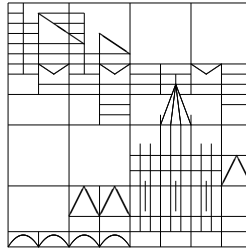


Universität Konstanz
Fachbereich
Mathematik und Statistik



Prof. Dr. Robert Denk

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Konstanz, den 22. November 2010

Im
Oberseminar Partielle Differentialgleichungen
wird am
Donnerstag, dem 28. Oktober 2010,
folgender Vortrag gehalten:

Matthias Makowski (Universität Konstanz):
„Volume preserving curvature flows in Lorentzian manifolds“

Zeit: 14:15 Uhr

Raum: G 227 a

Interessenten sind herzlich willkommen!

R. Denk, R. Racke, O. Schnürer

Abstract: Let N be a $(n + 1)$ -dimensional globally hyperbolic Lorentzian manifold with a compact Cauchy hypersurface S_0 and F a curvature function, either the mean curvature H , the root of the second symmetric polynomial $\sigma_2 = \sqrt{H_2}$ or a curvature function of class (K^*) . We consider curvature flows with curvature function F and a volume preserving term and prove long time existence of the flow and exponential convergence of the corresponding graphs in the C^∞ -Topology to a hypersurface of constant F -curvature, provided there are barriers. Furthermore we examine stability properties and foliations of constant F -curvature hypersurfaces.

(invited by Prof. Dr. Schnürer)