MATH 923 — TERM PROJECT

Report on Wednesday, November 29, 2000

You may work in groups of two!

The term project is of size and length comparable to our other projects. Please write your report in the style of a technical report. Imagine you work for a consulting company and you write your report to your project leader. Your project leader has some good general technical knowledge, but is not necessarily up on all the details, so you must give a little bit of background, and explain the advantages and disadvantages of the algorithms you are using.

Write a program implementing the DFP and/or BFGS update for solving the unconstrained minimization problem. Your program must still use line search algorithms, etc. Compare the performance of the Hessian free algorithms to the ones you used in Project 3. Test you algorithms on the problems of Project 3. Also test your methods on at least three of the five test problems in the book, Appendix B, pages 361–363 (to avoid work with finding all the Hessian matrices you may want to use Finite-difference approximations for the Hessian matrix).

On Wednesday, November 29, each group will get 15 minutes to present results.