Software

Hi y'all, beta versions of CorrCountMac (for Intel Macs) and CorrCountPC (for 64-bit PCs) are ready to play with down below. On both platforms they are double-clickable apps that calculate the normalized correlation count (as well as 23 other analyses from the same data). The apps require installation of MCR (Matlab Compiler Runtime, free from Mathworks, which will already be on computers that have Matlab installed):

http://www.mathworks.com/products/compiler/mcr/

An example data set also is provided (Julia's data from Grove Creek), which has the following format: first column is nearest-neighbor spacings, second column is kinematic apertures (this can be a column of zeros). Columns can be space- or tab-delimited in .txt files. The sequence of spacings and apertures assumes that the first spacing precedes the first aperture along the scanline, etc, as though you were reading a standard English text. If you enter the same number of apertures as spacings, then the last aperture will be ignored: the code assumes all fractures are embedded within the scanline and not present at either end of the scanline.

After opening an input file in CorrCountMac/CorrCountPC, the data can optionally be filtered to a subdomain of the entire scanline and/or a subset of fracture sizes. A suite of randomizations must be generated before you execute any analysis. Afterwards, no new randomizations are needed unless you input a new data set, or change subdomain/subset of data already entered.

In terms of future development, the biggest outstanding issue obviously is generation of a java version (platform/OS-independent app). I'm not holding my breath because, not only do the Matlab instructions involve numerous steps, the documentation is expressed in a vocabulary that is foreign to me. The only functionality that I have not yet implemented in the current software is an option to estimate uncertainties analytically. Right now, Monte Carlo estimation is the only choice because I haven't yet figured out good analytical estimators. A science question (in a matter of speaking)! I intend to write a User's Guide before public release. I apologize that I haven't written one yet, but a lack of documentation (apart from manuscripts and this message) is the price of beta in this case.

It's worth pointing out that CorrCountMac/CorrCountPC are ~orders of magnitude faster than predecessors, and (as best as I can tell) bug-free. At this point, I can run data sets for you in a matter of minutes (or seconds), but I'm really interested in your input regarding usability. I avoided any use of menus, and dialog boxes are limited to I/O and warnings. Otherwise everything relevant is visible at all points of your workflow. Likewise, all parameters are encoded in graphical and numerical output so that byzantine file names should be unnecessary. –Randy

CorrCountMac.app

CorrCountPC.exe

example data set (save as .txt file)

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