## Kolloquium

## Im Rahmen des Kolloquiums des Graduiertenkollegs Algorithmic Optimization

findet am

Montag, dem 28. Januar 2019 16 Uhr c.t. Hörsaal 9

folgender Vortrag statt:

## On the limits of boundary stabilizability for networks of strings.

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An example by Bastin and Coron illustrates that the boundary stabilization of 1-d hyperbolic systems with certain source terms is only possible if the length of the space interval is sufficiently small.

We show that similar phenomena also occur for networks of vibrating strings that are governed by the wave equation with a certain source term. It turns out that for a tree of strings with Neumann velocity feedback control at some boundary nodes for sufficiently large lengths of the strings, boundary feedback stabilization is not possible.

However, if the number of strings in the tree is sufficiently large, also for arbitrarily short strings for certain parameters in the source term stabilization is not possible.