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

1001-53-313 **Bruce Solomon*** (solomon@indiana.edu), Math Department, Indiana University, Bloomington, IN 47405. *Skew loops and hyperboloids.* Preliminary report.

A C^1 loop in $\mathbf{R}^3$ is *skew* if no two distinct lines tangent to it are parallel. In a joint paper with M. Ghomi, we showed that skew loops are quite common, but that no C^2 skew loop can be drawn on a convex quadric. At that time, however, we were unable to rule out C^1 skew loops on convex quadrics. Recently, Ghomi has shown how to do so on ellipsoids. We do the same here for the other convex quadrics, i.e. the convex hyperboloids. (Received August 30, 2004)