1030-53-369 **Stephanie B. Alexander*** (sba@math.uiuc.edu), Mathematics Department, MC-382, UIUC, 1409 West Green St., Urbana, IL 61801, and **Mohammad Ghomi** and **Jeremy A. Wong**.

Topology of nonnegatively curved Euclidean hypersurfaces spanning a prescribed boundary. Preliminary report.

We construct a simple closed curve in R^3 that is differentiable in its arclength parameter, is C^∞ in the complement of two points, and bounds infinitely many topologically distinct, compact, embedded, positively curved C^∞ surfaces. In contrast, for a $C^{1,1}$ curve we prove there can be at most finitely many topologically distinct, compact, locally convex immersed spanning surfaces. In higher dimensions, we prove that a smooth, compact, connected submanifold of codimension 2 immersed in R^{n+1}, $n > 2$, bounds at most finitely many topologically distinct, positively curved immersed hypersurfaces, complete but not necessarily compact. When $n = 2$, topological finiteness extends to noncompact positively curved spanning surfaces if they are embedded. (Received August 07, 2007)