

# 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)
- Octave 4.0 (module load octave/v4.0)
- Matlab (matlab)
  - Start Matlab 2020a with m2020a
  - Start Matlab 2019b with m2019b
  - Start Matlab 2018a with m2018b
  - Start Matlab 2017b with m2017b
  - Start Matlab 2016b with m2016b
  - Start Matlab 2015b with m2015b
- Mathematica
  - Start Mathematica 11.1.1 with mathematica

## Visualizing, Pre- und Postprocessing

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

## Simulation

- Ansys Workbench (module load ansys/v2019r1; wb)
- Ansys Electronic Desktop (module load ansys/v2019r1; ansyedt)
- ADS (module load ads/v2016.01)
- MSC: Adams, Nastran, ... (setmsc)
- Hypermesh (sethyper)
- Comsol (comsol54)
- LAMMPS (setlammps)
- Gaussian (module load gaussian/g16)

- `Silvaco (module load silvaco/summer2018)`
- `TCAD (module load tcad/N_2017.09-SP1)`
- `FDTD (module load lumerical/fdtd/v8)`
- `meep (module load meep/v1.3)`
- `vasp (module load vasp/v5.4.4)`

## 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/`

## Libraries

- `fftw`
- `mpb`

# Communication

- MPICH
- OpenMPI

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