



**Yuri Bilu**  
(IMB Université de Bordeaux)

Fecha: Miércoles 13 de septiembre 2017

Hora: 14:00-16:00

Lugar: Sala 12 Facultad de Ciencias,  
Universidad de Valparaíso

**Title:** Effective bounds for singular units

**Abstract :** A singular modulus is a  $j$ -invariant of a CM elliptic curve. It is known that it is always an algebraic integer. In 2015 Habegger proved that at most finitely many singular moduli are algebraic units. It was a special case of his more general “Siegel Theorem for Singular Moduli”. Unfortunately, this result was not effective, because a Siegel zero was involved (through Duke’s equidistribution theorem).

In the present work we obtain an explicit bound: if  $D$  is an imaginary quadratic discriminant such that the corresponding singular moduli are units, then  $|D| < 10^{15}$ .

Joint work with Philipp Habegger and Lars Kühne

<http://seminarioaritmetyageometria.wordpress.com>

