## Institut für Geometrie und Topologie

Sommersemester 2024

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## Submersion constructions for geometries with parallel skew torsion

## 8. Juli 2024– 16:15 Uhr Raum 7.530

Abstract: Riemannian manifolds carrying a metric connection with parallel skew-symmetric torsion are well-studied and include many classes of interesting geometries: nearly Kähler, nearly parallel G2, Sasakian, and naturally reductive spaces, to name just a few.

The de Rham decomposition theorem does not directly generalize for these geometries - nevertheless, by extending a construction of Cleyton-Moroianu-Semmelmann, it is possible to formulate a local analogue and derive many local classify-cation results in the cases where the holonomy representation of the connection with torsion is reducible - the irreducible case having been worked out by Cleyton-Swann.



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