The goal of the project is to implement a fast implementation of an approximation of the matrix exponential operation provided by (Al-Mohy, Awad & Higham, Nicholas, 2009, A New Scaling and Squaring Algorithm for the Matrix Exponential.,SIAM Journal on Matrix Analysis and Applications):

https://epubs.siam.org/doi/epdf/10.1137/09074721X

The main algorithm to implement is 5.1. Note that the **normest** function is defined in http://eprints.maths.manchester.ac.uk/321/1/35608.pdf (algorithm 2.4).

In this project, you are allowed to use an external performance library (BLAS, MKL …) to perform the occurring matrix-matrix multiplications (gemm), but only those, i.e., the rest is implemented by you. One interesting aspect in the evaluation is how close the overall performance will compare against the one of the gemm.