1100-62-265   **Mingfei Qiu*** (`info@stat.fsu.edu`), 214 OSB 117 N. Woodward Ave. P.O. Box 3064330, Tallahassee, FL 32306-4330, **Vic Patrangenaru** (`info@stat.fsu.edu`), 214 OSB 117 N. Woodward Ave. P.O. Box 3064330, Tallahassee, FL 32306-4330, and **Leif Ellingson** (`math.dept@ttu.edu`), Broadway and Boston, Lubbock, TX 79409-104. *Neighborhood Hypothesis Testing for Mean Contour Shapes of Corpus Callosum Mid Sections.*

Shape is the residual structural of a configuration of points, modulo some group of transformations of R^m. Direct similarity shapes of contours can be regarded as points on a projective space of a complex Hilbert separable space. Asymptotic tests on this Hilbert manifold fail, given that the extrinsic sample covariance matrix is always degenerate. Here we present the neighborhood hypothesis testing methodology on a Hilbert manifold as developed by Ellingson et. al. (2013), and apply it to shape analysis of contours of corpus callosum midsagittal sections data extracted from MRI images given in Fletcher (2013). (Received February 09, 2014)