## Gianluca Occhetta

## (University of Trento)

## A characterization of complete flag manifolds

Let G be a semisimple algebraic group and B a Borel subgroup; the complete flag manifold G/B is a Fano manifold whose elementary contractions are smooth  $\mathbb{P}^1$ -fibrations. In particular the number of such fibrations is equal to  $\rho(G/B)$ , the Picard number of the manifold.

I will show how these manifolds can be characterized by this property, namely that a smooth complex projective manifold X of Picard number n which admits n contractions  $\pi_i : X \to X_i$  which are smooth  $\mathbb{P}^1$ -fibrations is isomorphic to a complete flag manifold G/B, and how this characterization can be used to recognize some homogeneous manifolds from their varieties of lines by a point.

This is a joint work with Roberto Muñoz, Luis E. Solá Conde, Kiwamu Watanabe and Jaroslaw A. Wisniewski.