

Workshop on "Geometry of vector distributions,  
differential equations, and variational problems"

SISSA, Trieste, Italy, 13–15 December 2006

**Abstracts of the talks**

**Maciej Dunajski** (University of Cambridge, UK) *Doubrov invariants, twistor theory and exotic holonomy*

I shall review the twistor approach to ODEs for which the space of solutions admits a splitting of the tangent bundle as a symmetric tensor product of rank-two vector bundles. This condition leads to the vanishing of relative invariants originally due to Doubrov. The special case of 4th order ODEs leads to exotic holonomy of Bryant. Despite this technical description it will be an elementary talk aimed at audience with no knowledge of twistor theory, but some familiarity with complex analysis.