

1 Prerequisites

The following libraries are necessary for using of extrEMe:

- .NET or mono subsystem
- FFTW3 (<http://www.fftw.org/download.html>)
- OpenBlas (<https://github.com/xianyi/OpenBLAS>) (recommended) or IntelMKL

For using parallel (MPI) version you need the installed mpi subsystem.

2 Installation

2.1 For Linux with mono

1. Set BLAS library into `Native/make.inc`:
 - For using OpenBlas set `BLASTYPE=OpenBlas` and correct path into `BLAS_INC`, `BLAS_LIB`;
 - For using MKL set `BLASTYPE=MKL`;
2. Set your favorite C compiler (if you want) by the corresponding modification of `Native/make.inc`
3. Build the extrEMe :
 - For serial version run `make` from installation directory
 - For parallel version run `make MPI_VERSION=<MPI_TYPE>` from installation directory, where `<MPI_TYPE>` is one of (OpenMPI,MPICH,MSMPI) depends on your MPI-subsystem.

3 Using

- Example of input format: `EndUser/ExtremeMt/Examples/COMMEMI3D2`
- Command to run: `mono PATH-TO-EXTEREME PATH-TO-.xproj`
- For example run from `EndUser/ExtremeMt/Examples/COMMEMI3D2` as `mono -O=all ../../bin/x64/Release/ExtremeMt.exe forward.xproj` (serial version)
- For example run from `EndUser/ExtremeMt/Examples/COMMEMI3D2` as `mpirun -n 4 mono -O=all ../../bin/x64/Release/ExtremeMt.exe forward.xproj` (mpi version on 4 processes)
- The paths for FFTW and OpenBlas/MKL libraries must be in `$LD_LIBRARY_PATH`