

研究業績リスト

安井幸則

[I] 論文リスト (査読つき学会誌)

- [1] K. Shizuya and Y. Yasui, “Construction of Effective Actions in Superspace”
Phys. Rev. D 29 (1984) 1160-1167.
- [2] Y. Yasui, “The Kähler Potential of $E_6/Spin(10) \times SO(2)$ ”
Prog. Theor. Phys. 72 (1984) 877-880.
- [3] S. Irie and Y. Yasui, “Supersymmetric Non-linear σ Model based on $E_8/SO(10) \times SU(3) \times U(1)$ ”
Z. Phys. C-Particle and Fields 29 (1985) 123-126.
- [4] T. Yanagida and Y. Yasui, “Cancellation on Anomalies in Supersymmetric Sigma Model based on Exceptional Groups”
Nucl. Phys. B 269 (1986) 575-586.
- [5] Y. Yasui, “Global Anomalies in Non-linear Sigma Models based on Exceptional Groups”
Prog. Theor. Phys. 76 (1986) 238-259.
- [6] T. Moriya and Y. Yasui, “Anomalies in Supersymmetric Nonlinear σ Model based on E_ℓ -type Groups”
J. Math. Phys. 27 (1986) 3040-3050.
- [7] S. Uehara and Y. Yasui, “A Superparticle on the Super Poincaré Upper Half-plane”
Phys. Lett. B 202 (1988) 530-534.
- [8] S. Matsumoto and Y. Yasui, “Chaos on the Super Riemann Surface”
Prog. Theor. Phys. 79 (1988) 1022-1027.
- [9] S. Uehara and Y. Yasui, “Super-selberg Trace Formula from the Chaotic Model”
J. Math. Phys. 29 (1988) 2486-2490.
- [10] S. Matsumoto, S. Uehara and Y. Yasui, “Hadamard Model on Super Riemann Surface”

Phys. Lett. A 134 (1988) 81-86.

[11] S. Uehara and Y. Yasui, “Super Beltrami Differentials via 2D Supergravity”
Phys. Lett. B 217 (1989) 479-484.

[12] S. Matsumoto, S. Uehara and Y. Yasui, “A Superparticle on the Super Riemann Surface”
J. Math. Phys. 31 (1990) 476-501.

[13] S. Uehara and Y. Yasui, “The Weil-Petersson Kähler Form on the Super Teichmüller Space”
Phys. Lett. B 250 (1990) 72-78.

[14] S. Uehara and Y. Yasui, “On the Monodromy Group for the Super Schwarzian Differential Equation”
J. Math. Phys. 32 (1991) 2972-2978.

[15] S. Uehara and Y. Yasui, “On the Symplectic Geometry of the Super Teichmüller Space”
Commun. Math. Phys. 144 (1992) 53-86.

[16] T. Hirokane, M. Miyajima and Y. Yasui, “Witten Complex and Supersymmetric Quantum Mechanics on $SO(3)$ ”
J. Math. Phys. 34 (1993) 2789-2806.

[17] Y. Yasui and S. Takahashi, “Unstable Geodesics and Topological Field Theory”
J. Math. Phys. 35 (1994) 4547-4567 [hep-th/9312100].

[18] S. Matsumoto, S. Uehara and Y. Yasui, “Chaotic System on Super Riemann Surface”
Chaos Solitons and Fractals, 5 (1995) 295-316.

[19] Y. Yasui and W. Ogura, “Vortex Filament in Three-manifold and Duistermaat-Heckman Formula”
Phys. Lett. A 210 (1996) 258-266 [hep-th/9508118].

[20] Y. Hashimoto, Y. Yasui, S. Miyagi and T. Ootsuka, “Applications of the Ashtekar Gravity to Four-dimensional Hyperkähler Geometry and Yang-Mills In-

stantons”

J. Math. Phys. 38 (1997) 5822-5839.

[21] Y. Yasui and N. Sasaki, “Differential Geometry of the Vortex Filament Equation”

J. Geom. Phys. 28 (1998) 195-207 [hep-th/9611073].

[22] M. Tsubota, Y. Yasui and W. Ogura, “Quantum Statistics of Three-dimensional Vortex Filament in Superfluid 4He”

J. Low Temp. Phys. 113 (1998) 609-614.

[23] R. Kubo, W. Ogura, T. Saito and Y. Yasui, “The Gauss-Knorrer Map for the Rosochatius Dynamical System”

Phys. Lett. A 251 (1999)6-12.

[24] Y. Yasui, W. Ogura and M. Tsubota, “Path Integral Approach to Vortex Filament in Superfluid 4He”

J. Phys. Soc. Japan, 68 (1999)12-16.

[25] T. Ootsuka, S. Miyagi, Y. Yasui and S. Zeze, “Anti-self-dual Maxwell Solutions on Hyperkähler Manifold and N=2 Supersymmetric Ashtekar Gravity”

Class. Quant. Grav. 16 (1999)1305-1312.

[26] H. Kanno and Y. Yasui, “Octonionic Yang-Mills Instanton on Quaternionic Line Bundle of Spin(7) Holonomy”

J. Geom. Phys. 34 (2000) 302-320.

[27] Y. Yasui and T. Ootsuka, “Spin(7) Holonomy Manifold and Superconnection”

Class. Quant. Grav. 18 (2001) 807-816.

