Readme.txt

Macroscopic and Microscopie Unmixing

The code in this directory is an evolution of the code that Ryan Close wrote for his dissertation research. The changes included:

(1) Changing the lookup tables to calculations

(2) General speedups

(3) Changing the algorithm to optimize the difference between the pixels and the linear mixture, normalized by the proportion of the microscopic mixture.

(F1) The function that does the unmixing is

MacMicUnmixDEM(Data, parameters, degrees)

This is the function that needs to be modified to calculate the endmembers.

The parameters are set by the call

Paramters = MacMicUnmixParametersDE

Note that you must set a parameter to use VCA to initialize. If you are running it outside of the batch function, then you should use VCA to initialize or it will crash.

(F2) The function

[ExperimentStruct, ErrorTypes] = MacMicDEMBatch(parameters)

runs a bunch of unmixing experiments using synthetic data that are 1/3 linearly mixed, 1/3 partially linearly mixed and partially microscopically mixed, and 1/3 microscopically mixed.

The parameters are set by the call

parameters = MacMicParametersBatchDEM