1 Program imstat

1.1 Purpose

Write out some statistics about (one or more) 2D image files.

1.2 Usage

imstat [-nolabel] [-pixstat prefix] [-quiet] image_file ...

1.3 Options

-nolabel Don't write labels on each file's summary line

-quiet Don't print statistics for each file

-pixstat prefix If more than one image file is given, then 'prefix.mean', 'prefix.sdev', and 'prefix.cvar' will be written as the pixel-wise statistics images (for the mean, standard deviation, and coefficient of variation, respectively) of the whole collection. These images will be in the 'flim' floating point format. [This option only works on 2D images!]

1.4 Examples

Example 1. Suppose that files fred08.0001, fred08.0002, fred08.0003,..., fred08.0068 contain 2D images. Assuming that these are the only files with prefix "fred08." in the current directory, the command line to calculate the pixel-wise statistics across the whole collection is given by:

imstat -pixstat fredstat fred08.*

And the computer responds with:

file = fred08.0001 nx = 64 ny = 64 data type = short
min = 0 next min= 1 max= 1808 next max= 1733
mean= 207.1 std.dev.= 331.2 number of zero pixels = 68

file = fred08.0002 nx = 64 ny = 64 data type = short
min = 0 next min= 1 max= 1489 next max= 1421
mean= 190.9 std.dev.= 298.5 number of zero pixels = 63

file = fred08.0003 nx = 64 ny = 64 data type = short
min = 0 next min= 1 max= 1346 next max= 1328
mean= 189.8 std.dev.= 296.9 number of zero pixels = 68

⋮

etc.

⋮

file = fred08.0068 nx = 64 ny = 64 data type = short
min = 0 next min= 1 max= 1416 next max= 1348
mean= 187.5 std.dev.= 294 number of zero pixels = 73

– Wrote mean image to fredstat.mean
– Wrote standard deviation image to fredstat.sdev
– Wrote coefficient of variation image to fredstat.cvar

So, files fredstat.mean, fredstat.sdev, and fredstat.cvar contain floating point images, where each individual pixel contains the mean, standard deviation, and coefficient of variation (respectively) for that pixel across the collection of fred08.* images.