UNIVERSITÄT DES SAARLANDES
Naturwissenschaftlich-Technische Fakultät I
Fachrichtung 6.1 Mathematik

Mathematisches Kolloquium

Am Freitag, dem 28. Juni 2013 spricht um 14 Uhr c.t. im Hörsaal IV der Fachrichtung Mathematik (Gebäude E2 4)

Dr. María Angélica Cueto
Goethe-Universität Frankfurt

über das Thema:

Mixed discriminants

Abstract: The mixed discriminant of n Laurent polynomials in n variables with fixed support is the irreducible polynomial in the coefficients which vanishes whenever two of the roots coincide. It represents the variety of ill-posed systems. By means of the Cayley trick, we can express the mixed discriminant as an A-discriminant in the sense of Gelfand, Kapranov and Zelevinski. Our goal is to characterize its degree. I will discuss in detail the case of two plane curves where an explicit degree formula can be provided. In the case of two dense polynomials, this formula recovers the classical tact invariant of Salmon. Finally, inspired by the tropical approach to computing A-discriminants, I will show that the degree of the mixed discriminant is a piecewise linear function in the Plcker coordinates of a mixed Grassmannian. This is joint work with E. Cattani, A. Dickenstein, S. Di Rocco and B. Sturmfels.

Der Gast wird von Prof. H. Markwig und Prof. F.-O. Schreyer betreut.

Alle Interessenten sind zu dem Vortrag herzlich eingeladen.

Kaffee und Tee ab 13.45 Uhr im Konferenzraum der Mathematik (Erdgeschoss, Raum 1.03)

Die Dozenten der Mathematik