal field. Monthly Notices of the Royal Astronomical Society, 2017, 470, 1729-1737.	4.4	27
46	Black hole mergers in compact star clusters and massive black hole formation beyond the mass gap. Monthly Notices of the Royal Astronomical Society, 2022, 512, 884-898.	4.4	27
47	A stochastic Monte Carlo approach to modelling of real star cluster evolution -- I. The model. Monthly Notices of the Royal Astronomical Society, 1996, 283, 805-810.	4.4	26
48	Dynamical formation of cataclysmic variables in globular clusters. Monthly Notices of the Royal Astronomical Society, 2017, 464, 2511-2516.	4.4	26
49	Preparing the next gravitational million-body simulations: evolution of single and binary stars in <tt> <scp>nbody6++gpu</scp> </tt>, <tt> <scp>mocca</scp> </tt>, and <tt> <scp>mcluster</scp> </tt>. Monthly Notices of the Royal Astronomical Society, 2022, 511, 4060-4089.	4.4	24
50	MOCCA-SURVEY Database I: Is NGCâ€‰6535 a dark star cluster harbouring an IMBH?. Monthly Notices of the Royal Astronomical Society, 2017, 464, 3090-3100.	4.4	21
51	mocca-survey Database I: Binary black hole mergers from globular clusters with intermediate mass black holes. Monthly Notices of the Royal Astronomical Society, 2020, 498, 4287-4294.	4.4	21
52	Dynamical evolution of multiple-population globular clusters. Monthly Notices of the Royal Astronomical Society, 2021, 502, 4290-4304.	4.4	21
53	Revisiting the universality of (multiple) star formation in present-day star formation regions. Monthly Notices of the Royal Astronomical Society, 2014, 441, 3503-3512.	4.4	20
54	The dynamical origin of multiple populations in intermediate-age clusters in the Magellanic Clouds. Monthly Notices of the Royal Astronomical Society, 2017, 472, 67-77.	4.4	20

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55	mocca-SURVEY database I. Accreting white dwarf binary systems in globular clusters â€“ III. Cataclysmic variables â€“ implications of model assumptions. Monthly Notices of the Royal Astronomical Society, 2017, 468, 2429-2446.	4.4	20
56	A simple dynamical evolutionary model for Â Cen. Monthly Notices of the Royal Astronomical Society, 2003, 339, 486-490.	4.4	19
57	The MÂ4 Core Project with HST â€“ III. Search for variable stars in the primary fieldâ˜¼. Monthly Notices of the Royal Astronomical Society, 2014, 442, 2381-2391.	4.4	18
58	Prospects for detection of intermediate-mass black holes in globular clusters using integrated-light spectroscopy. Monthly Notices of the Royal Astronomical Society, 2017, 467, 4057-4066.	4.4	15
59	Dynamical Simulations: Methods and Comparisons. , 1998, , 591-596.		15
60	The M 4 Core Project with HST: I. Overview and first epoch. Astronomische Nachrichten, 2013, 334, 1062-1085.	1.2	13
61	MOCCA-SURVEY database I. Accreting white dwarf binary systems in globular clusters â€“ II. Cataclysmic variables â€“ progenitors and population at birth. Monthly Notices of the Royal Astronomical Society, 2017, 464, 4077-4095.	4.4	13
62	Dynamical equivalence, the origin of the Galactic field stellar and binary population, and the initial radiusâ€“mass relation of embedded clusters. Monthly Notices of the Royal Astronomical Society, 2018, 474, 3740-3745.	4.4	13
63	Finding black holes with black boxes â€“ using machine learning to identify globular clusters with black hole subsystems. Monthly Notices of the Royal Astronomical Society, 2019, 485, 5345-5362.	4.4	13
64	mocca code for star cluster simulations â€“ VI. Bimodal spatial distribution of blue stragglers. Monthly Notices of the Royal Astronomical Society, 2017, 471, 2537-2552.	4.4	12
