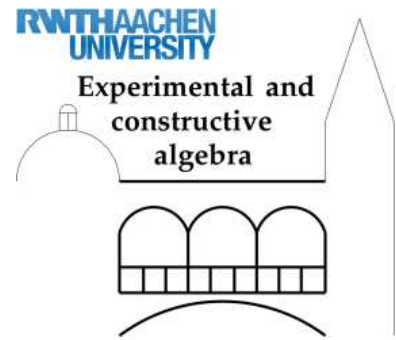


Graduiertenkolleg

Experimentelle und konstruktive Algebra



Kolloquiumsvortrag

Donnerstag, 3. Februar 2011, 15:15 Uhr, Hörsaal V

FRANÇOIS LEMAIRE (University of Lille I, Frankreich): *Application of differential algebra to the quasi-steady state approximation in Biology and Physics*

The quasi-steady state approximation (QSSA) is a technique for approximating the evolution of a dynamical system which involves both slow and fast dynamics. It can be used when the fast dynamics tend to an equilibrium which slowly drifts due to action of the slow dynamics.

I will show how to use differential algebra, and more precisely differential elimination, to solve the QSSA in the context of chemical reactions systems, as well as some examples taken from physics (pendulum, communicating vessels, diffusion, ...).

I will also present the Maple package called MABSys (Modeling and Analysis of Biological Systems) which provides tools for performing the QSSA in a transparent way.

Wir laden alle Interessierten herzlich ein.

Ab 14:30 Uhr gibt es Kaffee und Tee in der Bibliothek des Lehrstuhl D für Mathematik.