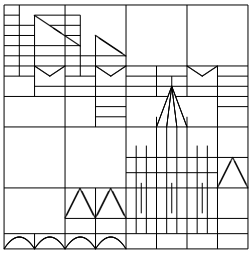
**Universität Konstanz**

**Fachbereich**
**Mathematik und Statistik**



**Prof. Dr. Robert Denk**

**Prof. Dr. Reinhard Racke**

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Konstanz, den 23. November 2010

Im

Oberseminar Partielle Differentialgleichungen

wird am

Donnerstag, dem 09. Dezember 2010,

folgender Vortrag gehalten:

Prof. Dr. Stéphane Gerbi (Université de Savoie de Chambery):

*„The damped wave equation with dynamic boundary condition and a delay term: existence and stability“*

**Zeit: 14:15 Uhr**

**Raum: F 426**

Interessenten sind herzlich willkommen!

R. Denk, R. Racke, O. Schnürer

**Abstract**: We consider a multi-dimensional wave equation with dynamic boundary conditions related to the Kelvin-Voigt damping and a delay term acting on the boundary. If the weight of the delay term in the feedback is less than the weight of the term without delay or if it is greater under an assumption between the damping factor, and the difference of the two weights, using the Faedo-Galerkin approximations together with some energy estimates, we proved the global existence of the solutions. Under the same assumptions, the exponential stability of the system is proved using an appropriate Lyapunov functional. More precisely, we will show that under the same assumptions the exponential stability occurs (this is due to the strong damping).

(invited by Prof. Dr. Racke)