

Seminari de Geometria Algebraica 2016-2017

Divendres 4 de Novembre a les 15:00, aula T2 FMI-UB

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## Resultants modulo $p$

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Several problems in elimination theory involving arithmetic over the integers (like resultants, the Nullstellensatz, etc.) have as an outcome an integer number which if it is not zero modulo a prime  $p$ , then several results over the complex number (dimension, number of zeroes, etc.) “descend” to the residual field.

But what happens when  $p$  does divide this number? We will report on work in progress with Laurent Busé and Martín Sombra on the study of the vanishing of resultants modulo  $p$ , and the geometric meaning of the  $p$ -th valuation of this resultant in generic cases.

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