

Decomposition of algebraic groups

Theorem 1. Let G be an algebraic group. Then there exists a unique maximal connected affine normal algebraic subgroup G_{aff} of G such that the quotient G/G_{aff} is an abelian variety. This subgroup is called the *affine part* of G . Yang: To be continued...

Theorem 2. Let G be an algebraic group. Then there exists a smallest normal connected algebraic subgroup G_{ant} of G such that the quotient G/G_{ant} is affine. This subgroup is called the *anti-affine part* of G . Moreover, G_{ant} is contained in the center of G^0 and is smooth and connected. Yang: To be continued...