



## Observeinar Geometrische Analysis und Mathematische Relativitätstheorie

Am Donnerstag, den 13.03.2014 spricht um **15 Uhr 30** im Hörsaal **M3** (N16)

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über das Thema

### **A monotonicity formula for free boundary surfaces with respect to the unit ball**

In the first part of this talk we will present a monotonicity identity for compact surfaces with free boundaries inside the boundary of the unit ball in  $\mathbb{R}^n$  that have square integrable mean curvature. As one consequence we obtain a Li-Yau type inequality in this setting, thereby generalizing results of Oliveira and Soret, and Fraser and Schoen. In the second part of the talk we derive some sharp geometric inequalities for compact surfaces with free boundaries inside arbitrary orientable support surfaces. If time permits, we will present a sharp lower bound for the L1-tangent-point energy of closed curves in euclidean space thereby answering a question raised by Strzelecki, Szumańska and von der Mosel.

Hierzu wird herzlich eingeladen.