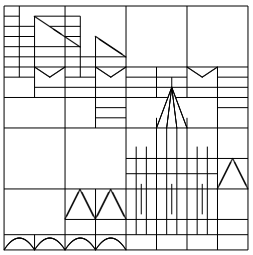
Universität Konstanz

Fachbereich
Mathematik und Statistik



Prof. Dr. Robert Denk

Prof. Dr. Reinhard Racke

Prof. Dr. Oliver Schnürer
Oliver.Schnuerer@uni-konstanz.de

Konstanz, den 9. Januar 2012

Im

Oberseminar Partielle Differentialgleichungen

wird am

Mittwoch, dem 21. Dezember 2011

folgender Vortrag gehalten:

Dr. Melanie Rupflin (MPI Potsdam):
"About uniqueness and non-uniqueness for the harmonic map flow"

Zeit: 16:15 Uhr

Raum: F 426

Interessenten sind herzlich willkommen!

R. Denk, R. Racke, O. Schnürer

Abstract: We will discuss the issue of uniqueness for weak solutions of the harmonic map flow. In the critical dimension there is a sharp uniqueness criterion for the flow in terms of the energy and the only mechanism that can cause non-uniqueness of solutions is the addition of a so called reverse bubbling (which increases the energy). In supercritical dimensions the possibilities for non-uniqueness are much more diverse and there can be several solutions to the same initial data even under the restriction that the energy is non-increasing. We will focus on the class of symmetric, selfsimilar solutions and prove that in these settings the issue of uniqueness is determined by the properties of the so called equator maps. We obtain in particular that for appropriate initial data the number of -genuinely different- evolutions under the harmonic map heat flow can be arbitrarily large, even infinite.

(invited by Oliver Schnürer)