

Abelian varieties & Galois actions

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Collegium Minus

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ABSTRACTS

Speaker : Chris Hall

Title : *Soft Hilbert Irreducibility Theorems*

Abstract : Let G be the Galois group of a finite Galois extension L/K of the rational function field $K = \mathbb{Q}(t)$. The extension L/K gives rise to a one-parameter family of subgroups $G_s \subset G$ indexed by rational values s in $\mathbb{Q}$. It is well understood that the G_s is well-defined up to conjugacy in G and that the set of s in $\mathbb{Q}$ such that $G_s \subset G$ is a thin set. We will discuss a soft technique for finding explicit s in $\mathbb{Q}$ satisfying $G_s = G$. We will also explain how to apply these techniques to extensions coming from arithmetic geometry.