FSEM: Functional Structural Equation Models for Twin Functional Data

FSEM is a novel class of functional structural equation models (FSEMs) for dissecting functional genetic and environmental effects on twin functional data, while characterizing the varying association between functional data and covariates of interest.

It contains a three-stage estimation procedure to estimate varying coefficient functions for various covariates (e.g., gender) as well as three covariance operators for the genetic and environmental effects.

It also has an inference procedure based on weighted likelihood ratio statistics to test the genetic/environmental effect at either a fixed location or a compact region.

To install the package, just download FSEM.mltbx and double click on it, then you are ready to use all the functions.

Click on demo.html to see a detailed step-by-step example.

To see how to use certain function, say <FSEM\_wlrt>, just run ‘help FSEM\_wlrt’ in matlab.