

List of research papers

Hirotaka Yoshino

I. Refereed research papers

- [I-1] H. Yoshino, K. Izumi, T. Shiromizu, and Y. Tomikawa,
“*Extension of photon surfaces and its area: Static and stationary spacetimes,*”
Prog. Theor. Exp. Phys. (2017) 063E01, [arXiv:1704.04637\[gr-qc\]](#).
- [I-2] T. Shiromizu, Y. Tomikawa, K. Izumi, and H. Yoshino,
“*Area bound for a surface in a strong gravity region,*”
Prog. Theor. Exp. Phys. (2017) 033E01, [arXiv:1701.00564\[gr-qc\]](#).
- [I-3] H. Yoshino,
“*On uniqueness of static photon surface: Perturbative approach,*”
Phys. Rev. D **95** (2017) 044047, [arXiv:1607.07133\[gr-qc\]](#).
- [I-4] H. Yoshino and H. Kodama,
“*Bosenova and Axiverse,*”
Class. Quantum Grav. **32**, 214001 (Invited contribution to the Focus Issue on “Black holes and fundamental fields”), [arXiv:1505.00714 \[gr-qc\]](#).
- [I-5] T. Igata, H. Ishihara, and H. Yoshino,
“*Integrability of Particle System around a Ring Source as the Newtonian Limit of a Black Ring,*”
Phys. Rev. D **91**, 084042 (2015), [arXiv:1412.7033\[hep-th\]](#).
- [I-6] H. Yoshino and H. Kodama,
“*Probing the string axiverse by gravitational waves from Cygnus X-1,*”
Prog. Theor. Exp. Phys. **2015**, 061E01, [arXiv:1407.2030 \[gr-qc\]](#).
- [I-7] H. Yoshino and H. Kodama,
“*Gravitational radiation from an axion cloud around a black hole: Superradiant phase,*”
Prog. Theor. Exp. Phys. **2014**, 043E02 [[arXiv:1312.2326 \[gr-qc\]](#)].
- [I-8] M. Matsumoto, H. Yoshino and H. Kodama,
“*Time evolution of a thin black ring via Hawking radiation,*”
Phys. Rev. D **89**, 044016 (2014) [[arXiv:1205.5715 \[gr-qc\]](#)].
- [I-9] Hirotaka Yoshino and Hideo Kodama,
“*Bosenova collapse of axion cloud around a rotating black hole,*”
Prog. Theor. Phys. **128**, 153 (2012) [[arXiv:1203.5070\[gr-qc\]](#)].
- [I-10] Hirotaka Yoshino,
“*Black hole initial data in Gauss-Bonnet gravity: Momentarily static case,*”
Phys. Rev. D **83**, 104010 (2011) [[arXiv:1102.1810\[gr-qc\]](#)].

- [I-11] M. Shibata and H. Yoshino,
“*Bar-mode instability of rapidly spinning black hole in higher dimensions: Numerical simulation in general relativity,*”
Phys. Rev. D **81**, 104035 (2010) [arXiv:1004.4970 [gr-qc]].
- [I-12] M. Shibata and H. Yoshino,
“*Nonaxisymmetric instability of rapidly rotating black hole in five dimensions,*”
Phys. Rev. D **81**, 021501(R) (2010) [arXiv:0912.3606 [gr-qc]].
- [I-13] K. i. Nakao, H. Abe, H. Yoshino and M. Shibata,
“*Maximal slicing of D -dimensional spherically-symmetric vacuum spacetime,*”
Phys. Rev. D **80**, 084028 (2009) [arXiv:0908.0799 [gr-qc]].
- [I-14] H. Yoshino and M. Shibata,
“*Higher-dimensional numerical relativity: Formulation and code tests,*”
Phys. Rev. D **80**, 084025 (2009) [arXiv:0907.2760 [gr-qc]].
- [I-15] H. Yoshino,
“*On the existence of a static black hole on a brane,*”
J. High Energy Phys. **0901**, 068 (2009) [arXiv:0812.0465 [gr-qc]].
- [I-16] H. Yoshino,
“*Highly distorted apparent horizons and the hoop conjecture,*”
Phys. Rev. D **77**, 041501 (2008) [arXiv:0712.3907 [gr-qc]].
- [I-17] H. Yoshino and T. Shiromizu,
“*Collision of high-energy closed strings: Formation of a ring-like apparent horizon,*”
Phys. Rev. D **76**, 084021 (2007) [arXiv:0707.0076 [gr-qc]].
- [I-18] H. Yoshino, A. Zelnikov and V. P. Frolov,
“*Apparent horizon formation in the head-on collision of gyratons,*”
Phys. Rev. D **75**, 124005 (2007) [arXiv:gr-qc/0703127].
- [I-19] H. Yoshino, T. Shiromizu and M. Shibata,
“*Close-slow analysis for head-on collision of two black holes in higher dimensions: Bowen-York initial data,*”
Phys. Rev. D **74**, 124022 (2006) [arXiv:gr-qc/0610110].
- [I-20] T. Shiromizu and H. Yoshino,
“*Positive energy theorem implies constraints on static stellar models,*”
Prog. Theor. Phys. **116**, 1159 (2007) [arXiv:gr-qc/0609124].
- [I-21] Y. Iwashita, T. Kobayashi, T. Shiromizu and H. Yoshino,
“*Holographic entanglement entropy of de Sitter braneworld,*”
Phys. Rev. D **74**, 064027 (2006) [arXiv:hep-th/0606027].
- [I-22] H. Yoshino and R. B. Mann,
“*Black hole formation in the head-on collision of ultrarelativistic charges,*”
Phys. Rev. D **74**, 044003 (2006) [arXiv:gr-qc/0605131].

