How to use software?

Note: These directions are how to use the entire software package, but I am currently not releasing the createhardcode program, only releasing the hardcoded output that can be used to run simulations under the GNU general purpose license.

Matlab/Octave:

-The mechanism you want to use should be named chem.inp

-chem.inp should have all thermodynamic data is the file, do not use a separate therm.dat file

(if using Octave version make sure all blank lines are removed)

-Run createhardcode.m

-A folder “hardcode” will be created

-You may have to change the fuel species in the reactor file to match your mechanism for instance changing “CH4” to “H2”

-simply run reactor the reactor .m file in matlab

Note: to use the reactor\_3dplotcode.m file, you must have the matlab parallel computing package installed and a verified cluster profile. You can click on Parallel>>Manage Cluster Profiles>>Verify

Octave-Fortran hybrid version:

-The mechanism you want to use should be named chem.inp

-chem.inp should have all thermodynamic data is the file, do not use a separate therm.dat file

-Run createhardcode.m

-A file mechspecific.f will be created

-you may have to change the fuel species and also the length of NEQ and KK vectors in the RES function (DASSL solver has some glitches when trying to pass a variable containing these vector lengths)

-you must run the run\_reactor…..m file from octave, then plotoutput.m from octave