

## Exposé court

### 131 **On almost $\eta$ -Ricci-Bourguignon solitons**

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In this presentation firstly, we will investigate a Riemannian manifold with almost  $\eta$ -Ricci-Bourguignon soliton structure. Then, we will use the Hodge-de Rham decomposition theorem to make a link with the associated vector field of an almost  $\eta$ -Ricci-Bourguignon soliton. Furthermore, we will show that a nontrivial, compact almost  $\eta$ -Ricci-Bourguignon soliton of constant scalar curvature is isometric to the Euclidean sphere. Finally using some results obtaining from almost  $\eta$ -Ricci Bourguignon soliton, we will give the integral formulas for compact orientable almost  $\eta$ -Ricci-Bourguignon soliton. See [1] and [2].

### **Bibliography**

- [1] A. M. Blaga and H. M. Taştan. Some results on almost  $\eta$ -Ricci-Bourguignon solitons. *J. Geom. Phys.*, 168:Paper No. 104316, 9, 2021. doi:10.1016/j.geomphys.2021.104316.
- [2] S. Dwivedi. Some results on Ricci-Bourguignon solitons and almost solitons. *Can. Math. Bull.*, 64(3):591–604, 2021. doi:10.4153/S0008439520000673.