Hajime Sotani

List of Publications by Year
in descending order

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87 papers	3,873 citations	172207 29 h-index	123241 61 g-index
88 all docs	88 docs citations	88 times ranked	2649 citing authors

#	Article	IF	Citations
1	Gravitational wave asteroseismology on cooling neutron stars. Physical Review D, 2022, 105, .	1.6	9
2	New constraints on the neutron-star mass and radius relation from terrestrial nuclear experiments. Progress of Theoretical and Experimental Physics, 2022, 2022, .	1.8	16
3	Neutron star mass formula with nuclear saturation parameters. Physical Review D, 2022, 105, .	1.6	6
4	Accuracy of one-dimensional approximation in neutron star quasi-normal modes. European Physical Journal C, 2022, 82, .	1.4	1
5	Neutron star asteroseismology and nuclear saturation parameter. Physical Review D, 2021, 103, .	1.6	16
6	Stability of the protoneutron stars towards black hole formation. Monthly Notices of the Royal Astronomical Society, 2021, 507, 2766-2776.	1.6	7
7	Universal relations between the quasinormal modes of neutron star and tidal deformability. Physical Review D, 2021, 104, .	1.6	21
8	Universal relation for supernova gravitational waves. Physical Review D, 2021, 104, .	1.6	17
9	Gravitational wave asteroseismology for low-mass neutron stars. Physical Review D, 2020, 102, .	1.6	14
10	Dimension dependence of numerical simulations on gravitational waves from protoneutron stars. Physical Review D, 2020, 102, .	1.6	24
11	Avoided crossing in gravitational wave spectra from protoneutron star. Monthly Notices of the Royal Astronomical Society, 2020, 498, 3503-3512.	1.6	17
12	Estimating the nuclear saturation parameter via low-mass neutron star asteroseismology. Physical Review D, 2020, 102, .	1.6	10
13	Accuracy of the relativistic Cowling approximation in protoneutron star asteroseismology. Physical Review D, 2020, 102, .	1.6	17
14	Equation of state for quark matter with strong magnetic field and hybrid stars. Journal of Physics: Conference Series, 2020, 1468, 012087.	0.3	1
15	Light curves from highly compact neutron stars with spot size effect. Physical Review D, 2020, 101, .	1.6	15
16	Space gravitational-wave antennas DECIGO and B-DECIGO. International Journal of Modern Physics D, 2019, 28, 1845001.	0.9	73
17	Finite size effects on the light curves of slowly-rotating neutron stars. Physical Review D, 2019, 100, .	1.6	3
18	Dependence of the outer boundary condition on protoneutron star asteroseismology with gravitational-wave signatures. Physical Review D, 2019, 99, .	1.6	27

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19	Determination of properties of protoneutron stars toward black hole formation via gravitational wave observations. Physical Review D, 2019, 100, .	1.6	22
20	Crustal torsional oscillations and nuclear saturation parameters. AIP Conference Proceedings, 2019, , .	0.3	1
21	Gravitational waves from protoneutron stars and nuclear equation of state. Astronomische Nachrichten, 2019, 340, 217-220.	0.6	0
22	Crustal torsional oscillations inside the deeper pasta structures. Astronomische Nachrichten, 2019, 340, 920-923.	0.6	1
23	Protoneutron Star Properties via Gravitational Wave Asteroseismology. , 2018, , .		0
24	Hybrid Stars as a Third Family of Compact Objects. , 2018, , .		0
25	Constraints on the nuclear equation of state and the neutron star structure from crustal torsional oscillations. Monthly Notices of the Royal Astronomical Society, 2018, 479, 4735-4748.	1.6	35
26	Systematical study of pulsar light curves with special relativistic effects. Physical Review D, 2018, 98, .	1.6	16
27	Pulse profiles of highly compact pulsars in general relativity. Physical Review D, 2018, 98, .	1.6	20
28	Compactness of neutron stars and Tolman VII solutions in scalar-tensor gravity. Physical Review D, 2018, 97, .	1.6	11
29	Maximum mass limit of neutron stars in scalar-tensor gravity. Physical Review D, 2017, 95, .	1.6	38
30	Probing nuclear bubble structure via neutron star asteroseismology. Monthly Notices of the Royal Astronomical Society, 2017, 464, 3101-3107.	1.6	33
31	Effect of nuclear saturation parameters on a possible maximum mass of neutron stars. Physical Review C, 2017, 95, .	1.1	16
32	Probing mass-radius relation of protoneutron stars from gravitational-wave asteroseismology. Physical Review D, 2017, 96, .	1.6	34
33	Sensitivity of pulsar light curves to spacetime geometry and efficacy of analytic approximations. Physical Review D, 2017, 96, .	1.6	8
34	Probing crustal structures from neutron star compactness. Monthly Notices of the Royal Astronomical Society, 2017, 470, 4397-4407.	1.6	17
35	Pulse profiles from a pulsar in scalar-tensor gravity. Physical Review D, 2017, 96, .	1.6	16
36	Low-mass neutron stars: universal relations, the nuclear symmetry energy and gravitational radiation. Monthly Notices of the Royal Astronomical Society, 2016, 459, 4378-4388.	1.6	34

