

1129-35-393

Thomas Backing (dgarofal@purdue.edu), IN, **Donatella Danielli*** (dgarofal@purdue.edu),
Department of Mathematics, 150 N. University St., West Lafayette, IN 47907, and **Rohit Jain**.

Regularity results for a penalized boundary obstacle problem.

In this talk we will discuss the optimal regularity of solutions and the structure of the free boundary in a two-penalty boundary obstacle problem modeling fluid flow through a permeable membrane. (Received March 20, 2017)