

1067-35-1129      **Cody Pond\*** (cpond@tulane.edu), Department of Mathematics, Tulane University, 6823 St. Charles Ave, New Orleans, LA 70118. *Lifespans for Effective Boundary Conditions*.

The problem of protecting a body from overheating with a thin coating of insulation arises naturally in many settings. In aerospace applications the insulation may have anisotropic, or direction dependent, heat conduction properties. In this talk we will present new results on how scaling relationships between the thickness of the coating and the anisotropic properties of the insulation influence the effective boundary condition on the insulated body. In particular we show how the time interval during which the effective boundary is Neumann scales with the thickness and heat conduction properties of the insulation. (Received September 19, 2010)