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37	Gravitational wave asteroseismology with protoneutron stars. Physical Review D, 2016, 94, .	1.6	46
38	Empirical formula of crustal torsional oscillations. Physical Review D, 2016, 93, .	1.6	13
39	Possible identifications of newly observed magnetar quasi-periodic oscillations as crustal shear modes. New Astronomy, 2016, 43, 80-86.	0.8	40
40	Magnetized relativistic stellar models in Eddington-inspired Born-Infeld gravity. Physical Review D, 2015, 91, .	1.6	12
41	Strong gravitational lensing by an electrically charged black hole in Eddington-inspired Born-Infeld gravity. Physical Review D, 2015, 92, .	1.6	60
42	Torsional oscillations of neutron stars with highly tangled magnetic fields. Physical Review D, 2015, 92, .	1.6	7
43	Constraining the density dependence of the nuclear symmetry energy from an x-ray bursting neutron star. Physical Review C, 2015, 91, .	1.1	14
44	Massive hybrid quark stars with strong magnetic field. Monthly Notices of the Royal Astronomical Society, 2015, 447, 3155-3161.	1.6	17
45	Testing general relativity with present and future astrophysical observations. Classical and Quantum Gravity, 2015, 32, 243001.	1.5	943
46	Torsional oscillations of neutron stars in scalar-tensor theory of gravity. Physical Review D, 2014, 90, .	1.6	24
47	Properties of an electrically charged black hole in Eddington-inspired Born-Infeld gravity. Physical Review D, 2014, 90, .	1.6	48
48	Stellar oscillations in Eddington-inspired Born-Infeld gravity. Physical Review D, 2014, 89, .	1.6	31
49	Observational discrimination of Eddington-inspired Born-Infeld gravity from general relativity. Physical Review D, 2014, 89, .	1.6	31
50	Electromagnetic waves from neutron stars and black holes driven by polar gravitational perturbations. General Relativity and Gravitation, 2014, 46, 1.	0.7	5
51	Scalar gravitational waves from relativistic stars in scalar-tensor gravity. Physical Review D, 2014, 89, .	1.6	36
52	Electron screening effects on crustal torsional oscillations. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2014, 730, 166-170.	1.5	13
53	Shear oscillations in the hadronâ€“quark mixed phase. Nuclear Physics A, 2013, 906, 37-49.	0.6	16
54	Possible constraints on the density dependence of the nuclear symmetry energy from quasi-periodic oscillations in soft gamma repeaters. Monthly Notices of the Royal Astronomical Society, 2013, 434, 2060-2068.	1.6	56

