

DIFFERENTIAL GEOMETRY/PDE SEMINAR

WEDNESDAY, APRIL 2, 2008

PADEL FORD C-36

3:50-5PM

Non-variational existence problems in General Relativity and
applications to positive energy theorems

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In this talk we study the Plateau problem for apparent horizons on general Cauchy data sets. In our construction we introduce a Perron method and ideas from geometric measure theory to study the blow-up behaviour of Jang's equation. We will discuss new geometric insights about apparent horizons resulting from this approach, and will, time permitting, indicate an application of these methods to a conjecture of Bray's related to the space-time Penrose inequality.

For more information about this seminar, visit the DG/PDE Seminar Web page (from the Math Department home page, www.math.washington.edu, follow the link **Seminars, Colloquia, and Conferences**).

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