These Matlab files in this zip allow computation of identfiication robust and two-step confidence sets for GMM models following the approach described in the paper Valid Two-Step Identification-Robust Condence Sets in GMM by Isaiah Andrews. In particular, the file Twostep_CS_calc.m reports vectors of values contained in robust and non-robust confidence sets, as well as a vector of values gamma_hat. The results reported in the paper are produced by the file HS_CS_calc.m.

The file Twostep_CS_calc.m can be used to calculate robust and nonrobust confidence sets (along with values $\hat{\gamma}$) for discretized parameter spaces and (potentially nonlinear) GMM moment conditions and weighting matrices. When constructing confidence sets for functions of GMM parameters, the functions of interest are assumed to be of the form $f(\theta) = F\theta$ for some fixed matrix F (i.e. the hypotheses are assumed to be linear). The file Robust_CS_calc.m can be used to calculate robust confidence sets based on linear combination statistics as discussed in the paper, again for general (differentiable) GMM moment conditions and weighting matrices.

The data for the nonlinear Euler equation application are in crra.mat, and were drawn from replication files for Stock and Wright (2000), "GMM with weak identification," available on Jim Stock's website, http://scholar.harvard.edu/files/stock/files/gmmprogs.zip, and most recently accessed on 3/14/2017.