



Im  
Oberseminar Partielle Differentialgleichungen  
wird am  
Donnerstag, dem 15. Juli 2010,  
folgender Vortrag gehalten:

Dr. Esther Cabezas-Rivas (Münster):  
*„Ricciflowing“the Ricci Flow*

**Zeit:** 14:15 Uhr

**Raum:** F 425

Interessenten sind herzlich willkommen!

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**Abstract:**

In this talk, we will describe how the theory of optimal transport can lead to new Ricci flow results independent of optimal transport itself. In particular, given a Ricci flow on a manifold  $M$  over a time interval  $I$ , we introduce a second time parameter, and define natural gradient Ricci solitons on the space-time  $M \times I$ .

As an application, we shall see how our construction encodes various of the monotonic quantities that underpin Perelman's work on Ricci flow, and how the known Harnack inequalities (and also new ones) naturally arise as simple curvature conditions on the space-time solitons.