

SEMINARIO ESPECIAL DE GEOMETRÍA

Martes 21 de junio de 2016

15:00 h, **Aula Naranja** (ICMAT, Campus de Cantoblanco)

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Exceptional holonomy, maximal submanifolds and adiabatic limits

Abstract:

The first part of the talk will review the basic notions of holonomy in Riemannian geometry and the two exceptional holonomy groups in dimensions 7 and 8. We will then go on to discuss "adiabatic limits" in differential geometry, that is to say structures on fibre bundles when the fibres shrink to zero size.

We will explain that the adiabatic limits of the exceptional holonomy structures, for K3 fibrations, lead to the "maximal submanifold" equation for 3-dimensional submanifolds in a space of indefinite signature and a certain 4-dimensional generalisation of that equation.