

Séminaire de matrices, cordes et géométries aléatoires

Mardi 02/06/2015, 14h15-15h15

Orme des Merisiers Salle Claude Itzykson, Bât. 774

**Non-Kähler manifolds: - Locally conformally Kähler
metrics and vector bundles**

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In the first part of the talk, we will survey a selection of results about locally conformally Kähler metrics (LCK, for short) on non-Kähler manifolds. We will address the main problems: existence, behavior with respect to some classical operations (deformations, products, blowing-up, etc). We will also emphasize some interesting classes of LCK manifolds: LCK manifolds with potential and Vaisman manifolds.

In the second part, we will present a selection of results on holomorphic vector bundles over non-Kähler manifolds. We will address again the problem of existence of vector bundles with given topological type (or with special characteristics, such as stability), showing also some interesting phenomena which are specific to non-projective manifolds (e.g. existence of non-filtrable vector bundles or of coherent sheaves with no resolution by vector bundles).
