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Einladung zum Vortrag
im Oberseminar Analysis

Asymptotics and stability for global solutions of the heat flow of harmonic maps

Gael Diebou (University of Toronto)

The heat flow of harmonic maps is the gradient flow of the Dirichlet energy (L^2-norm of the gradient). There are essentially two research lines regarding the analysis of its Cauchy problem:

- the weak theory (pertaining to finite energy solutions) whose development goes back to Chen and Struwe who introduced the Ginzburg-Landau approximation scheme
- the strong (mild) theory which has been established recently by Koch Lam and later improved by Wang

In this talk, I will discuss the relationship between these two theories formulated as follows "any mild solution is a weak solution provided its initial data only has finite energy". Next, I shall mention some interesting and important consequences of this statement, in particular the fact that the gradient of any global in time harmonic map arising from BMO initial data never blows up at infinite time.

Alle Interessierten sind herzlich eingeladen!

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