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55	Gravitationally driven electromagnetic perturbations of neutron stars and black holes. Physical Review D, 2013, 87, .	1.6	12
56	Constraints on the nuclear symmetry energy via asteroseismology. Journal of Physics: Conference Series, 2013, 453, 012016.	0.3	0
57	Probing the Pasta Structure of Neutron Stars. Progress of Theoretical Physics Supplement, 2012, 196, 471-475.	0.2	1
58	Slowly rotating relativistic stars in scalar-tensor gravity. Physical Review D, 2012, 86, .	1.6	58
59	Probing the Equation of State of Nuclear Matter via Neutron Star Asteroseismology. Physical Review Letters, 2012, 108, 201101.	2.9	98
60	NR/HEP: roadmap for the future. Classical and Quantum Gravity, 2012, 29, 244001.	1.5	50
61	Torsional oscillations in tensor-vector-scalar theory. Physical Review D, 2011, 83, .	1.6	7
62	Slowly Rotating Relativistic Stars in TeVeS. Journal of Physics: Conference Series, 2011, 314, 012126.	0.3	0
63	Non-axisymmetric Torsional Oscillations of Relativistic Stars. Journal of Physics: Conference Series, 2011, 314, 012081.	0.3	2
64	Constraints on pasta structure of neutron stars from oscillations in giant flares. Monthly Notices of the Royal Astronomical Society: Letters, 2011, 417, L70-L73.	1.2	42
65	Signatures of hadron-quark mixed phase in gravitational waves. Physical Review D, 2011, 83, .	1.6	87
66	The Japanese space gravitational wave antenna: DECIGO. Classical and Quantum Gravity, 2011, 28, 094011.	1.5	456
67	Stellar oscillations in TeVeS. Journal of Physics: Conference Series, 2010, 229, 012069.	0.3	0
68	Polar oscillations in magnetars. Journal of Physics: Conference Series, 2010, 229, 012079.	0.3	1
69	Slowly rotating relativistic stars in tensor-vector-scalar theory. Physical Review D, 2010, 81, .	1.6	13
70	Toroidal oscillations of a slowly rotating relativistic star in tensor-vector-scalar theory. Physical Review D, 2010, 82, .	1.6	6
71	Probing tensor-vector-scalar theory with gravitational wave asteroseismology. Physical Review D, 2009, 80, .	1.6	29
72	Stellar oscillations in tensor-vector-scalar theory. Physical Review D, 2009, 79, .	1.6	35

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73	AlfvÃ©n polar oscillations of relativistic stars. Monthly Notices of the Royal Astronomical Society, 2009, 395, 1163-1172.	1.6	46
74	Gravitational radiation from collapsing magnetized dust. II. Polar parity perturbation. Physical Review D, 2009, 79, .	1.6	7
75	Structure of neutron stars in tensor-vector-scalar theory. Physical Review D, 2008, 78, .	1.6	43
76	Gravitational radiation from collapsing magnetized dust. Physical Review D, 2007, 75, .	1.6	12
77	Comparison of the velocity distribution between the adhesion approximation and the Euler-Jeans-Newton model. Physical Review D, 2006, 73, .	1.6	1
78	Gravitational waves from a dust disk around a Schwarzschild black hole. Physical Review D, 2006, 74, .	1.6	10
79	Possibility to Probe Gravitational Theory by Gravitational Wave. Journal of Physics: Conference Series, 2006, 31, 147-148.	0.3	0
80	The Japanese space gravitational wave antennaâ€”DECIGO. Classical and Quantum Gravity, 2006, 23, S125-S131.	1.5	388
81	Stellar oscillations in scalar-tensor theory of gravity. Physical Review D, 2005, 71, .	1.6	80
82	Probing strong-field scalar-tensor gravity with gravitational wave asteroseismology. Physical Review D, 2004, 70, .	1.6	105
83	Restricting quark matter models by gravitational wave observation. Physical Review D, 2004, 69, .	1.6	99
84	Nonradial oscillations of quark stars. Physical Review D, 2003, 68, .	1.6	56
85	Density discontinuity of a neutron star and gravitational waves. Physical Review D, 2001, 65, .	1.6	94
86	Quark matter with strong magnetic field and possibility of the third family of compact stars. Monthly Notices of the Royal Astronomical Society, 0, , stx219.	1.6	4
87	Astrophysical implications of double-layer torsional oscillations in a neutron star crust as a lasagna sandwich. Monthly Notices of the Royal Astronomical Society, 0, , .	1.6	23