

### List of Stata Programs for Beresteanu and Molinari (2008) – Updated 6/1/2010

**ball.ado** - Creates a ball in  $R^2$  with specified radius and specified number of angle divisions. Ball coordinates are ordered counter-clockwise, starting with the coordinate pair with the smallest y-coordinate. Output: ball coordinates.

**BLPcalculator.ado** - Computes the 2D identification set for the best linear predictor based on specified inputs. Output: matrix of coordinates that specify the boundary of the identification set.

**CI1D.ado** - Computes confidence set for 1D projections using the nonparametric bootstrap. Output: for each parameter specified, (1) identification set (2) critical value based on Hausdorff distance (3) critical value based on directed Hausdorff distance (4) confidence collection based on Hausdorff distance (CC) – unless “nocc” option is invoked (5) confidence set based on directed Hausdorff distance (DU) – unless “nodu” option is invoked (6) results of tests of specified intervals – if this option is invoked (7) (2)-(5) for estimated BLP – if predict option is invoked and (8) (2)-(5) for estimated contrast of BLP – if contrast option is invoked.

**CI2D.ado** - Computes confidence set for 2D projections using the nonparametric bootstrap. Output: (1) critical value based on Hausdorff distance (2) critical value based on directed Hausdorff distance (3) graph of confidence set based on Hausdorff distance (4) graph of confidence set based on directed Hausdorff distance (5) result of test of a specified set - if this option is invoked (6) graph of specified test set - if this option is invoked.

**dotdist.ado** - Computes the minimal distance between a point and a line segment formed by two other points. Output: minimal distance.

**EY.ado** - Computes identification set of the estimator for the mean. Output: (1) identification set (2) critical value based on Hausdorff distance (3) critical value based on directed Hausdorff distance (4) confidence collection based on Hausdorff distance (CC) – unless “nocc” option is invoked (5) confidence set based on directed Hausdorff distance (DU) – unless “nodu” option is invoked (6) results of tests of specified intervals – if this option is invoked.

**HausdorffDist.ado** - Computes the Hausdorff and directed Hausdorff distance between two convex polygons which are ordered counter-clockwise, starting with the coordinate pair with the smallest y-coordinate. Output: Hausdorff and directed Hausdorff distance.

**minksum.ado** - Computes the Minkowski sum of two convex polygons whose vertices are ordered counter-clockwise, starting with the coordinate pair with the smallest y-coordinate. Output: Minkowski sum coordinates.

**oneDproj.ado** - Computes 1D projection of the identification set on specified dimension of the explanatory variables. Output: (1) identification intervals (2) BLP interval – if predict option is invoked and (3) contrast of BLPs interval – if contrast option is invoked.

**twoDproj.ado** - Computes 2D projection of the identification set on specified dimensions of the explanatory variables. Output: (1) matrix of coordinates that specify the boundary of the identification set and (2) graph of projection.

**xangle.ado** - Computes the angle of the line between two points and the X-axis. Output: angle.

### Hierarchy of Programs

*Mean:* EY.ado

*BLP 1D:* oneDproj.ado

CI1D.ado

*BLP 2D:* twoDproj.ado *calls* BLPcalculator.ado *calls* minksum.ado *calls* xangle.ado

CI2D.ado *calls* twoDproj.ado **AND** HausdorffDist.ado (dotdist.ado) **AND** ball.ado **AND**  
minksum.ado