



## **CURSO DE DOCTORADO**

# **Lectures on geometric connections and their holonomy theory**

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### **Abstract**

This series of lectures gives a gentle introduction into metric connections with torsion on Riemannian manifolds and how they can be used to investigate geometric structures on the underlying manifolds - like almost hermitian manifolds, contact manifolds,  $G_2$  and  $Spin(7)$ -manifolds. Homogeneous spaces will turn out to play a crucial role herein - in the motivation of concepts, as a rich playground of examples, and just as much for applications like the classification of naturally reductive spaces. Further highlights will be the skew holonomy theorem and the investigation of strongly positive curvature.

**Organizado por el Instituto de Matemática Interdisciplinar (IMI)**

**Fechas y horas: 4, 5, 8 y 9 de abril de 2019  
de 10:00h a 12:00h.**

**Lugar: Seminario 225  
Facultad de CC Matemáticas, UCM**