



Im

Oberseminar Partielle Differentialgleichungen

gibt es am

Donnerstag, dem 20. Juni 2013,

einen Vortrag von

Dipl. Math. Felix Jachan (FU Berlin):

“Area preserving Willmore Flow in asymptotically Schwarzschild manifolds”.

Beginn: **15:15 Uhr**

Raum: **F 426**

Interessenten sind herzlich willkommen!

H. Freistühler, R. Racke, O. Schnürer

Abstract: We consider hypersurfaces Σ evolving by an area preserving variant of the gradient flow for the Willmore functional $\mathbf{W}(\Sigma) := 1/2 \|H\|_{L^2(\Sigma)}^2$, focusing on ‘large’ 2–spheres in an ambient space that is essentially a perturbation of \mathbf{R}^3 with sufficient decay of curvature at infinity. In spirit of the work of Kuwert and Schätzle in the early ‘00s on Willmore Flow in \mathbf{R}^n , we discuss minimal existence time of the flow and formation of curvature bubbles near singular times, addressing issues (or lack thereof) arising from the ambient curvature and nonlocal terms in our flow equation. These results then enable us to deduce sufficient conditions for long time existence.