Algebra Seminar

On Serre-Grothendieck and Purity conjectures for groups of type $F_4$

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Abstract: The Grothendieck-Serre conjecture asserts that for a reductive group $G$ over a smooth affine scheme $X$ a rationally trivial $G$-torsor is trivial in Zariski topology or more generally if $R$ is a regular local ring and $G$ is a reductive group scheme over $R$ then the natural mapping $f : H^1(R, G) \rightarrow H^1(K, G)$ has trivial kernel. Here $K$ is a fraction field of $R$. The image of $f$ is described by the purity conjecture which says that a $G$-torsor over $K$ is in the image of $f$ if and only if it is unramified everywhere in codimension 1.

These two conjectures are known for many groups of classical types and type $G_2$. In my talk we discuss next open case of groups of type $F_4$.

Tuesday, March 16, 2010, 4:00 pm
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