Meeting: 1006, Lubbock, Texas, SS 2A, Special Session on Differential Geometry and Its Applications

1006-53-82 **Ivan Charles Sterling*** (isterling@smcm.edu), 18952 E. Fisher Road, St Mary's City, MD 206863001. *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 February 07, 2005)