1062-51-93Zhuomin Liu\* (zhl26@pitt.edu), 301 Thackeray Hall, Department of Mathematics, University<br/>of Pittsburgh, Pittsburgh, PA 15260, and Mohammad Reza Pakzad (pakzad@pitt.edu), 301<br/>Thackeray Hall, Department of Mathematics, University of Pittsburgh, Pittsburgh, PA 15260. A<br/>note on regularity and rigidity of codimension 1 Sobolev isometric immersions. Preliminary report.

We prove regularity and developability of  $W^{2,m}$  Sobolev isometric immersions of m-dimensional domains into  $R^{m+1}$ . A corollary is the strong density of smooth mappings in this class when the domain is convex. (Received July 29, 2010)