[28] Y. Yasui, T. Takaai and T. Ootsuka, “Macroscopic Quantum Tunneling of a ^7Li Condensate in a Cylindrical Trap”

J. Phys. A 34 (2001)2643-2655.

[29] K. Kasamatsu, Y. Yasui and M. Tsubota, “Macroscopic Quantum Tunneling of Two-component Bose-Einstein Condensates”

Phys. Rev. A 64 , 053605 (2001)1-11.

[30] K. Kasamatsu, Y. Yasui and M. Tsubota, “Macroscopic Quantum Tunneling

of Two-component Bose-Einstein Condensates”

J. Low. Temp. Phys. 126 (2002)437-442.

[31] H. Kanno and Y. Yasui, “On Spin(7) Holonomy Metric based on $SU(3)/U(1)$ ”

J. Geom. Phys. 43(2002) 293-309.

[32] H. Kanno and Y. Yasui, “On Spin(7) Holonomy Metric based on $SU(3)/U(1):II$ ”

J. Geom. Phys. 43(2002) 310-326.

[33] H. Kanno and Y. Yasui, “Harmonic Forms and Deformation of ALC Metrics with Spin(7) Holonomy”

Nucl. Phys. B 650 (2002) 499-474.

[34] M. Hiragane, Y. Yasui and H. Ishihara, “Compact Einstein Spaces based on Quaternionic Kähler Manifolds”

Class. Quant. Grav. 20 (2003) 3933-3950.

[35] Y. Hashimoto, M. Sakaguchi and Y. Yasui, “Sasaki-Einstein Twist of Kerr-AdS Black Holes”

Phys. Lett. B 600 (2004) 270-274.

[36] G. W. Gibbons, S. A. Hartnoll and Y. Yasui, “Properties of Some Five-dimensional Einstein Metrics”

Class. Quant. Grav. 21 (2004) 3933-3950.

[37] Y. Hashimoto, M. Sakaguchi and Y. Yasui, “New Infinite Series of Einstein Metrics on Sphere Bundles from AdS Black Holes”

Commun. Math. Phys. 257 (2005)273-285.

[38] H. Kihara, M. Sakaguchi and Y. Yasui, “Scalar Laplacian on Sasaki-Einstein Manifolds $Y^{p,q}$ ”

Phys. Lett. B 621 (2005) 288-294.

[39] T. Oota and Y. Yasui, “ Toric Sasaki-Einstein Manifolds and Heun Equations”

Nucl. Phys. B 742 (2006) 275-294.

[40] M. Sakaguchi and Y. Yasui, “ Seven-dimensional Einstein Manifolds from Tod-Hitchin Geometry”

J. Geom. Phys. 56(2006)2463-2479.

- [41] M. Sakaguchi and Y. Yasui, “Notes on Five-dimensional Kerr Black Holes”
Int. J. Mod. Phys. A21(2006)2331-2352.
- [42] S. Tomizawa, Y. Morisawa and Y. Yasui, “ Vacuum Solutions of Five Dimensional Einstein Equations generated by Inverse Scattering Method”
Phys. Rev. D73(2006) 064009.
- [43] T. Oota and Y. Yasui, “Explicit Toric Metric on Resolved Calabi-Yau Cone”
Phys. Lett. B 639(2006)54-56.
- [44] T. Oota and Y. Yasui, “New Example of Infinite Family of Quiver Gauge Theories”
Nucl. Phys. B762(2007)377-391.
- [45] N. Hamamoto, T. Houri, T. Oota and Y. Yasui, “Kerr-NUT de Sitter Curvature in All Dimensions”
J. Phys. A40 (2007) F177-F184.
- [46] T. Houri, T. Oota and Y. Yasui, “Closed conformal Killing-Yano tensor and Kerr-NUT-de Sitter spacetime uniqueness” Phys. Lett. **B656** (2007) 214-216.
- [47] T. Houri, T. Oota and Y. Yasui, “Closed conformal Killing-Yano tensor and geodesic integrability” J. Phys. **A41** (2008) 025204.
- [48] Y. Morisawa, S. Tomizawa and Y. Yasui, “Boundary Value Problem for Black Rings” Phys. Rev. **D77** (2008) 064019.
- [49] T. Oota and Y. Yasui, “Separability of Dirac equation in higher dimensional Kerr-NUT-de Sitter spacetime” Phys. Lett. **B659** (2008) 688-693.
- [50] T. Houri, T. Oota and Y. Yasui, “Generalized Kerr-NUT-de Sitter metrics in all dimensions” Phys. Lett. **B666** (2008) 391-394.
- [51] Y. Yasui, “Conformal Killing-Yano tensor and Kerr-NUT-de Sitter spacetime uniqueness” Int. J. Mod. Phys. **A23** (2008) 2169-2171.
- [52] T. Houri, T. Oota and Y. Yasui, ”Closed conformal Killing-Yano tensor and uniqueness of generalized Kerr-NUT-de Sitter spacetime” Class. Quant. Grav. **26**

(2009)045015.

