

# SEMINARIO DI GEOMETRIA

Mer 8 Febbraio 2012, h 15<sup>00</sup> - 16<sup>00</sup>

@ Dipartimento di Matematica, Università di Torino,  
via Carlo Alberto 10  
AULA 4

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(Universität Hamburg)

## Special geometries on Lie algebras and Hitchin's flow equations

Half-flat  $SU(3)$ -structures and cocalibrated  $G_2$ -structures are the initial values for Hitchin's flow equations whose solutions define Riemannian metrics with holonomy contained in the exceptional holonomy groups  $G_2$  and  $Spin(7)$ , respectively.

In this talk I will present classification results for certain classes of Lie groups which admit left-invariant half-flat  $SU(3)$ -structures or cocalibrated  $G_2$ -structures. Moreover, I will look at Hitchin's flow equation for cocalibrated  $G_2$ -structures on Lie algebras with a codimension one Abelian ideal and show that the solutions define Riemannian metrics whose holonomy groups are always further reduced to  $SU(4)$ .

Ulteriori informazioni:

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