



JACOBS
UNIVERSITY

Mathematics Colloquium at Jacobs University Bremen

EVA-MARIA FEICHTNER

(Universität Bremen)

will speak on

*Tropical Discriminants –
an Invitation to Tropical Geometry*

Date: Monday, March 3, 2008

Time: 17:15

Place: Lecture Hall Research II, Jacobs University

Abstract:

We start out with classical algebra and employ tropical geometry to allow a new glance at A-discriminants in the sense of Gelfand, Kapranov and Zelevinsky.

Originally, A-discriminants were defined as a unifying, and combinatorially inspired framework for the study of classical discriminants and resultants. In the tropical picture, well-known objects from geometric combinatorics appear as core structures and allow for succinct and manageable descriptions of “tropicalized” A-discriminants. Returning to the classical setting, we obtain, among other applications, a degree formula for A-discriminants, which is valid regardless of smoothness assumptions.

Our starting point being classical algebra, we end up with an exciting mixture of algebra, geometry and combinatorics, which is characteristic for tropical geometry.

This is joint work with Alicia Dickenstein and Bernd Sturmfels.

Colloquium Tea at ca. 16:45 in the Tea Room of Research II, close to the lecture hall. Everybody is welcome!

M. STOLL