

COLLOQUIUM  
UNIVERSITY OF PITTSBURGH  
MARCH 16, 2007  
704 THACKERAY HALL  
4:00 P.M.

SPEAKER: **PROFESSOR SAGUN CHANILLO**

RUTGERS UNIVERSITY

TITLE: **THE COMPOSITE MEMBRANE PROBLEM**

ABSTRACT: We focus on the following problem:

Build a body of prescribed shape and of prescribed mass with materials of varying density so that the resulting body has the lowest first eigenvalue. To demand minimizing the first eigenvalue is to demand maximum rigidity. We also give a description of the free boundary/interface between the materials.