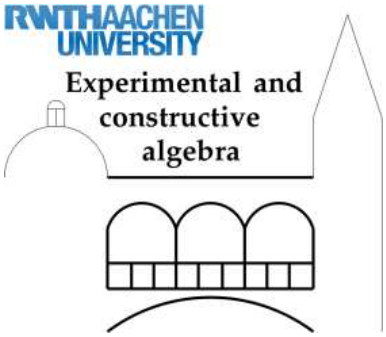
Graduiertenkolleg

Experimentelle und konstruktive Algebra



Kolloquiumsvortrag

Dienstag, 17. Januar 2017, 14:00 Uhr, SeMath

Christian Lax (Lehrstuhl A für Mathematik):
Tikhonov-Fenichel reductions for reaction diffusion systems

Tikhonov-Fenichel reductions have been used successfully in the context of chemical reaction systems with spatial homogeneity, i.e. for systems of ODEs. Due to the absence of an analogous theorem in the context of reaction diffusion systems (i.e. systems of PDEs) we propose a heuristic method to use Tikhonov-Fenichel reductions for spatially discretized PDE systems. This heuristic is based on a rigorous result for compartmental systems. We can show for a number of applications that this ansatz is well-grounded. The first half will be mostly introductionary and will repeat results of Alexandra Goeke (former member of the graduate school) regarding reaction systems. In the second half, the heuristic method will be presented.

Wir laden alle Interessierten herzlich ein.