

# Computational Fluid Dynamics (CFD)

- Ansys/ Fluent/CFD (module load ansys/v2019r1)
  - Start Ansys Workbench with wb
  - Start Fluent with fluent
  - Start IcemCFD with icemcfd
  - Start CFX with cfx5
  - Start TGrid with tgrid
  - Start Ansys Classic with launcher193
- Comsol with comsol (module load comsol/v54)
  - Start Comsol with comsol

## Multi Purpose

- Maple (xmaple)
- Matlab (matlab)
  - Start Matlab 2021b with m2021b
  - Start Matlab 2020b with m2020b
  - Start Matlab 2019b with m2019b
- Mathematica
  - Start Mathematica 12.1 with mathematica

## Visualizing, Pre- und Postprocessing

- Tecplot (tecplot)
- Ensignt
- Fieldview
- Avizo (avizo9)
- Comsol (comsol54)
- Paraview
- Visit

## Simulation

- Ansys Workbench (module load ansys/v2021r2; wb)
- Ansys Electronic Desktop (module load ansys/v2021r2; ansyedt)
- ADS (module load ads/v2019; ads)
- MSC: Adams, Nastran, ... (setmsc)
- Hypermesh (sethyper)
- Comsol (comsol56)
- Gaussian (module load gaussian/g16)
- Silvaco (module load silvaco/v2021)

## Europractice

- Cadence (module load cadence/v2017/cad2017)
- Mentor Graphics (setmentor)
- Synopsys (setsynop)
- Altera
- Xilinx (module load xilinx/14.7)

## Compiler & Tools

- gnu (module load gcc/v8.3.0)
- PGI (module load pgi/v2020)
- Intel Compiler - Intel Compiler&OpenMPI - Intel Compiler&IntelMPI
  - (module load intel/v2020)
  - (module load intel/v2019)
  - (module load intel/v2018)
- Intel Advisor - Vectorization and Threading Advisor
  - (source /usr/app-soft/intel/v2020/advisor/advixe-vars.csh; advixe-gui)
- Intel Inspector - Memory and Thread Debugger
  - (source /usr/app-soft/intel/v2020/inspector/inspxe-vars.csh; inspxe-gui)
- Intel VTune XE 2020 - Performance Profiler
  - (source /usr/app-soft/intel/v2020/vtune\_profiler/vtune-vars.csh; amplxe-gui)
- Intel Debugger
  - (module load intel/v2012; gdb-ia)
- cuda (module load cuda/v10.1)
- Totalview (totalview)
- Totalview pdf documentation:
  - /usr/app-soft/totalview/v2020/toolworks/totalview.2017.1.21/doc/pdf/

## Librarys

- fftw
- mpb

## Communication

- MPICH
- OpenMPI

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