

README

These are Matlab software (together with some examples) for doing DWD based Systematic Bias Adjustment for Microarray data.

The main function is in the file: BatchAdjustSM.m

A test program, that illustrates several ways to call this function is in the file: BatchAdjustSMtest.m

The function requires a number of different subroutines, so it is recommended that the full subdirectory structure be downloaded. This may be easiest to do by downloading and expanding the file: BatchAdjust.zip

Which is web accessible at:

<http://www.unc.edu/depts/statistics/postscript/papers/marron/GeneArray/BatchAdjust.zip>

The program BatchAdjustSMtest.m contains several parts.

itest == 1, gives a simple example of an application to a real data set (removing a simple binary source effect).

itest == 2, gives a more complex example, that requires several applications of BatchAdjustSM.m, (removing both a binary source effect, and also a 3 class batch effect).

itest == 100,...,120 were used to test various aspects of the function, and are probably not needed for most practical purposes.

Some additional notes:

i. When running itest == 1 or itest == 2, the first part of the program is a fairly complicated read in of the data from an Excel spreadsheet.

ii. The itest == 1 example is a single application, so the call is quite simple.

iii. The itest == 2 example is more complex because:

a. Several applications are needed to handle the complex source and batch effects being addressed.

b. There is also a part for printing the adjusted data out to a tab delimited text file.

iv. Copy and modify the program as needed for other tasks.

iv. E.g. To write a program that gives tab delimited text output for a simple example (such as itest == 1), copy the

block of text that does the output, and modify appropriately.