

Seminari de Geometria Algebraica 2014/2015 (UB-UPC)

Divendres 15 de maig a les 15 hs, aula B1 FM-UB

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## On the Geometry of moduli stacks of vector bundles over an algebraic curve

Frank Neumann

U. Leicester

We will study the geometry of the moduli stack of vector bundles of fixed rank and degree over an algebraic curve by introducing a new stratification made of open substacks build from  $(k,l)$ -stable bundles.  $(k,l)$ -stable bundles were first introduced by Narasimhan and Ramanan to study the geometry of the coarse moduli space of stable bundles. Here we will exhibit the stacky picture and analyse the geometric and cohomological properties of the moduli stacks of  $(k; l)$ -stable vector bundles in relation with the moduli stack of all vector bundles over the given curve. For particular pairs  $(k; l)$  of integers we also show that these moduli stacks admit coarse moduli schemes. This is joint work with Leticia Brambila-Paz and Osbaldo Mata-Gutirrez (CIMAT).

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