

FrontISTR v5.2 Release Note

FrontISTR commons

FrontISTR ver. 5.2 has been released!

FrontISTR v5.2

- Release date: April 9, 2021
- Changes from ver. 5.1.1 (November 13, 2020)
 - Improvements : 10
 - Specification changes: 7
 - Bug fixes: 11



version	release date
Ver. 4.4	2015/02/17
Ver. 4.5 RC1	2015/12/07
Ver. 4.5	2016/07/22
Ver. 4.6	2017/09/14
Ver. 5.0 α	2018/02/01
Ver. 5.0 β	2018/11/01
Ver. 5.0 RC	2019/09/05
Ver. 5.0	2019/10/18
Ver. 5.1	2020/06/30
Ver. 5.1.1	2020/11/13
Ver. 5.2	2021/04/09

Improvements

- #79 Output of contact normal force and friction force per unit area
 - Add CONTACT_[N/T]TRACTION to result output.
- #142 Specify num of parts in hecmw_part1 command line argument
- #218 Describe the result (res) file format in the documentation.
- #298 Cluster Paradiso support for Docker containers.
- #303 Make Metis ordering available in internal direct method
- #305 Enable RCM ordering with internal direct method.
- #313 JAD SpMV is not OpenMP parallelized
- #314 BLAS Lv.1 operations are not OpenMP parallelized
- #315 Apply parallelized BLAS Lv.1 functions to CG methods
- #324 Anisotropic hyperelasticity
 - !HYPERELASTIC,TYPE=MOONEY-RIVLIN-ANISO

Specification changes

- #239 Different format of build date and execute date in standard output.
- #262 Exclude result output for internal patch elements created by contact and MPC.
- #274 Fix INFINITE to INFINITESIMAL.
- #302 Refactoring the internal direct method solver
- #307 Update mingw build image for Windows binary creation
- #309 FATAL error is too severe when you have MUMPS and no scalapack
- #326 Remove unnecessary or unimportant version notations

Bugs fixed

- #45 Weird behavior of internal direct method?
- #111 AMPLITUDE boundary condition can be specified with other than AMP=.
- #280 Can't compile on FrontISTR-5.1 or master branch with Trilinos-13.0.0.
- #290 The version number at runtime is different from the actual version.
- #292 The link to the manual in README.md has not been updated.
- #300 Bugin DLOAD when multiple face groups are set.
- #304 Fix for RCM ordering.
- #306 msmapi.dll is not shipped.
- #327 Bug fix for DEBUG build not going through.
- #328 Error when specifying ISTRESS/ISTRAIN output when defining SURF-SURF contact.
- #332 Couldn't build with setup.sh anymore.

Acknowledgements

- Contributors

FrontISTR.git

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FrontISTR_manual.git

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Bug reports

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- Count the number of commits merged into the release branch in the git repository (Merge commits are not counted)
- Command: `git log --no-merges [previous release branch]. [This release branch] | grep -e Author | sort | uniq -c | sort -nr`
- Author name deviations are manually merged

Thank you very much for your cooperation!



FrontISTR

Large-scale Parallel Finite Element Analysis Open Software on HEC-MW

Version 5.2 now available