962-30-1039 **John Ryan*** (jryan@comp.uark.edu), Department of Mathematics, University of Arkansas, Fayetteville, AR 72703, and **Hong Liu**, Embry Riddle Aeronautical University, Florida. *The conformal Laplacian and Dirac operators on the sphere and hyperbola.* Preliminary report.

Using Clifford analysis we set up a Laplacian and Green's formula on the sphere and hyperbola. This Laplacian is conformally equivalent to the Laplacian in Euclidean space. The Clifford analysis facilitates a two fold factorisation of the Laplacian in tems of conformal Dirac operators. This leads to two different types of Greens formulas on the sphere and hyperbola. Properties of these operators and their relation to the conformal group and boundary value problems will be presented. (Received October 01, 2000)