

# Engineers — Mathematicians — Scientists

## PC-MATLAB

A Personal Computer becomes a powerful scientific and engineering workstation.

PC-MATLAB is a program that turns your IBM PC or compatible into a scientific workstation. Offering performance in the range of machines costing hundreds of times more, PC-MATLAB gives you rapid, accurate numeric computation. With a widely acclaimed and unique user interface, PC-MATLAB lets you do scientific and engineering matrix calculations using natural commands. For displaying results, two and three dimensional graphics commands provide personal, automatic graph paper. PC-MATLAB is the system you have been waiting for: Quality analytical tools, precision graphics, and a command format that is absolutely the best anywhere for flexibility and power.

Mainframe MATLAB is a popular interactive program for larger computers that serves as a convenient "laboratory" for computations involving matrices. Written in Fortran, it provides easy access to matrix software developed by the LINPACK and EISPACK projects. Together LINPACK and EISPACK represent the state of the art in software for matrix computation. Several hundred organizations worldwide currently use mainframe MATLAB.

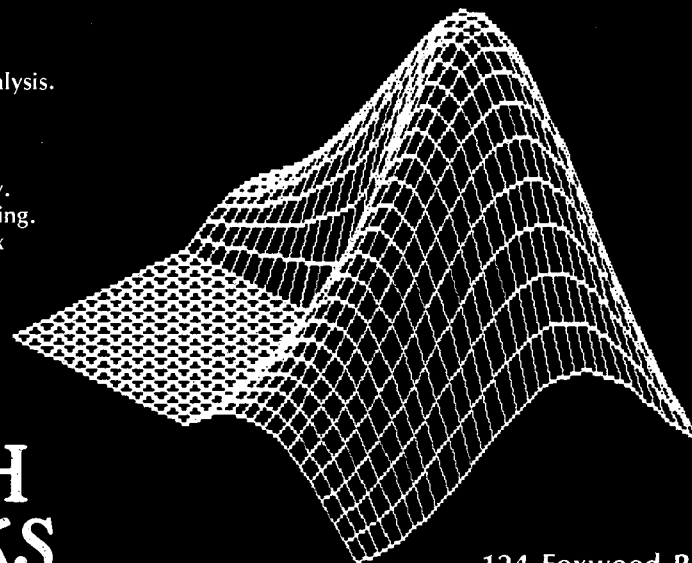
PC-MATLAB is a highly optimized, second generation MATLAB for the IBM PC. Completely rewritten in the C language, new features of PC-MATLAB include graphics, user-defined functions, IEEE arithmetic, text data types, fast compiled FOR and WHILE loops, and many new analytical commands. Experienced users of mainframe MATLAB will find PC-MATLAB to be a significantly more powerful version of an old friend. New users of PC-MATLAB will benefit from the years of experience gained in developing the earlier versions.

PC-MATLAB is priced at \$695 with quantity and university discounts available.

### Applications:

- Numerical analysis.
- Matrix theory.
- Statistics.
- Data analysis.
- Control theory.
- Signal processing.
- Applied matrix computations in many disciplines.

The  
**MATH  
WORKS**  
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## Benchmarks

Calculation	PC-MATLAB with 8087	VAX/11/780 MATLAB with FPA, VMS	Ratio PC/VAX
50 x50 real matrix multiply	10.1 s	12.5 s	0.8
50 x50 real matrix inverse	23.6 s	11.6 s	2.1
50 x50 complex matrix inverse	69.9 s	16.3 s	4.3
25 x25 real eigenvalues	25.7 s	10.5 s	2.4
2048 point complex FFT	5.5 s	1.4 s	3.9
25 x25 3-D plot	14.2 s	42.2 s	0.3