65	Anisotropic gaseous models of tidally limited star clusters: comparison with other methods. Monthly Notices of the Royal Astronomical Society, 2005, 364, 948-960.	4.4	11
66	mocca code for star cluster simulations â€“ V. Initial globular cluster conditions influence on blue stragglers. Monthly Notices of the Royal Astronomical Society, 2017, 466, 320-339.	4.4	10
67	On the absence of symbiotic stars in globular clusters. Monthly Notices of the Royal Astronomical Society, 2020, 496, 3436-3447.	4.4	10
68	MOCCA-SURVEY data base II â€“ Properties of intermediate mass black holes escaping from star clusters. Monthly Notices of the Royal Astronomical Society, 2022, 514, 5879-5889.	4.4	9
69	A Monte Carlo study of early gas expulsion and evolution of star clusters: new simulations with the MOCCA code in the <scp>amuse</scp> framework. Monthly Notices of the Royal Astronomical Society, 2022, 514, 5739-5750.	4.4	8
70	MOCCA Survey Database: extra Galactic globular clusters. I. Method and first results. Monthly Notices of the Royal Astronomical Society, 2021, 501, 5212-5228.	4.4	7
71	MOCCA-survey data base: extra galactic globular clusters â€“ II. Milky Way and Andromeda. Monthly Notices of the Royal Astronomical Society, 2022, 514, 5751-5766.	4.4	6
72	Dynamical Simulations: Methods and Comparisons. Highlights of Astronomy, 1998, 11, 590-596.	0.0	3

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73	COCOA Code for Creating Mock Observations of Star Cluster Models. Monthly Notices of the Royal Astronomical Society, 2018, , .	4.4	3
74	Stellar-mass Black Holes in Globular Clusters: Dynamical consequences and observational signatures. Proceedings of the International Astronomical Union, 2019, 14, 395-399.	0.0	2
75	Collisional Dynamics of Black Holes, Star Clusters and Galactic Nuclei. , 2003, , 71-87.		2
76	Forming short period sub-stellar companions in 47 Tuc: I.ÂDynamical model and brown dwarf tidal capture rates. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	2
77	MOCCA-SURVEY Database I: Dissolution of tidally filling star clusters harboring black hole subsystem. Proceedings of the International Astronomical Union, 2019, 14, 438-441.	0.0	1
78	Are most Cataclysmic Variables in Globular Clusters dynamically formed?. Proceedings of the International Astronomical Union, 2019, 14, 404-407.	0.0	1
79	Monte-Carlo Simulations. Symposium - International Astronomical Union, 1996, 174, 101-110.	0.1	0
80	Monte Carlo Simulations of Million Body Star Clusters. Symposium - International Astronomical Union, 2003, 208, 393-394.	0.1	0
81	Modelling Individual Globular Clusters. Proceedings of the International Astronomical Union, 2007, 3, 121-130.	0.0	0
82	Monte Carlo Simulations of Star Clusters with Primordial Binaries. Comparison with N-body Simulations and Observations. Proceedings of the International Astronomical Union, 2007, 3, 99-103.	0.0	0
83	High-resolution simulations of globular cluster dynamics. Astronomische Nachrichten, 2008, 329, 1065-1067.	1.2	0
84	Monte Carlo modeling of globular star clusters: many primordial binaries and IMBH formation. Proceedings of the International Astronomical Union, 2014, 10, 213-222.	0.0	0
85	MOCCA code for star cluster simulation: comparison with optical observations using COCOA. Proceedings of the International Astronomical Union, 2014, 10, 262-263.	0.0	0
86	MOCCA survey database I: Preliminary mock Extra Galactic Globular Cluster observations. Proceedings of the International Astronomical Union, 2019, 14, 122-125.	0.0	0
87	BEANS â€“ distributed data analysis for numerical simulations. Proceedings of the International Astronomical Union, 2019, 14, 460-463.	0.0	0