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3/25/2023

Exam 2 Comments

In general things that I observed was that the conjugate gradient method requires fewer iterations for spd matrices as explained in the text. I noticed that preconditioned methods were able to converge with less iterations if an appropriate preconditioner was used. The incomplete Cholesky was a good preconditioner because it helped the iterations of the methods decrease. I also noticed that changing other parameters such as drop tolerance had an effect on the number of iterations required for convergence. Making the drop tolerance higher can help with the convergence , however making it too high makes it loose its effectiveness, and the methods start converging slower.

Therefore the final comment that I have would be that the choice of the parameters and the number of iterations are directly related and that they should be tested sufficiently to ensure that we develop the most efficient algorithm for the problem.