



Gabriele Ranieri
Instituto de Matemáticas
Pontificia Universidad Católica de Valparaíso

Fecha : Miércoles 27 de junio 2018

Hora : 14 : 00 – 16 : 00

Lugar : Sala 2-2, IMA PUCV

Title : On some properties of the group III_ω^1

Abstract : Let k be a number field, let \bar{k} be its algebraic closure and let A be an abelian variety defined over k . Given a positive integer n , let $A[n]$ be the subgroup of $A(\bar{k})$ of the points of order dividing n . In 1981 Sansuc defined the group $\text{III}_\omega^1(k, A[n])$ and proved some of its interesting properties. The study of such group allowed various mathematicians to treat and at least partially solve many interesting problems, like the Grunwald-Wang problem, a question of Cassels on the divisibility of the Tate-Shafarevich group and, very recently, a conjecture of Bhargava, Kane, Lenstra, Poonen and Rains on the Selmer group of an elliptic curve. In this talk we shall give the definition of $\text{III}_\omega^1(k, A[n])$ and we shall explain how it can be used to study these last three problems. This work was made in collaboration with Florence, Jean and Pierre Gillibert.

<http://seminarioaritmetyageometria.wordpress.com>

