

1072-30-8

Andy Raich* (araich@uark.edu), Department of Mathematical Sciences, SCEN 327, 1 University of Arkansas, Fayetteville, AR 72701, and **Luca Capogna**. *An Aronsson Type Approach to Extremal Quasiconformal Mappings*.

I will discuss C^2 extremal quasiconformal mappings in space. I will establish necessary and sufficient conditions for a ‘localized’ form of extremality to hold. This will be in the spirit of the work of G. Aronsson on absolutely minimizing Lipschitz extensions. Time permitting, we also discuss the short time existence for smooth solutions of a gradient flow of QC diffeomorphisms associated to the extremal problem. This project is joint with Luca Capogna of the University of Arkansas. (Received April 15, 2011)