

The Structure of a Class of Generalized Sasakian-Space-Forms

PRADIP MAJHI, U. C. DE

*Department of Pure Mathematics, University of Calcutta,
35 Ballygaunge Circular Road, Kolkata 700019, West Bengal, India
mpradipmajhi@gmail.com, uc_de@yahoo.com*

Presented by Manuel de León

Received February 14, 2012

Abstract: The object of the present paper is to study ξ -conformally flat and ϕ -conformally flat generalized Sasakian-space-forms.

Key words: ξ -conformally flat, ϕ -conformally flat, Sasakian manifold, Einstein manifold, η -Einstein manifold, conformally flat.

AMS *Subject Class.* (2010): 53C15, 53C25.

REFERENCES

- [1] P. ALEGRE, D. BLAIR, A. CARRIAZO, Generalized Sasakian-space-forms, *Israel J. Math.* **141** (2004), 157–183.
- [2] P. ALEGRE, A. CARRIAZO, Submanifolds of generalized Sasakian-space-forms, *Taiwanese J. Math.* **13** (3) (2009), 923–941.
- [3] P. ALEGRE, A. CARRIAZO, Generalized Sasakian-space-forms and conformal changes of the metric, *Results Math.* **59** (3-4) (2011), 485–493.
- [4] P. ALEGRE, A. CARRIAZO, C. ÖZGÜR, S. SULAR, New examples of generalized Sasakian-space-forms, preprint.
- [5] P. ALEGRE, A. CARRIAZO, Structures on generalized Sasakian-space-forms, *Differential Geom. Appl.* **26** (6) (2008), 656–666.
- [6] K. ARSLAN, C. MURATHAN, C. ÖZGÜR, On ϕ -conformally flat contact metric manifolds, *Balkan J. Geom. Appl. (BJGA)* **5** (2) (2000), 1–7.
- [7] D.E. BLAIR, “Contact Manifolds in Riemannian Geometry”, Lecture Notes in Mathematics, 509, Springer-Verlag Berlin, 1976.
- [8] D.E. BLAIR, “Riemannian Geometry of Contact and Symplectic Manifolds”, Progress in Mathematics, 203, Birkhauser, Boston, 2002.
- [9] U.C. DE, A. SARKAR, On the projective curvature tensor of generalized Sasakian-space-forms, *Quaest. Math.* **33** (2) (2010), 245–252.
- [10] U.C. DE, A. SARKAR, Some results on generalized Sasakian-space-forms, *Thai J. Math.* **8** (1) (2010), 1–10.

- [11] U.C. DE, S. BISWAS, A note on ξ -conformally flat contact manifolds, *Bull. Malays. Math. Sci. Soc. (2)* **29** (1) (2006), 51–57.
- [12] U.K. KIM, Conformally flat generalized Sasakian-space-forms and locally symmetric generalized Sasakian-space-forms, *Note Mat.* **26** (1) (2006), 55–67.
- [13] Z. OLSZAK, On the existence of generalized complex space forms, *Israel J. Math.* **65** (2) (1989), 214–218.
- [14] G. ZHEN, On conformal symmetric K -contact manifolds, *Chinese Quart. J. Math.* **7** (1992), 5–10.
- [15] G. ZHEN, J.L. CABRERIZO, L.M. FERNANDEZ, M. FERNANDEZ, On ξ -conformally flat contact metric manifolds, *Indian J. Pure Appl. Math.* **28** (6) (1997), 725–734.
- [16] G. ZHEN, J.L. CABRERIZO, L.M. FERNANDEZ, M. FERNANDEZ, The structure of a class of K -contact manifolds, *Acta Math. Hungar.* **82** (4) (1999), 331–340.