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Roger W. Barnard and **David R. Martin*** (dmartin323@hotmail.com), 2310 92nd Street, Lubbock, TX 79423, and **G. Brock Williams**. *Maximizing the generalized Fekete-Szegő functional over a class of hyperbolically convex functions*. Preliminary report.

We will present some of our continuing work on conformal mappings of the unit disk into itself whose image is hyperbolically convex, fix the origin, and have mapping radius a given fixed real number $0 \leq \alpha \leq 1$. In particular, we will discuss some of the background of the field and our current work: finding the maximum value of the generalized Fekete-Szegő functional, $|ta_3 + a_2^2|$ for t in $(0,1)$. This functional was maximized for convex functions composed with Möbius transformations in the pivotal work of Barnard and Schober. To find the maximum value of the functional for hyperbolically convex maps, we will make use of Julia's variational techniques developed, and expanded upon, by the previously mentioned authors as well as Cole, Lewis, Ornas, Pearce, Williams, et. al. (Received September 28, 2005)