



**Mês de: JUNHO 2012**

**SEMINÁRIO DE ANÁLISE E EQUAÇÕES  
DIFERENCIAIS**

**Dia 20 de Junho (quarta-feira), às 13h30, na Sala B3-01**

Variational problems with measure constraints: existence, geometric and smoothness properties of minimizers

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**Abstract:**

Optimization problems involving volume or area constraints appear often in mathematical models. In general the classical methods from the Calculus of Variations are not suitable or powerful enough to treat such problems. Instead, their analysis rely on fine techniques from geometric measure and free boundary theories. In this talk I will present some recent advances on variational problems with volume constraints governed by a rather general family of degenerate elliptic PDE's. I will address questions regarding existence and asymptotic behavior of optimal designs as well as the regularity theory for the free boundary. If time permits, we will also discuss minimization problems with area constraints modeled in Riemannian manifolds.

Local:  
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