

Meeting: 1001, Evanston, Illinois, SS 10A, Special Session on Differential Geometry

1001-53-265 **Ivan Charles Sterling*** (isterling@smcm.edu), MathCS Dept, St Mary's College of Maryland, St Mary's City, MD 20686-3001. *K-Surfaces (smooth and discrete) of non-finite type*. Preliminary report.

We study the problem of constructing K-surfaces (ie surfaces of constant negative Gauss curvature $K=-1$) of non-finite type. Unlike the case of $K=+1$ (or $H=1$) almost nothing is known. We will discuss the relationship between this problem and the corresponding one for discrete K-surfaces. This problem is related to non-finite type solutions of the sine-Gordon equations (smooth and discrete) and the non-finite type Lorentz harmonic maps (smooth and discrete). The talk will include both theory and computer graphics. (Received August 28, 2004)