

## NUMERICAL ANALYSIS PROGRAMS IN MATLAB

### About the Program Disk

This README file gives instructions to the MATLAB programs on the disk. These programs are designed to run on a minimally configured computer. Minimal hard disk space plus the MATLAB package are all that is really needed. All of the programs are given as ASCII files called m-files with the .m file extension. They can be altered using any editor or word processor that creates a standard ASCII file. These are commonly called a "Text Only" file. The m-files can be run from within MATLAB by entering their name without the .m extension, for example, as ALG021. The files should be placed in the MATLAB\BIN subdirectory of MATLAB. If the m-files are in the current directory they can be opened in EDIT mode and run from the EDIT menu.

Some of the programs require the input of large amounts of data or generate extensive output. To enable the programs to be run quickly and efficiently, the input data can be placed in data files and the data files read by the program. When the output is likely to be extensive, the programs have been constructed so that it is convenient to place the output directly into an output file. The program will prompt you for the form of the input or output you would like to use. For example, when running the program for Neville's method, ALGO31.m, using the defined data file ALGO31.DTA for the sample problem, you will first see a screen that states:

Choice of input method:

1. Input entry by entry from the keyboard
2. Input data from a text file
3. Generate data using a function F

Choose 1,2, or 3 please

If you choose 1 you will need to enter all the data for the program from the keyboard, and any mistake in a data entry will require the program to be rerun. Choosing 2 will lead to the input data file ALGO31.DTA. Choosing 3 will cause the program to prompt you for the input of the function F.