New REFIT GitLab repository for collaboration
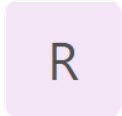
WPEC SG49 Meeting, 16th Nov 2020

Tim Ware, Jacobs

REFIT is now on GitLab!

https://git.oecd-nea.org/science/wpec/sg49/test/refit

WPEC Subgroup 49 Webex Meeting – 16th Nov 2020

Progress so far…

✓ Repository created

✓ Initial population from NEA-0914.008 (2010) package (source + test cases)

✓ Basic Docker packages and Continuous Integration

✓ Fixes to Fortran – so it builds on gfortran 8.1.0

➢ Remove interactive input – better for command line / CI

➢ Successfully run existing test cases on CI

➢ Draft Latex documentation (from original MS Word document)

o Merge in updates from Geel since 2010

o Open up to collaboration

Wish list of developments for reproducibility

- Code refactoring
  - Improved stability
  - Improved runtime and memory usage
  - Increase size of problem – reduce iterations / user intervention
- Improved interface
  - Simplify user and update documentation
  - Read input parameters direct from SG50 database
  - I/O GNDS format parameters
  - I/O for comparison / QA, e.g. direct calculation for resonance integrals
- Update variable fitting routines
  - Improved stability and reproducibility of solution
  - Increase size of problem – reduce iterations / user intervention
  - Direct production of covariances

Thank you's

- Mick Moxon   – for keeping REFIT going for >40 years

- Michael Fleming   – for the enthusiasm to get this collaboration going and for the support with GitLab