Dienstag, 18. April 2017, 15.15 Uhr
Ort: Raum E 2 (1.1.53) Arnimallee 14, 14195 Berlin
Disputation über die Doktorarbeit von
Herrn Bernhard Brehm

Thema der Dissertation:
Bianchi VIII and IX vacuum cosmologies:
Almost every solution forms particle horizons
and converges to the Mixmaster attractor

Thema der Disputation:
Sensitivity in networks and Murota’s combinatorial canonical form

Die Arbeit wurde unter der Betreuung von Prof. Dr. B. Fiedler durchgeführt.

Abstract: A series of recent papers studies the sensitivity of chemical reaction networks to parameter perturbations [1, 2, 3, 4]. Perhaps surprisingly, structural sparsity patterns arise in response to steady state perturbations.

Quite abstractly, Murota [5, 6] studies mixed matrices $M$, i.e. matrices where each entry is either a rational number or algebraically independent from all other entries. The combinatorial canonical form is an upper block-tridiagonal mixed matrix, where the block structure is canonical.

In this talk, we will contrast these two viewpoints, to their mutual advantage. This simplifies and clarifies the presentation of the combinatorial canonical form, in the special case of invertible $M$, and gives different insights into the sensitivity analysis.

Literature

Die Disputation besteht aus dem o. g. Vortrag, danach der Vorstellung der Dissertation einschließlich jeweils anschließenden Aussprachen. Interessierte werden hiermit herzlich eingeladen
Der Vorsitzende der Promotionskommission
Prof. Dr. B. Fiedler