

List of All Publications
Yasuo Matsushita
For 2021 Academic Year

March 7, 2021

Submitted Paper

2020 : Y. Matsushita, P. R. Law

Harmonic indefinite Kaehler structures on Walker manifolds of dimension $2n$ (≥ 4) with a parallel field of totally null 2-planes

Published Papers (refereed)

2018: *Lecture Notes on Indefinite Manifolds & Related Topics, pp.111-174*

Proceedings of The Twenty-First International Workshop on Hermitian Symmetric Spaces and Submanifolds, Volume 21, Eds. By Young Jin Suh, Yoshihiro Ohnita, Byung Hak Kim and Hyunjin Lee.

2017: Y. Matsushita, P. R. Law,

Counterexamples to Goldberg Conjecture with reversed orientation on Walker 8-manifolds of neutral signature,

The 20th International Workshop on Hermitian Symmetric Spaces and Submanifold, Kyungpook National University, Daegu, Korea, 26 - 30, 2016. The 20th Proceedings [IWHSSS2016], Springer Proceedings in Mathematics and Statistics, 2017. MR3710836

2015: Y. Matsushita, P. R. Law and N. Katayama,

Neutral geometry in 4-dimension and counterexamples to Goldberg conjecture constructed on Walker 6-manifolds, Proceedings of The 19th International Workshop on Hermitian-Grassmannian Submanifolds and Its Applications ¥& The 10th RIRCM-OCAMI Joint Differential Geometry Workshop, Institute for Mathematical Sciences (NIMS), Daejeon, South Korea, 26-28 October, 2015. MR3699631

2013: P. R. Law and Y. Matsushita,

Real AlphaBeta-Geometries and Walker Geometry,
Journal of Geometry and Physics **65** (2013), 35-44.

2011: P. R. Law and Y. Matsushita,

Algebraically Special, Real Alpha-Geometries,
Journal of Geometry and Physics **61** (2011), 2064-2080.

2011: Y. Matsushita,

Geometric structures in four-dimension and almost Hermitian structures, in AIP Conference Proceedings, Volume **1340**, International Workshop on Complex Structures, Integrability and Vector Fields (2011) 66-80.

- 2008: P. R. Law and Y. Matsushita
A Spinor Approach to Walker Geometry,
 Communications in Mathematical Physics **287**, (2008), 577-623.
- 2008: J. Davidov, J.C.Díaz-Ramos, E. García-Río, Y. Matsushita, O. Muskarov
 and R. Vázquez-Lorenzo,
Hermitian Walker 4-manifolds,
 Journal of Geometry and Physics **58** (2008), 307-323.
- 2008: E. García-Río, S. Haze, N. Katayama, and Y. Matsushita,
Symplectic, Hermitian and Kähler structures on Walker 4-manifolds,
 Journal of Geometry **90** (2008), 56-65.
- 2007: Y. Matsushita,
*Counterexamples of compact type to the Goldberg conjecture and various
 version of the conjecture*, pp.222-233,
 Proceedings of The 8th International Workshop on Contemporary
 Differential Geometry, *Complex Structures and Vector Fields*, Sofia,
 Bulgaria, August 20 - 26, 2006, eds. S. Dimiev and K. Sekigawa, World
 Scientific 2007.
- 2007: Y. Matsushita, S. Haze and P. R. Law,
Almost Kähler-Einstein structures on 8-dimensional Walker manifolds,
 Monatshefte für Mathematik **150** (2007), 41-48.
- 2007: J. Davidov, J.C.Díaz-Ramos, E. García-Río, Y. Matsushita, O. Muskarov
 and R. Vázquez-Lorenzo,
Almost Kähler 4-manifolds,
 Journal of Geometry and Physics **57** (2007), 1075-1088.
- 2006: Y. Matsushita,
*Four-dimensional geometric structures and almost complex structures ---
 Solvmanifolds $Sol^4_{\{m,n\}}$ (Neutral Version) --- : III-N*,
 JP Journal of Geometry and Topology **6** (2), (2006), 197-210.
- 2006: Y. Matsushita,
*Four-dimensional geometric structures and almost complex structures ---
 Nilmanifolds Nil^4 (Neutral Version) --- : II-N*,
 JP Journal of Geometry and Topology **6** (2) (2006), 183-195.
- 2006: Y. Matsushita,
*Four-dimensional manifolds with two kinds of double almost Hermitian
 structures*
 JP Journal of Geometry and Topology **6** (1) (2006), 1-23.
- 2006: Y. Matsushita,
*Four-dimensional geometric structures and almost complex structures,
 Product manifolds $H^3 \times E^1$ --- Riemannian Version ---: IV-R*,
 JP Journal of Geometry and Topology **6** (1) (2006), 35-44.

