VecDisplay6Manual

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See Also: CoordGen, Regress6a

Introduction

VecDisplay6 is meant to display Partial Warp plus Uniform component Scores based on a reference form. The program can display scores in Procrustes superposition, sliding baseline registration (SBR) or Bookstein registration (BC). However, note that all partial warp scores are based on Procrustes superpositions and the uniform component model take from Bookstein's article in the White Book.

This program loads two sets of partial warp scores, each of which represents a single deformation. The program can then display each of these independently, their sum, the difference between them or both at the same time as vectors on landmarks, quiver plots,deformation grids, etc.

Partial warp scores may be obtained from the program Regress6, as well as growth vectors or deformations predicted from regression models.

One can use the partial warp scores in other software to perform various types of statistical analyses. This program then allows the user to visualize the results of these analyses.

Specify Superposition

This box specifies the superposition to be used in determining the "implicit" part of the deformation. You may alter this setting once the reference and data have been loaded.

Load Reference

You must load the reference form used to form the partial warp scores. Note that when displaying two sets of partial warp scores, both must be based on the same reference form.

Baseline Endpoints

When using SBR or BC, the user must specify the end points which are to be used.

Load Vector 1/ Load Vector 2

These buttons load the two vectors describing the deformations in the x1y1..CS format used in CoordGen.

The values are all on a single line in the file, separated by spaces. The highest bending energy components are listed first (x,then y component), followed by successively lower bending energy components and finally the uniform components, followed by the centroid size. Each data set has a single deformation.

Zero Vector 2

This sets vector 2 to be all zero. This is useful if you only want to look at a single vector

Display Vector 1, Display Vector 2

Display each vector independently. The form of the deformation is controlled using the Deformation Display format box. The deformation multiplier box can be used to rescale the data, to allow easier viewing of small deformations.

Display V1+V2, Display V1-V2, Display V2-V1

Displays the sum or difference of two deformations, using any chosen display format.

Display V1,V2 on LM

Displays both vectors at the same time as vectors from the landmarks of the reference form. Note that both vectors are the same color and line width, so you will need to look at each vector independently as well to identify the two.

Clear Axis

Turns off the axis, removing them from the diagram.

Clear Data

Clears the data loaded and resets the program.

Add Colorbar

Adds a colorbar, explaining what the color coding used in some deformation plots.

Copy Image to Clipboard

Copies only the plotted image onto the clipboard, where it may be pasted into other programs. This is probably the best way to save or print images.

Clear Image and Colorbar

Erases the image and colorbar. This is the only way to get rid of the colorbar.

Deformation Display Format

The following options are available.

Deformation Grid- a grid showing the deformation from a square

grid pattern. The deformation of the grid is drawn to scale of the reference.

Quiver Plot- this graph shows the relative deformations at all

points in the diagram using a set of arrows. Note that these are relative deformations, the largest arrow is the largest deformation, but is not scaled to the reference.

Vectors on Smallest- This actually shows the deformation as

vectors located at each landmark on the reference. The deformation shown is the predicted difference from the smallest specimen to the largest (this is the deformation shown in all of these plots).

Contour X Components, Contour Y Components- These are contour

plots, as used in topographic maps. The contour plots show only the X or Y components at one time.

Quiver X components, Quiver Y components-These are the same as

the Quiver Plot above, but showing only the X or Y components.

Contour Abs(X), Contour Abs(y)- This are contour plots of the

absolute value of the deformations in the x and y directions.