

Documentation for `miFunctions.R`

The `miFunctions.R` file includes a set of options used as standards for fitting models described on hermine-maes.squarespace.com, as well as functions to facilitate coding.

Functions to assign **labels** to matrix elements:

- `labLower`: assigns labels to the diagonal & sub-diagonal elements of a square matrix of size `nv`
- `labSDiag`: assigns labels to the sub-diagonal elements of a square matrix of size `nv`
- `labSDiag`: assigns labels to the sub-diagonal elements of a square matrix of size `nv`
- `labODiag`: assigns labels to the diagonal elements of a square matrix of size `nv`
- `labFullSq`: assigns labels to the elements of a full square matrix of size `nv`
- `labDiag`: assigns labels to the diagonal elements of a square matrix of size `nv`
- `labSymm`: assigns labels to the diagonal & sub-diagonal elements of a square matrix of size `nv`
- `labFull`: assigns labels to the elements of a full matrix of size `nr x nc`
- `labFullR`: assigns labels to the elements of a full matrix of size `nr x nc` by row
- `labVect`: assigns labels to the elements of a vector of size `nv`
- `labVars`: assigns labels for a list of variables specified in `vars`
- `labTh`: assigns labels for the number of thresholds `nth` of a list of variables `vars`

Functions to assign **values** to matrix elements:

- `valDiag`: assigns value `valD` to the diagonal elements of a square matrix of size `dim`
- `valDiag0`: assigns value `valD` to the diagonal elements and value `valOD` to the off-diagonal elements a square matrix of size `nv`
- `valDiagLU`: assigns value `valD` to the diagonal elements, value `valLD` to the lower off-diagonal elements, and value `valUD` to the upper off-diagonal elements a square matrix of size `nv`

Functions to generate **descriptive statistics** of variables:

- `myMean`: prints mean for non-missing values of numeric variables
- `myCov`: prints covariance matrix of complete observations of numeric variables
- `myCor`: prints correlation matrix of 'everything' observations of numeric variables

Functions to generate **output** of models:

- `fitGofs`: prints goodness-of-fit statistics on one line, including model name, number of observations, records, estimated parameters, constraints, degrees of freedom, $-2\log$ -likelihood, cpu time, optimizer, OpenMx version, and status code
- `fitGofS`: similar to `fitGofs` with longer labels
- `fitGofT`: similar to `fitGofs` without labels to generate tables
- `fitEsts`: prints parameter estimates with 4 decimals
- `fitEstCis`: prints parameter estimates and confidence intervals with 4 decimals
- `fitEstCiMxs`: prints parameter estimates, confidence intervals and calculated variance components matrix with 4 decimals
- `lrtSAT`: print likelihood ratio test, comparing model to saturated model fit `llSAT` & `dfSAT`

- `parameterSpecifications`: prints labels of a `MxMatrix` with square brackets surrounding free parameters
- `formatOutputMatrices` prints matrix with specified labels and # number of decimals
- `formatMatrix` returns a matrix with specified dimnames and # of decimal places