- 2006: Y. Matsushita,
Four-dimensional geometric structures and almost complex structures, solvmanifolds $Sol^4_{\{m,n\}}$ --- Riemannian Version ---: III-R,
 JP Journal of Geometry and Topology **6** (1), (2006), 25--33.
- 2005: Y. Matsushita,
Four-dimensional geometric structures and almost complex structures General Procedure (Neutral Version) --- : I-N,
 JP Journal of Geometry and Topology **5** (3), (2005), 251--274.
- 2005: Y. Matsushita,
Four-dimensional geometric structures and almost complex structures, --- Nilmanifolds Nil^4 (Riemannian Version) --- : II-R,
 JP Journal of Geometry and Topology **5** (2), (2005), 177-186.
- 2005: Y. Matsushita,
Four-dimensional geometric structures and almost complex structures, General Procedure (Riemannian Version) --- : I-R,
 JP Journal of Geometry and Topology **5** (2) (2005), 155--176.
- 2005: A. Bonome, R. Castro, L. M. Hervella and Y. Matsushita,
Flat almost Norden metrics with nonintegrable almost complex structures in dimension four,
 JP Journal of Geometry and Topology **5** (2) (2005), 141-153.
- 2005: A. Bonome, R. Castro, L. M. Hervella and Y. Matsushita,
Construction of Norden structures on neutral 4-manifolds,
 JP Journal of Geometry and Topology **5** (2) (2005), 121-140.
- 2005: I. García-Ramírez, E. García-Río and Y. Matsushita,
Application of Bochner-Weizenböck formulas to symplectic and complex pairs to be Kähler pairs in dimension four,
 Proceedings in honor of Professor K. Sekigawa's 60th birthday,
 Topics in Almost Hermitian Geometry and the Related Fields, eds.
 Y. Matsushita, E. García-Río, H. Hashimoto, T. Koda and T. Oguro,
 World Scientific, July 2005.
- 2005: Y. Matsushita,
The existence of indefinite metrics of signature $(+ + - -)$ and two kinds of almost complex structures in dimension four,
 Proceedings of The Seventh International Workshop on Complex Structures and Vector Fields, Plovdiv, Bulgaria, August 31 - September 4, 2004, Contemporary Aspects of Complex Analysis, Differential Geometry and Mathematical Physics, eds. S. Dimiev and K. Sekigawa, World Scientific July 2005, ISBN978-981-256-390-3
- 2005: Y. Matsushita,
On Euler characteristics and Hirzebruch indices of four-dimensional

- almost para-Hermitian manifolds*,
 JP Journal of Geometry and Topology **5** (2) (2005), 115-190.
- 2005: Y. Matsushita,
Walker 4-manifolds with proper almost complex structures,
 Journal of Geometry and Physics **55** (2005), 385-398.
- 2005: M. Chaichi, E. García-Río and Y. Matsushita,
Curvature properties of four-dimensional Walker metrics,
 Classical and Quantum Gravity **22** (2005), 559-577.
- 2004: Y. Matsushita,
Four-dimensional Walker metrics and symplectic structures,
 Journal of Geometry and Physics **52** (2004), 89-99.
- 2001: Y. Matsushita and P. R. Law,
*Hitchin-Thorpe Type Inequalities for Pseudo-Riemannian 4-Manifolds
 of Metric Signature $(+ + - -)$* ,
 Geometriae Dedicata **87** (2001), 65-89.
- 2001: E. García-Río, R. Vázquez-Lorenzo and Y. Matsushita,
Paraquaternionic Kähler Manifolds,
 Rocky Mountain Journal of Mathematics **31** (2001), 237-260.
- 2000: E. García-Río and Y. Matsushita,
Isotropic Kähler structures on Engel 4-manifolds,
 Journal of Geometry and Physics **33** (2000), 288-294.
- 1997: A. Bonome, R. Castro, E. García-Río, Y. Matsushita and L. M. Hervella,
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 Acta Mathematica Hungaria **75** (1997), 299-16.
- 1995: A. Bonome, R. Castro, E. García-Río, Y. Matsushita and L. M. Hervella,
*Kähler-Einstein metrics on a $K3$ surface cannot be almost Kähler
 with respect to an opposite almost complex structure*,
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- 1995: A. Bonome, R. Castro, E. García-Río, Y. Matsushita and L. M. Hervella,
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- 1995: A. Bonome, R. Castro, E. García-Río, Y. Matsushita and L. M. Hervella,
Null holomorphically flat indefinite almost Hermitian manifolds,
 Illinois Journal of Mathematics **39** (1995), 635-660.
- 1995: Y. Matsushita,
*Equivalence classes of fields of 2-planes and two kinds of almost complex
 structures on compact 4-dimensional manifolds*,
 manuscripta mathematica **88** (1995), 409-415.
- 1993: Y. Matsushita,

- Some remarks on fields of 2-planes on compact smooth 4-manifolds,*
Advanced Studies in Pure Mathematics **22** (1993), 153-167.
- 1991: Y. Matsushita,
Fields of 2-planes and two kinds of almost complex structures on compact 4-dimensional manifolds,
Mathematische Zeitschrift **207** (1991), 281-291.
- 1988: Y. Matsushita,
Fields of 2-planes on compact simply connected smooth 4-manifolds,
Mathematische Annalen **280** (1988), 687-689.
- 1987: Y. Matsushita,
Pseudo-Chern classes of an almost pseudo-Hermitian manifold,
Transactions of American Mathematical Society **301** (1987), 665-677.
- 1985: Y. Matsushita,
Pseudo-Pontrjagin classes,
Proceedings of American Mathematical Society **93** (1985), 521-524.
- 1985: N. Katayama and Y. Matsushita,
A problem on closed orbits in a cosmological model,
Tensor (N.S.) **42** (1985), 174-178.
- 1983: Y. Matsushita,
Thorpe-Hitchin inequality for compact Einstein 4-manifolds of metric signature $(+ + - -)$ and the generalized Hirzebruch index formula,
Journal of Mathematical Physics **24** (1983), 36-40.
- 1981: Y. Matsushita,
Inequality for the Euler characteristic of compact Einstein 4-manifolds,
Mathematica Japonica **26** (1981), 77-79.
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On Euler characteristics of compact Einstein 4-manifolds of metric signature $(+ + - -)$,
Journal of Mathematical Physics **22** (1981), 979-82.