

# Symmetries of the Dirac operators on curved spaces

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## Abstract

The Killing-Yano tensors play an essential role in the construction of new Dirac-type operators. The Dirac-type operators constructed with the aid of covariantly constant Killing-Yano tensors are equivalent to the standard Dirac operator. The non-covariantly constant Killing-Yano tensors generate non-standard Dirac operators which are not equivalent to the standard Dirac operator and they are associated with the hidden symmetries of the space. The general results are applied to the case of the four-dimensional Euclidean Taub-Newman-Unti-Tamburino space.

## References

- [1] I. I. Cotăescu and M.Visinescu, *Class. Quant. Grav.* **21**, 11 (2004).
- [2] I. I. Cotăescu and M.Visinescu, *hep-th/0312129*

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