TOUGHREACT V3.32 INSTALLATION AND USAGE

1. The TOUGHREACT V3.32 folder should be located in a place where all users can access the executables and documentation. On a multi-user Linux or Mac OS machine this may be in /usr/local or /opt.
2. The "core" folder inside the TOUGHREACT V3.32 folder contains the Sample Problems, documentation, and OpenMP libraries. Executables for all EOS modules are located in located in the toughreact_v3.32_exe folder.
3. To run TOUGHREACT V3.32, one must either:
    a. Copy the executable appropriate for your system into the folder where the simulation input files are located (recommended for Windows users). Then,
        i. Open a bash shell (Terminal Window on Mac OS), xterm (Linux), Commandline/DOS shell (Windows)
        ii. Move to the folder with the simulations input file: *chdir* <folder name> (Linux) or *cd* <folder name> (Windows)
        iii. On the command prompt, hen typen Mac OS or Linux:
            ./< name of appropriate executabe file >
            (no space, e.g., . *treactv332omp_eos1_macos*)
            or on Windows:< name of appropriate executable file >
            (e.g., *treactv332omp_eos1_pc.exe*)

    b. Copy all executables into a separate, permanent folder, then create a system path to this folder:

        Linux and Mac: Edit the .bashrc file, such as:
            TREACT332HOME= /opt/TOUGHREACT_V332/
            PATH=$PATH:$TREACT332HOME/treactv332omp_eos1_mac
            os:export PATH

        Windows: Specify the system path by following these steps:
            -Left click *My Computer*
            -Click on *Properties*
            -Click on *Advanced System Settings*
            -Click on *Environment Variables*
            -Highlight the *Path* variable on the *System Variable* table (the lower table in the window)
            -Click *Edit*
            -At the end of the path, add the name of the folder that contains the TOUGHREACT executables (e.g., C:*TOUGHREACT_V332*). It must be preceded by a semicolon, if not already there, to separate this folder from the other ones listed.
            -Click OK on all menus
            -Restart computer

To run the code, then
i. Open a Terminal Window (Mac OS), xterm (Linux), Commandline/DOS shell (Windows)
ii. Move to the folder with the simulation input files: *cd* <folder name> (Linux) or *cd* <folder name> (Windows)
iii. Then type the name of the appropriate executabe file after the command prompt

Windows OpenMP libraries:

Errors running TOUGHREACT on Windows PCs may result owing to missing numerical libraries. In this case, the following library file must be included in the directory where the code is or run, or a system path () created to a folder including this library (as in 3.b above), such that TOUGHREACT V332 can access this runtime libraries:

libiomp5md.dll

The latest freely distributable Fortran libraries and installers can also be downloaded directly from Intel:

https://software.intel.com/en-us/articles/intelr-composer-redistributable-libraries-by-version