

Numerical Simulation and Scientific Computing

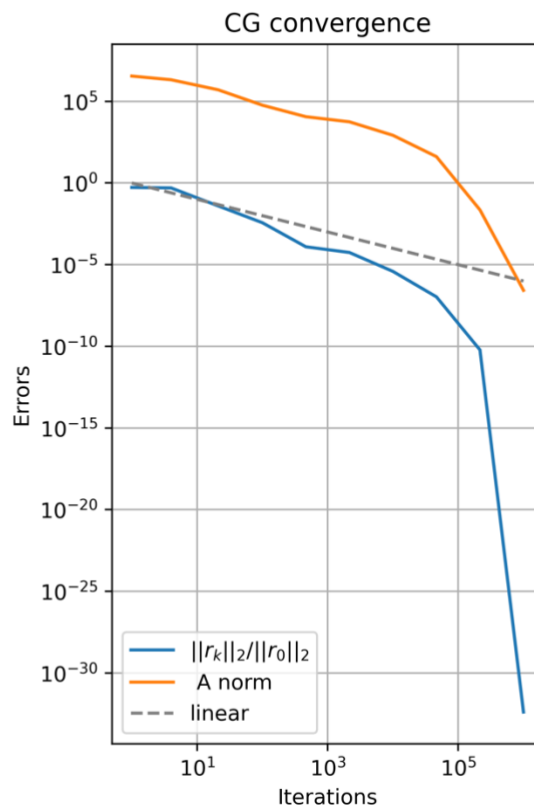
Exercise 3: Task 1

Elsayed Saleh Abrishq Bassam : 12302324

Ravelet Thomas : 12302809

Saudin Abdic : 11730114

Christoforos Eseroglou : 12331470



The figure above depicts the error convergence of the Conjugate Gradient method. To that end two lines are plotted the first one (blue) depicts the ratio $\frac{\|r_k\|_2}{\|r_0\|_2}$, whereas the second one the $\|x^* - x_k\|_A$.

Both lines follow a similar pattern, i.e a linear one. However after approx. 10^5 iterations the convergence rate increases sharply.