



i Seminar

Title: The structure of annihilating polynomials for quadratic forms

Speaker: Mr. Klaas-Tido Ruehl (EPFL)

Date: Wed 11th February 2009 at 4:00PM

Location: Mathematical Sciences Seminar Room

Abstract: Let $R[X]$ be the polynomial ring in one variable over a principal ideal domain R . For any given ideal I in $R[X]$

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is possible to construct a set of generators P_1, \dots, P_r with certain nice properties. We apply and refine the method to the case where I is the ideal of all polynomials in $R[X]$ that have a root in a given field K . We also show that if I is the ideal of all polynomials in $R[X]$ that have a root in a given field K , then there exists a set of generators P_1, \dots, P_r such that P_i is a polynomial of degree at most d for all $i = 1, \dots, r$. We also show that if I is the ideal of all polynomials in $R[X]$ that have a root in a given field K , then there exists a set of generators P_1, \dots, P_r such that P_i is a polynomial of degree at most d for all $i = 1, \dots, r$.