

Seminari de Geometria Algebraica 2011/2012 (UB-UPC)
Dilluns 7 de Novembre a les 15 h, aula B2 de la FM-UB
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Castelnuovo-Mumford regularity and the
discreteness of F -jumping coefficients
in graded rings

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In this talk I will introduce the notion of F -jumping coefficients of ideals in characteristic p and discuss the discreteness of these sets of invariants. I will establish a connection between the discreteness of these sets and the growth of Castelnuovo-Mumford regularities of certain sequences of ideals, and I will apply these ideas to prove that F -jumping coefficients form discrete sets in low dimensional rings and also in other settings. (Joint work with Wenliang Zhang)