- [I-23] T. Shiromizu, S. Yamada and H. Yoshino,
“*On existence of matter outside a static black hole,*”
J. Math. Phys. **47**, 112502 (2006) [arXiv:gr-qc/0605029].
- [I-24] T. Shiromizu, S. Fujii, C. de Rham and H. Yoshino,
“*High-energy effective theory for orbifold branes,*”
Phys. Rev. D **73**, 087301 (2006) [arXiv:hep-th/0602032].
- [I-25] C. de Rham, S. Fujii, T. Shiromizu and H. Yoshino,
“*High-energy effective theory for a bulk brane,*”
Phys. Rev. D **72**, 123522 (2005) [arXiv:hep-th/0509194].
- [I-26] H. Yoshino, T. Shiromizu and M. Shibata,
“*The close limit analysis for head-on collision of two black holes in higher dimensions: Brill-Lindquist initial data,*”
Phys. Rev. D **72**, 084020 (2005) [arXiv:gr-qc/0508063].
- [I-27] Y. Iwashita, H. Yoshino and T. Shiromizu,
“*Gravitational collapse disturbs the dS/CFT correspondence?,*”
Phys. Rev. D **72**, 084014 (2005) [arXiv:gr-qc/0507076].
- [I-28] E. Mitsuda, H. Yoshino and A. Tomimatsu,
“*Electromagnetic radiation due to naked singularity formation in self-similar gravitational collapse,*”
Phys. Rev. D **71**, 084033 (2005) [arXiv:gr-qc/0503104].
- [I-29] H. Yoshino and V. S. Rychkov,
“*Improved analysis of black hole formation in high-energy particle collisions,*”
Phys. Rev. D **71**, 104028 (2005) [Erratum-ibid. *D* **77**, 089905 (2008)] [arXiv:hep-th/0503171].
- [I-30] H. Yoshino,
“*Lightlike limit of the boosted Kerr black holes in higher-dimensional spacetimes,*”
Phys. Rev. D **71**, 044032 (2005) [arXiv:gr-qc/0412071].
- [I-31] H. Yoshino and Y. Nambu,
“*Black ring formation in particle systems,*”
Phys. Rev. D **70**, 084036 (2004) [arXiv:gr-qc/0404109].
- [I-32] H. Yoshino, T. Ohba and A. Tomimatsu,
“*Static black holes with a negative cosmological constant: Deformed horizon and anti-de Sitter boundaries,*”
Phys. Rev. D **69**, 124034 (2004) [arXiv:gr-qc/0402082].
- [I-33] H. Yoshino and Y. Nambu,
“*Black hole formation in the grazing collision of high-energy particles,*”
Phys. Rev. D **67**, 024009 (2003) [arXiv:gr-qc/0209003].
- [I-34] H. Yoshino and Y. Nambu,
“*High-energy head-on collisions of particles and hoop conjecture,*”
Phys. Rev. D **66**, 065004 (2002) [arXiv:gr-qc/0204060].

- [I-35] H. Yoshino, Y. Nambu and A. Tomimatsu,
“*Hoop conjecture for colliding black holes : non-time-symmetric initial data,*”
Phys. Rev. D **65**, 064034 (2002) [arXiv:gr-qc/0109016].

II. Papers in preparation

- [II-1] H. Yoshino, K. Takahashi, and K.-i. Nakao,
“*How does a collapsing star look?,*”
to be submitted

III. Review papers

- [II-1] Hideo Kodama and Hiroataka Yoshino,
“*Axiverse and Black Hole,*”
Int. J. Mod. Phys. Conf. Ser. (IJMPCS) **7**, 84-115 (2012) [arXiv:1108.1365[hep-th]].
- [II-2] H. Yoshino and M. Shibata,
“*Exploring Higher-Dimensional Black Holes in Numerical Relativity,*”
Prog. Theor. Phys. Suppl. **190**, 282-303 (2011).
- [II-3] H. Yoshino and M. Shibata,
“*Higher-Dimensional Numerical Relativity: Current Status,*”
Prog. Theor. Phys. Suppl. **189**, 269-310 (2011).
- [II-4] H. Yoshino and Y. Nambu,
“*Black hole formation in the grazing collision of high-energy particles,*”
Prepared for 10th Marcel Grossmann Meeting on Recent Developments in Theoretical and Experimental General Relativity, Gravitation and Relativistic Field Theories (MG X MMIII), Rio de Janeiro, Brazil, 20-26 Jul 2003