1003-65-1415 **Victoria Baramidze*** (`vbaramid@math.uga.edu`), Department of Mathematics, Boyd Graduate Studies Research Center, Athens, GA 30602-7403, and **Ming Jun Lai** (`mjlai@math.uga.edu`), Department of Mathematics, Boyd Graduate Studies Research Center, Athens, GA 30602-7403.
Minimal energy homogeneous spherical splines for data interpolation.

The convergence of the minimal energy interpolatory splines on the unit sphere is studied in this paper. An upper bound on the difference between a sufficiently smooth function and its interpolatory spherical spline in the infinity norm is given. The error bound is expressed in terms of a second order spherical Sobolev-type seminorm of the original function. The computational algorithm is discussed and numerical examples are presented. (Received October 05, 2004)