

ANTI-INVARIANT SEMI-RIEMANNIAN SUBMERSIONS ADMITTING  
VERTICAL FROM LORENTZIAN SASAKIAN AND PARA SASAKIAN  
MANIFOLDS

Morteza Faghfour<sup>1</sup>, Sahar Mashmouli<sup>2</sup>

<sup>1</sup>University of Tabriz, Tabriz, Iran

<sup>2</sup>University of Tabriz, Tabriz, Iran

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### Abstract

In this paper we study anti-invariant semi-Riemannian submersions from Lorentzian Sasakian and Para Lorentzian Sasakian onto semi-Riemannian manifolds. We give examples of anti-invariant semi-Riemannian submersions. We survey main results of anti-invariant semi-Riemannian submersions defined on (para) Lorentzian Sasakian manifolds. We investigate necessary and sufficient condition for an anti-invariant semi-Riemannian submersion to be totally geodesic and harmonic.

**Keywords:** Semi-Riemannian submersion, (Para) Sasakian manifold, Anti-invariant submersion.

### References

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<sup>1</sup>faghfour@tabrizu.ac.ir

<sup>2</sup>s\_mashmouli91@ms.tabrizu.ac.ir