1056-53-366 **Jeffrey L Jauregui*** (jeff@math.duke.edu), Mathematics Department, Duke University, Box 90320, Durham, NC 27708. *Optimization problems within a harmonic conformal class.*

I will introduce four functions that arise from certain geometric optimization problems on the harmonic conformal class of an asymptotically flat manifold. These functions are natural, in that they are independent of the choice of metric in the class. Two of them turn out to be trivial, but the other two are more interesting and are pertinent to a generalization of the Riemannian Penrose Inequality. (Received September 02, 2009)