

```
GenericRows is a script file that applies a function to each row in an
% array, returning either scalar values or a series of vectors. Scalars
% are returned as a column vector, with one row for each row in the input
% array. Vectors are returned as a matrix that can be written to an Excel
% file
%
% To use this script file, first define a matrix to be analysed
%     A = xlsread('test.xls')
% Run this script
%     GenericRows
% Define a function handle for an anonymous function, such as csm_v.
%     myFunc = @(x) [func(x)]
% where x is a scalar or vector (row in matrix A, such as ncoor_v). Then,
% call genericApplyToRows
%     genericApplyToRows(myFunc,A)
%
applyToGivenRow = @(func, matrix) @(row) func(matrix(row, :));
newApplyToRows = @(func, matrix) arrayfun(applyToGivenRow(func, matrix),
1:size(matrix,1), 'UniformOutput', false)';
takeAll = @(x) reshape([x{:}], size(x{1},2), size(x,1))';
genericApplyToRows = @(func, matrix) takeAll(newApplyToRows(func, matrix));
```