

Numerical Simulation and Scientific Computing

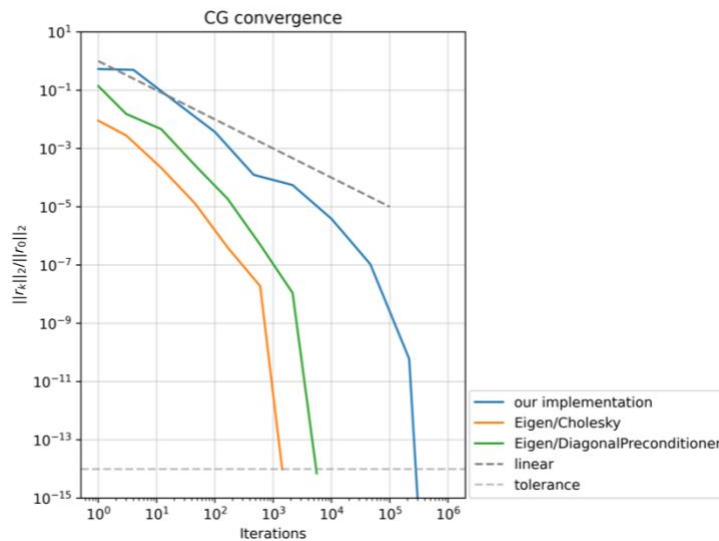
Exercise 3: Task 2

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The figure above depicts the convergence rates between our implementation and Elgens' library. The error is the ratio $\frac{\|r_k\|_2}{\|r_0\|_2}$.

Its obvious that our implementation is slower, but more importantly the convergence rate increases drastically after $1e3$ iterations. Moreover, Cholesky produces faster results than preconditioning the method of conjugate gradient.