[53] S. Tomizawa, Y. Yasui and A. Ishibashi, "Uniqueness theorem for charged rotating black holes in five-dimensional minimal supergravity" *Phys. Rev. D* **79**(2009)124023.

[54] S. Tomizawa, Y. Yasui and Y. Morisawa "Charged rotating Kaluza-Klein black holes generated by $G_2(2)$ transformation" *Class. Quant. Grav.* **26**(2009)045006.

[55] D. Kubiznak, H.K. Kunduri and Y. Yasui, "Generalized Killing-Yano equations in $D=5$ gauged supergravity" *Phys. Lett. B* **678** (2009) 240-245.

[56] T. Oota and Y. Yasui, "Separability of gravitational perturbation in generalized Kerr-NUT-de Sitter spacetime" *Int. J. Mod. Phys. A* **25** (2010)3055-3094.

[57] T. Houri, D. Kubiznak, C.M. Warnick and Y. Yasui, "Symmetries of the Dirac operator with skew-symmetric torsion" *Class. Quant. Grav.* **27**(2010)185019.

[58] T. Houri, D. Kubiznak, C.M. Warnick and Y. Yasui "Generalized hidden symmetries and Kerr-Sen black hole" *JHEP* (2010) 1007:055.

[59] Y. Yasui and T. Houri, "Hidden Symmetry and Exact Solutions in Einstein Gravity" *Prog. Theor. Phys. Supplement.* **189** (2011)126-164.

[60] T. Houri, D. Kubiznak, C.M. Warnick and Y. Yasui, "Local metrics admitting a principal Killing-Yano tensor with torsion" *Class. Quant. Grav.* **29** (2012) 165001.

[61] T. Houri, H. Takeuchi and Y. Yasui, "A Deformation of Sasakian Structure in the Presence of Torsion and Supergravity Solutions" *Class. Quant. Grav.* **30** (2013) 135008.

[62] K. Hinoue, T. Houri, C. Rugina and Y. Yasui, "General Wahlquist metrics in all dimensions" *Phys. Rev.D* **90** (2014) 024037.

[63] K. Hinoue, S. Mizoguchi and Y. Yasui, "Supersymmetric heterotic solutions via non-SU(3) standard embedding" *Phys. Rev.D* **90** (2014) 106009.

[64] T. Houri and Y. Yasui, "A simple test for spacetime symmetry" *Class. Quant.*

Grav. **32** (2015) 055002.

[65] K. Hinoue and Y. Yasui, "Heterotic Solutions with G2 and Spin(7) Structures" JP Journal of Geometry and Topology **17** (2015) 17-48

[66] T. Houri, K. Tomoda and Y. Yasui, "On integrability of the Killing equation" Class. Quant. Grav. **35** (2018) 075014.

[67] T. Houri, N. Tanahashi and Y. Yasui, "Separability of Maxwell equation in rotating black hole spacetime and its geometric aspects" Advaced Studies in Pure Mathematics **85** (2020) 407-416.

[68] T. Houri, N. Tanahashi and Y. Yasui, "On symmetry operators for the Maxwell equation on the Kerr-NUT-(A)dS spacetime" Class. Quant. Grav. **37** (2020) 015011.

[68] T. Houri, N. Tanahashi and Y. Yasui, "Hidden symmetry and the separability of the Maxwell equation on the Wahlquist spacetime" Class. Quant. Grav. **37** (2020) 075005.

[69] F. Gray, T. Houri, D. Kubiznak and Y. Yasui, "Symmetry operators for the conformal wave equation in rotating black hole spacetime" Phys. Rev.D **104** (2021) 184042.

[II] その他

[70] 場の理論と微分幾何学—Einstein 計量と特殊ホロノミー多様体
数理解科学 特集「幾何学的物理観」2004年2月号

[71] 場の理論と微分幾何学—Einstein 計量と特殊ホロノミー多様体¹
別冊・数理解科学「場の量子論の広がり」2006年10月号 156-163

[72] 高次元ブラックホールの幾何学とコンパクト Einstein 多様体
数理解析研究所講究録第 1668 巻 2009 年 87-96

[73] 特集「物理学と多様体」—幾何学構造がもたらす物理学の理解

¹特集幾何学的物理観で書いた記事に修正を加え再度掲載したものです.

数理科学 2011 年 4 月号

[74] K. Fuziwara, H. Itoyama, S. Kawamoto, H. Kihara, T. Oota, M. Sakaguchi, T. Takayanagi, and Y. Yasui, “PROCEEDING OF THE INTERNATIONAL CONFERENCE ON PROGRESS OF STRING THEORY AND QUANTUM FIELD THEORY” Int. J. Mod. Phys. A23 14 & 15, World Scientific 2008.

[75] アインシュタインが取り入れたリーマン幾何学の発想
特集「幾何学における様々な発想」数理科学 2014 年 3 月号

[76] 接続
特集「テンソルの物理イメージ」数理科学 2015 年 7 月号

[77] リーマン幾何学
安藤正樹（監修, 編集）「相対論と宇宙の事典」朝倉書店 2020