

On the characteristic connection of gwistor space

Rui Albuquerque

(Submitted on 26 Jul 2011 (v1), last revised 17 Jul 2012 (this version, v2))

We give a brief presentation of gwistor space, which is a new concept from G_2 geometry. Then we compute the characteristic torsion T^\wedge of the gwistor space of an oriented Riemannian 4-manifold with constant sectional curvature k and deduce the condition under which T^\wedge is ∇^\wedge -parallel; this allows for the classification of the G_2 structure with torsion and the characteristic holonomy according to known references. The case with the Einstein base manifold is envisaged.

Comments: Many changes since first version, including title; Central European Journal of Mathematics, 2013

Subjects: **Differential Geometry (math.DG)**

MSC classes: 53C10, 53C20, 53C25 (Primary) 53C28 (Secondary)

DOI: [10.2478/s11533-012-0082-y](https://doi.org/10.2478/s11533-012-0082-y)

Cite as: [arXiv:1107.5357](https://arxiv.org/abs/1107.5357) [math.DG]

(or [arXiv:1107.5357v2](https://arxiv.org/abs/1107.5357v2) [math.DG] for this version)

Submission history

From: Rui Albuquerque [[view email](#)]

[v1] Tue, 26 Jul 2011 23:46:46 GMT (22kb)

[v2] Tue, 17 Jul 2012 18:23:49 GMT (16kb)

[Which authors of this paper are endorsers?](#)

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

math.DG

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [1107](#)

Change to browse by:

[math](#)

References & Citations

- [NASA ADS](#)

Bookmark (what is this?)



Science
WISE