

Bradford Hovinen

**Vortrag: A nonclassical determinantal
formula for the classical discriminant**

ZEIT:

23.6.2008, 16:15 Uhr

ORT:

FU-Berlin
Institut fuer Mathematik
Arnimallee 3, SR 119
14195 Berlin

The classical discriminant of degree- n polynomials is a formula which determines whether a polynomial $f(x)$ of degree n has a repeated root. Several mathematicians in the 18th and 19th centuries devised ways to represent the discriminant as the determinant of a matrix, however all such classical presentations are equivalent in the sense that they have isomorphic cokernels. In this talk, I will describe a nontrivial determinantal presentation of the discriminant which is not equivalent to the classical ones. It is an explicit construction of the presentation matrix of the so-called "open swallowtail" defined by Arnold as a module over the coordinate ring of the hypersurface defined by the discriminant.

Kontakt:

Humboldt-Universität zu Berlin . Institut für Mathematik
SFB 647 . Unter den Linden 6 . 10099 Berlin
Tel. +49 30 2093 1804 . Fax. +49 30 2093 2727
sfb647@math.hu-berlin.de

www.raumzeitmaterie.de