

Mathematisches Kolloquium

am: Dienstag, dem 10.3.2009

Zeit: 11.00 h

Ort: Sammelbau Raum 329

Es spricht: **Prof. Dr. François Boulier**
Université Lille

über das Thema: **DifferentialAlgebra**

ABSTRACT

DifferentialAlgebra is a new MAPLE package, still under development, dedicated to differential elimination. It is actually just an interface package for the BLAD libraries [1], which are open source software written in the C programming language.

The underlying theory is the differential algebra [2] developed by Ritt and Kolchin. More precisely, the package is dedicated to the differential elimination theory which provides an algorithmic tool for simplifying systems of differential polynomial equations (ordinary or with partial derivatives) without integrating them.

In this talk, I will illustrate the basic concepts of the differential elimination, using the new package, and I will show how they can be applied for simplifying models of biochemical reactions by the quasi-steady state approximation theory [3].

References:

[1] <http://www.lifl.fr/boulier/BLAD>

[2] http://www.ams.org/online_bks/coll33

[3] <http://hal.archives-ouvertes.fr/hal-00274689/fr>

Wir laden herzlich alle Interessierten zu diesem Vortrag ein.