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# SEMINARIO DE GEOMETRÍA ALGEBRAICA

Jueves 16 de enero de 2014, **12:00**, Seminario 238

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Universidad de Trento

Impartirá la conferencia

Fano manifolds whose elementary contractions are  
smooth  $P^1$ -fibrations

*Resumen.*

Let  $X$  be a Fano manifold whose elementary contractions are smooth  $P^1$ -fibrations. I will show how one can associate with  $X$  a finite Dynkin diagram  $D(X)$ , which encodes the intersection matrix of relative canonical bundles and contracted curves. I will moreover show how to prove that these varieties, with a possible exception for  $D(X) = F_4$ , are homogeneous, i.e.  $X$  is the full flag manifold associated with  $D(X)$ . Finally I will discuss the possible implications of this result in the context of the conjecture of Campana and Peternell which asserts that every Fano manifold with nef tangent bundle is homogeneous.

These results have been obtained in collaboration with Roberto Muñoz, Luis E. Solá Conde, Kiwamu Watanabe and Jaroslaw Wisniewski.