Bachelor or semester thesis
RW/CSE

Supervisor: Prof. Dr. Ralf Hiptmair

Implementation of a `c++` library for data exchange with `MATLAB`

Project description:

Scientific programming requires virtuosic skills in order to accomodate requirements like efficiency, parallelism, team work, user-friendliness, exactness, reproducibility, versatility etc.

The goal of this project is to enable interopability of two modern tools of scientific programming, `c++` and `MATLAB` by providing a set of routines for both languages that make data exchange in form of vectors and sparse matrices *easy* and *reliable*, possibly also in the context of distributed computing.

Exploring and assessing existing methods like the `c` and `c++` routines already provided by `MATLAB` is part of the project.

Prerequisites: Strong `c++` and decent `MATLAB` knowledge
MPI a plus
Independent worker

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