

Changes to FRANC3D from Version 7.4 to 7.4.1

Jul 30, 2019

- 1) Add preliminary timing output – you can request timing from the Preferences dialog
- 2) Fix a couple issues with ANSYS I/O; in particular, update load step for a change in omega when that is the only change in boundary conditions
- 3) Fix bug when computing SIFs for orthotropic materials using DC and VCCT methods
- 4) Fix GUI freezing after closing the Crack Front Plots dialog
- 5) Fix recording of lists of empty lists in session log
- 6) Check relative geometry patch size for multiple flaw insertion and set the refinement level if needed to make patch sizes consistent
- 7) Add analysis output type (full model, local model, template only) to session log

Changes to FRANC3D from Version 7.3.4 to 7.4

Jul 15, 2019

- 8) Add preliminary capabilities for computing elasto-plastic J-integral from ABAQUS results
- 9) Modified ABAQUS writeDtpFile.py script to extract data for elasto-plastic J-integral
- 10) Modified crack face traction (CFT) to allow user to add CFT to an existing load step and added options for setting temperature and thermal expansion properties for CFT in a new load step
- 11) Modified SIF XY Plot dialog to allow jpg or png export
- 12) Modified SIF XY Plot dialog to allow user to set axis scale and label
- 13) Modified SIF XY Plot to add extra legend for SIF computation options and terms
- 14) Color crack front edges for user-defined (bounding points and mesh) crack display
- 15) Process ANSYS shell (and 2D) elements along with 3D volume elements – shell elements sent to the GLOBAL model .cdb file
- 16) Fix some command language bugs and missing options for ANSYS – including the Python script and local+global connection settings
- 17) Allow for more than 99 ANSYS extra (.s##) load step files
- 18) Ignore unreferenced (not part of elements) nodes during crack insertion and remeshing
- 19) Fix GUI-related bug with temperature independent table-look-up crack growth models
- 20) Fix bug when writing crack growth model description text to file
- 21) Fix GUI-related bugs when displaying SIFs for multiple load steps and substeps
- 22) Add option to save .crk file during crack front merging
- 23) Fix crack insertion/meshing error messages
- 24) Fix bug finding mesh boundary facets when brick and tetrahedral elements are joined (without pyramids)
- 25) Process commas in quoted strings for ABAQUS inp data
- 26) Add preliminary capability for ANSYS static + modal combined analyses
- 27) Small change to point-in-region testing to improve crack front extrapolation.
- 28) Updated FOX library to the latest stable release
- 29) Updated RLM library to Version 13.
- 30) Updated internal license version – old license files will need to be updated.

