
RUXANDRA MORARU, University of Waterloo

Stable bundles on complex nilmanifolds

Let G be a connected, simply connected nilpotent Lie group, and let $\Gamma \subset G$ be a discrete, co-compact subgroup. The quotient manifold $\Gamma \backslash G$ is called a *nilmanifold*. If $N = \Gamma \backslash G$ is equipped with a complex structure I induced by a left-invariant complex structure on G , then (N, I) is called a *complex nilmanifold*. Other than complex tori, examples of complex nilmanifolds are given by Kodaira surfaces and Iwasawa manifolds. Moreover, although all complex nilmanifolds have holomorphically trivial canonical bundles, only complex tori admit Kaehler metrics. Nonetheless, many non-Kaehler complex nilmanifolds admit balanced metrics. In this talk, I will describe some of the interesting geometric properties that moduli spaces of stable bundles on non-Kaehler complex nilmanifolds possess.