

Séminaire d'Algèbre, Topologie et Géométrie

Mercredi 20 Avril à 14h00

Salle II

Ben McKay

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Titre : *Cartan's geometry in dimension 5, G2 and algebraic geometry.*

Résumé : Hilbert proved that

$$y' = (z'')^2$$

cannot be solved by elementary methods. Cartan proved that Hilbert's equation is invariant under G2, and that all equations

$$y' = F(x, y, z, z', z'')$$

have symmetry group of dimension at most 14, and equal to 14 only for Hilbert's equation. I will prove that Hilbert's equation is the unique equation of this type which extends (in a suitable sense) to be holomorphic on a smooth complex projective variety. The proof uses work of Demailly on holomorphic subbundles of tangent bundles.